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THESIS

PHYSICAL FITNESS IN THE UNITED STATES MARINE CORPS: HISTORY, CURRENT PRACTICES, AND IMPLICATIONS FOR MISSION ACCOMPLISHMENT AND HUMAN PERFORMANCE

by

Andrew J. Thompson

December 2005

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FOREWORD

Since childhood, I have always maintained an active lifestyle. My father, a former coach, and my athletic brothers influenced my interest in physical activity as early as I can remember. Nearly everything was done outdoors. Even in a metropolitan suburb of the Pacific Northwest, weather conditions never dampened youthful enthusiasm. Bike riding, firecrackers, playground fights and the normal youthful high jinks were ongoing. Sports, organized or "pick-up," were a central focus of family and neighborhood activity. Although secondary to academics and good citizenship, athletics were a healthy outlet for our family's aggressive and energetic boys (thankfully, sports were the vehicle that kept us out of any serious trouble). Little did I know that my childhood experiences would grow in my teenage years, peak in my collegiate years and re-emerge during my service as a U.S. Marine. These experiences continue to shape my life and provide personal motivation for the study.

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History has shown mission accomplishment to be a hallmark of a Marine Officer's duty. Mission accomplishment can be a very difficult undertaking and there are several contributing variables. Two variables that enhance mission accomplishment are the maintenance of high personal readiness and physical fitness levels. In consideration of these issues, this thesis takes an organizational behavior and systems-based approach to the study of physical fitness in the United States Marine Corps (USMC). The purpose and intent of this study is to gain an appreciation and understanding of physical readiness. Thesis objectives are a history of physical fitness in the military, a description of the "systems" approach and an analysis of the current system. In reviewing these areas, recommendations can be made for improvements. This study will outline the implications of physical fitness on mission accomplishment and conclude with recommendations for improved fitness programs in the military.

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ABSTRACT

History has shown mission accomplishment to be a hallmark of a Marine Officer's duty. Mission accomplishment can be a very difficult undertaking and there are several contributing variables. Two variables that enhance mission accomplishment are the maintenance of high personal readiness and physical fitness levels. In consideration of these issues, this thesis takes an organizational behavior and systems-based approach to the study of physical fitness in the United States Marine Corps (USMC). The purpose and intent of this study is to gain an appreciation and understanding of physical readiness. Thesis objectives are a history of physical fitness in the military, a description of the "systems" approach and an analysis of the current system. In reviewing these areas, recommendations can be made for improvements. This study will outline the implications of physical fitness on mission accomplishment and conclude with recommendations for improved fitness programs in the military.

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I would like to recognize the educational legacy provided by my grandfather, Stanley I. Thompson, my father, Jack S. Thompson, Ph.D. and my brothers Scott W. and Richard E.G. Thompson. In their respective lifetimes, they have each achieved at least one or more levels of graduate education. I am grateful for their contributions to my life.

Most of all, I would like to thank my wife, Alison, for her support of my academic pursuits. Her kindness and understanding, two of her many attributes, kept me focused throughout the study. I am extremely fortunate to be married to such a wonderful human being. In the midst of this study, Alison gave birth to our first child. Evan Drake was born on August 24, 2005. This thesis is dedicated to him. May he enjoy a lifetime of growth, fitness and adventure.

Figure 1. Athletic Movement [1]

[1] The Naval Aviation Physical Training Manuals, U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *Track and Field* (Annapolis, MD: Naval Institute Press, 1943), 177.

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I. OVERVIEW

"During periods of national emergency the strength and quality of a nation's citizens is vital to the country's welfare. The greatest heritage of this nation is freedom and its preservation depends on the ability of the present *and future* (italics mine) generation to measure up to the stringent demands essential for victory. A most important requisite for meeting this challenge is fitness, and every available means must be utilized to promote it."[2]

A. INTRODUCTION

Physical fitness has always been a priority in the United States Marine Corps (USMC). Entry level officer and enlisted indoctrination training has emphasized, and continues to emphasize, Physical Training (PT). There are several reasons for this. Primarily, rigorous physical fitness training molds officer candidates and enlisted recruits, aiding in the transformation process from civilian to military life. Further, the USMC's expeditionary war-fighting nature may require immediate response to worldwide contingencies. Physically fit Marines are better prepared to meet the uncertain challenges of the battlefield. In "All Navy Order 100," former Secretary of the Navy Frank J. Knox clearly stated his intentions for physical fitness in the Navy and Marine Corps. "Modern war requires the acme of physical fitness and fighting edge. Nothing shall be left undone to insure that all officers and men are properly conditioned to meet the utmost demands of physical endurance."[3]

B. PHYSICAL TRAINING AND THE UNITED STATES MARINE CORPS

Since the inception of the Marine Corps in 1775, physical readiness has had direct applications to the demands of mission accomplishment and the welfare of Marine Corps

[2] The Naval Aviation Physical Training Manuals, U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *Mass Exercise, Games, Tests*. (Annapolis, MD: Naval Institute Press, 1943), vii. The Naval Aviation Physical Training Manuals were a series of books issued by the Aviation Training Division, Office of the Chief of Naval Operations during World War Two. Twelve volumes were published by the Naval Institute ranging in subjects from hand-to-hand combat to football. These books were instrumental in the training of future naval aviators. Their applicability to today's military Physical Training (PT) environment is uncanny. The manuals will be quoted and used extensively throughout this study.

[3] Ibid. p.6. Secretary Knox, his vision outlined in ALNAV 100 issued in October of 1940, was a bold visionary. Just over a year later, Japan attacked the United States at Pearl Harbor, demanding immediate response by the Navy and Marine Corps. The perils faced by America in the early 1940s parallel the uncertainties of today's Global War On Terror (GWOT).

personnel. This study will determine if advantages to being physically fit are just as important today as they were for previous generations of Marines. We know that physical fitness is mandatory in accordance with Marine Corps Order (MCO) P6100.12[4] and there are additional reasons for the USMC's emphasis on PT which will be addressed at length later in the study.

Physical Fitness programs in general, and specifically in the USMC, have been an ongoing topic of personal interest. As a former remedial PT instructor and as a current Marine Corps Martial Arts Program (MCMAP) Black-Belt Instructor, personal experiences have been rewarding, but have also been a cause for concern. The USMC has the reputation of being the world's premier military force in readiness. In many ways this is true, however, there are some potentially dangerous assumptions that accompany this belief, particularly in the area of physical readiness. From a readiness and mission accomplishment perspective, the repercussions of physical degradation in any branch of the Marine Corps are potentially devastating. This study will discuss and determine why. By doing so, the scope and nature of this study may have far-reaching implications that affect the Marine Corps on both the institutional and individual levels.

The implications and influences of fitness shape perspectives related to the USMC's current emphasis, handling and execution of PT programs. Through research and scrutiny, this study will illuminate, substantiate and clarify my assumptions or unintentional misconceptions regarding physical fitness in the USMC. This study will use organizational behavior and systems approaches to properly define problems and arguments, analyze qualitative and quantitative data and offer recommendations for improvement. The study will evolve from the history of military physical fitness and a definition of the systems approach to the analysis of today's "system" and the future of effective physical readiness training in the USMC.

[4] MCO P6100.12 outlines three major physically-related USMC programs; The Physical Fitness Test (PFT), the BCP (Body Composition Program), and the Physical Conditioning Program (PCP). It is a comprehensive document, over 100 pages long, and is precise both in scope and methodology. It leaves little room for debate as to the USMC standards and expectations for fitness and military appearance.

Figure 2. Trainees Negotiating Obstacles[5]

One main assertion is that a proper PT system promotes physical readiness and solidifies the USMC's mission accomplishment capability. Significant health, mental acumen and morale all improve throughout the process. These results are a natural extension of physical fitness, and the USMC will benefit from a more anticipatory approach to these challenges.[6] There may be deeper reasons behind the importance of physical fitness in the military. This study will clarify this determination.

[5] The Naval Aviation Physical Training Manuals, U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *Track and Field* (Annapolis, MD: Naval Institute Press, 1943), 81.

[6] The scope of this study focuses primarily on the United States Marine Corps. However, these issues permeate traditional service boundaries. Although missions and operational requirements differ, the need for aggressive, physically fit, and mentally astute personnel is universal throughout the Department Of Defense (DOD). It is possible that this study can assist the Marine Corps' sister services in understanding the importance of this issue.

The renowned military historian Victor Davis Hanson suggests that "the ultimate answers are of a moral nature, and have a far greater likelihood to be applicable and comprehensible to nearly every one of us."[7]

Figure 3. Naval Aviation Cadets Reporting to Football Practice[8]

[7]Victor Davis Hanson, *The Western Way of War* (New York, NY: Oxford University Press, 1989), 8. Hanson's account of Greek infantry warfare contends that "hoplite" battle was the genesis of Western warfare. The author used this book as a Midshipman at the Naval Academy, but not until captaincy as a Marine Officer did it provide lasting influence. This book is very applicable to anyone in the profession of arms.

[8] The Naval Aviation Physical Training Manuals, U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *The Sports Program* (Annapolis, MD: Naval Institute Press, 1943), 113.

II. HISTORICAL BACKGROUND AND RELEVANCE

"Physical preparation includes the teaching of such basic skills as hand-to-hand combat, swimming, running, and team play, the development of physical ruggedness and all around agility, the promotion of an aggressive fighting spirit, and the development of all the physical endurance possible."[9]

Chapter II discusses physical fitness in the military. Instead of a comprehensive history about military physical fitness, this portion of the thesis outlines what is known and generally accepted regarding the physical demands of the profession of arms. This approach serves a two-fold purpose. First, it communicates the historical evolution of military PT. Second, it gives the reader an understanding of timeless attributes found through the application of rigorous physical fitness examples. The historical descriptions include examples from worldwide martial cultures as well as a range of stories from the American military experience. Each of these examples, although not directly involved with USMC history, has particular applicability to today's USMC martial culture. A historical context is important because it communicates the necessity of PT in the military and the significance of each milestone.

A. EARLY WARRIORS

Throughout the course of modern history, a physically active life was mandatory in the profession of arms. Martial cultures throughout the world dedicated themselves to demanding training regimens, blending physical and mental disciplines in a quest for excellence and, in many cases, survival. Martial cultures were not the only segment of the populace dedicated to physical training. The common citizen was physically active, particularly those who worked in agrarian environments. The citizenry was often called upon to put down their plows and pick up arms in defense of the city-state or local town.

In the ancient Greek world of continual conflict, the physical demands of both citizens and military hoplites (infantry foot soldiers) were tremendous. "Fighting in the

[9] The Naval Aviation Physical Training Manuals, U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *Track and Field* (Annapolis, MD: Naval Institute Press, 1943), from the introduction, no page number listed.

ranks of the phalanx required utmost courage, excellent physical condition, and endurance."[10] The nature, style of combat and fighting conditions were punishing for the participants. Wearing armor and wielding a spear and shield demanded a superbly-conditioned human being, capable of enduring harsh environments.[11]

In particular, Spartan warfare also demanded much of combatants. Ethnic culture and training indoctrinated Spartan youth by familiarizing them with the rigors of battle. At the age of seven, Spartan boys would enter the "agoge." "Agoge" means "training" in Greek dialects, and served as an all-encompassing education and training regime geared to prepare young boys for future battles. Although the agoge had educational elements of music, dance and writing, it heavily favored sports, physical training and athletic competition.[12]

B. AMERICAN FIGHTING FORCES

From an American standpoint, military physical training has evolved alongside warfare's tactics and technology. Interestingly, "one would expect Americans in the 1700s and 1800s to be more rugged and fit than those of 1990, but in fact good American commanders have always found physical training to be a problem."[13] In spite of the predominant agricultural and rural landscape of early America, militia members and regular military struggled to assimilate physically into the military. Working and living off the land was demanding in and of itself, but the rigors of a battlefield were altogether different. As in years past, the civilian to military transition/adaptation process remains difficult today, regardless of the member's background or preparation. The requirement

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[10]Victor Davis Hanson, *The Western Way of War* (New York, NY: Oxford University Press, 1989), 31.

[11] Estimates are broad, but a hoplite's armor: breastplate, helmet, shield, spear, and leg/arm protection weighed in the range of 75 to 100 pounds. It was cumbersome, hot, and unwieldy. Individual warriors had an assistant for the sole purpose of maintaining the equipment.

[12]Available from http://en.wikipedia.org/wiki/Agoge. [database online] July 6, 2005.

[13]Colonel Michael D. Krause, United States Army. "History of U.S. Army Soldier Physical Fitness." *National Conference on Military Physical Fitness*, Proceedings Report, 1990. p. 1. This compilation of speeches, essays, and articles canvassed fitness issues then faced by the military services. The conference was presented by The President's Council on Physical Fitness and Sports and the Department of Health and Human Services. The report is a wealth of information and lends itself easily to discussion and debate. Unfortunately, the conference was the only one of its kind. An extensive database and document research effort revealed the inaugural conference has not been held since. It served as a major resource throughout this project.

that an all-volunteer military force must be indoctrinated via the challenges of boot camp or officer training eases the difficulty of civilian to military transition process.

The birth of a new, independent nation and the outbreak of the Revolutionary War presented an immediate need for military organization. The business of declaring independence, fighting the British and adopting a constitution in 1787, kept our founding fathers occupied during the early years of the Republic. Like legislative and political proceedings of the time, the formal establishment of a military organization was long and difficult. In the meantime, colonists fought in local militias and were loosely organized. Fighting battles and skirmishes was the order of the day. Again, physical capability was an extension of the time period's lifestyle more than any formal training would have provided. Formality in military fitness training was not a priority because of obvious and more pressing matters. "Life, liberty and the pursuit of happiness" were of great significance and early colonial militias (although not recipients of formalized military training) certainly met spirit of the nation's independence.

The 1800s brought continued challenges to the American military establishment. The physical demands of the battlefield were no different. Based on his previous wartime experiences, General Stonewall Jackson "insisted on long speed marches and similar physical challenges. As a result, the Stonewall Brigade displayed both stamina in maneuver warfare and discipline on the battlefield."[14] Physical endurance and battlefield adaptation improved under General Jackson's leadership and it is a testament to the toughness of these Civil War soldiers. Considering the health conditions and logistical challenges of the time period, it is amazing how effective many of these forces actually were. "A typical day's march in 1862, for example, carried Americans 28 miles with 60-pound packs, with no time to rest or eat. Yet, the Brigade was still ready to fight when it reached its destination."[15] Whether it was Stonewall Jackson's ability to inspire his men or the sheer tenacity of his soldiers, the results speak for themselves. Unfortunately, Jackson's troops and their level of physical conditioning were the period's exception rather than the rule. Commonly, hundreds, and in some cases, thousands of troops were

[14]Colonel Michael D. Krause, United States Army. "History of U.S. Army Soldier Physical Fitness." *National Conference on Military Physical Fitness*, Proceedings Report, 1990. p. 1.

[15]Colonel Michael D. Krause, United States Army. "History of U.S. Army Soldier Physical Fitness." *National Conference on Military Physical Fitness*, Proceedings Report, 1990. p. 1.

lost in transit from one battlefield to another. Through exhaustion, sickness, wounds or desertion, good physical endurance was not commonplace. For instance, "in his approach to the Battle of Antietam, Robert E. Lee lost 16,000 stragglers on the march—16,000 men that he desperately needed on the battlefield."[16] Any formality to fitness programs at the time would have been either coincidental or accidental, since no official programs had yet been implemented at an institutional level.

C. THE ROOTS OF ORGANIZED PHYSICAL TRAINING

In the 1860s, the intramural athletic program began to take shape in the United States. Modeled after English university programs, the movement surfaced in America. After a rocky start, the momentum became so great that a national intramural program was established in the early 1900s. "A realization that such a movement was not only desirable but, if properly administered, would make possible for every participant certain values of a social, physical, and mental nature."[17] Athletic competition is a large part of military culture, with informal sports leagues and contests a common occurrence. Today, military sports leagues, similar to those on college campuses and local communities continue to shape the social atmosphere on most military installations.

One of the first organized military physical fitness programs took shape at the United States Military Academy at West Point, New York. Although unknown at the time, this was a watershed event in the evolution of military PT. By the end of the Civil War, there were two events that shaped this eventuality. First, the German "Turnverein" movement began spreading to the United States. This movement "advocated a scientific approach to physical fitness and training."[18] Second, a man by the name of Herman Koehler, a son of German parents involved in the Turnverein, was appointed "Master of the Sword" at West Point. He was to remain in that position, overseeing the overall

[16] Colonel Michael D. Krause, United States Army Most Americans do not realize the significance of the Battle of Antietam. September 17, 1862 took a toll on human life never exceeded before or since in U.S. history. Arguably the most pivotal battle of the Civil War, the Battle of Antietam claimed roughly 23,000 American lives. To put that number in perspective, that's nearly **nine times** the number of killed and wounded on D-Day, June 6, 1944. On the heels of the battle, President Abraham Lincoln issued the Emancipation Proclamation, abolishing slavery in the Southern states.

[17] The Naval Aviation Physical Training Manuals, U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *The Sports Program* (Annapolis, MD: Naval Institute Press, 1943), 5.

[18] Colonel Michael D. Krause, United States Army. "History of U.S. Army Soldier Physical Fitness." *National Conference on Military Physical Fitness*, Proceedings Report, 1990. p. 2.

physical development of cadets until 1923. Koehler was appointed in 1885, and wasted no time implementing formal programs. Courses included work in gymnastics, fencing, swimming and calisthenics. "The West Point physical education program produced officers with at least a minimum of personal experience and knowledge of physical fitness."[19]

There were other visionary leaders who shared Herman Koehler's passion for physical fitness. In 1890, Army Lieutenant C.D. Parkhurst, wrote about the education of the American Soldier. In his writings, Parkhurst contended that "physical training should precede all specifically military activities with the exception of battle itself."[20] Some of the more popular sports were baseball and boxing. While baseball added a more pleasant diversion to the often mundane nature of military life, boxing was viewed in an entirely different light. Shunned by many, and illegal in many parts of the United States, boxing offered parallels to warfare that could not be replicated elsewhere. "The drama of fist fighting between equals presented a poignant if fleeting alternative to the ghastliness of battle. The violence of play offered meaning denied by the anarchy of war."[21] Boxing was used regularly as a training method as well as a competitive outlet for servicemen. Boxing also simulated the hand to hand combat demands of bayonet fighting so prevalent in WWI.[22] Boxing is still used today as a means of physical conditioning and forging toughness. As a mandatory requirement, it has a tremendous influence on Marines who participate in the Marine Corps Martial Arts Program (MCMAP).

19Colonel Michael D. Krause, United States Army. "History of U.S. Army Soldier Physical Fitness." National Conference on Military Physical Fitness, Proceedings Report, 1990. p. 2 The United States Military Academy at West Point is the oldest of the three Service Academies. Formally established in 1802, it enjoys the prominence associated with such a fine leadership institution. No less prominent, although younger, is the United States Naval Academy in Annapolis, MD, established in 1845. Last, but not least, is the United States Air Force Academy in Colorado Springs, CO. The youngest of the three, it has enjoyed tremendous success in athletic endeavors. All three institutions place a heavy emphasis on both intramural and varsity competitive athletics, and believe sports are a critical path to officer development. Therefore, physical fitness is a major priority at all three Service Academies. Navy has recently prevailed in head-to-head contests winning the Commander-In-Chief's trophy in football in 2003, 2004 and 2005.

20Steven W. Pope, "An Army of Athletes: Playing Fields, Battlefields, and the American Sporting Experience, 1890-1920." In *The Journal of Military History*, 59 (July 1995): 438. Lieutenant C.D. Parkhurst wrote a series of essays entitled: "The Physical Education of the Soldier."

21Steven W. Pope, "An Army of Athletes: Playing Fields, Battlefields, and the American Sporting Experience, 1890-1920." In *The Journal of Military History*, 59 (July 1995): 438.

22 Ibid, p. 446

D. PRESIDENTIAL INFLUENCE

At the turn of the 20th century, we know that physical fitness had a champion in the President of the United States. Theodore Roosevelt, a physically-active man (President Roosevelt overcame a serious health ailments as a child as a result of his rigorous approach to exercise) brought new meaning to the job of Commander and Chief of the military. President Roosevelt, troubled by the poor performance of soldiers in the Spanish-American war (himself a veteran of war in Cuba), reacted aggressively to this problem. He directed the Secretary of War to institute new standards of physical performance. "Every officer had to ride 90 miles on horseback or march 45 miles on foot within a three-day period. Roosevelt then exceeded his own standards by riding the required distance in two days, rather than three, over icy roads."[23] The President's level of involvement in the military's fitness standards is almost inconceivable today. Moreover, adhering to, and surpassing his appointed standards in unfavorable weather conditions was the epitome of leadership by example. It had to have endeared the military to its Commander-In-Chief.

E. WORLD WAR ONE

As the intramural movement gained momentum, competitive athletics flourished as well. The use of sports as a medium of training and prevention was particularly useful in the preparation for, and during World War One (WWI).

> Between 1917 and 1919 the armed services made sports and athletics central components of military life. Uniformed officers assumed a moral commitment to the soldiers' welfare and used sport initially to combat desertion, alcohol, and the lure of prostitution.[24]

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[23] Colonel Michael D. Krause, United States Army. "History of U.S. Army Soldier Physical Fitness." *National Conference on Military Physical Fitness*, Proceedings Report, 1990. p. 2. History gives readers a healthy position of objectivity. Reading about Theodore Roosevelt is a historic journey into the life of an incredible American. President Roosevelt led a full life of adventure. His accomplishments included, but were not limited to: Congressional Medal of Honor recipient as a military officer, Governor of New York, Police Commissioner of New York City, Assistant Secretary of the Navy, Vice-President of the United States, President of the United States, author, voracious reader, and active conservationist. Our nation still bears the fruit of seeds he planted a century ago.

[24] Steven W. Pope, "An Army of Athletes: Playing Fields, Battlefields, and the American Sporting Experience, 1890-1920." In *The Journal of Military History*, 59 (July 1995): 435-436.

Leaders of that time realized and harnessed the potential of PT to their advantage. Although fairly new in certain areas of the American experience, the military was one of the first organizations to implement fitness on a grand scale.

> Millions of men were introduced to sports for the first time and became converts to the cult of strenuousity. Officials embraced sport and athletics as the most effective means to cultivate national vitality, citizenship, and the martial spirit. Military training, infused with a heavy dose of sport and athletics, would not only train American men in the "soldierly values" of obedience, citizenship, and combat, but would also usefully repair class schisms and restore social order and patriotism to the nation.[25]

Essentially, the aims were two-fold. First, PT and would unify the participants by breaking down their individual tendencies and forcing them to concentrate on the greater good of the team. The shift in focus from an inward to an outward perspective substantiated the military's mantra of "selfless service." Second, athletics gave military officers an entirely different way to observe personnel. The athletic area usually revealed one of two things in the participants. Officers were able to observe either the strengthening or revealing of the participating athletes' character.

F. WEST POINT AND GENERAL DOUGLAS MACARTHUR

Upon assuming the duties as Superintendent at the United States Military Academy at the end of World War One (WWI), then Brigadier General Douglas MacArthur made sweeping changes to the institution. Many of these changes included the bolstering of an already stout physical fitness program. MacArthur, an ardent proponent of athletics, said that "nothing brings out the qualities of leadership, mental and muscular co-ordination, aggressiveness, and courage more quickly than competition. Physical qualities may well determine the destiny of the intellect."[26] Additionally, there were several other soldierly traits that could be awakened and developed through rigorous physical training:

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[25]Steven W. Pope, "An Army of Athletes: Playing Fields, Battlefields, and the American Sporting Experience, 1890-1920." In *The Journal of Military History*, 59 (July 1995): p.436.

[26]General Douglas MacArthur, *Reminiscences* (New York, NY: McGraw Hill Publishers, 1964), 82.

> The training of the athletic field which produces in a superlative degree the attributes of fortitude, self-control, resolution, courage, mental agility, and, of course, physical development, is one completely fundamental to an efficient soldiery.[27]

MacArthur's intent to bolster West Point's physical training was based on his WWI combat experiences. Disappointed by often unfit, poorly conditioned and undisciplined troops, he believed in a direct correlation between physical fitness and soldier morale. "The effect on the army at large of an extensive system of competitive sports, controlled by competent and well-prepared officers cannot be overestimated."[28]

General MacArthur also knew there was more to physical training than just strength and conditioning. For MacArthur, physical training was a military officer's duty not only to himself, but to his fellow soldiers.

> The problem of athletic training was one close to my heart. For years, athletics had consisted of an excellent system of military gymnastics, but it was apparent from the experiences of the World War that a course of training should be planned not only to fit future officers physically for the rigors of military service, but also to qualify them as physical directors and instructors of their future commands. They must learn, not only how to perform themselves, but how to teach others. They must understand the means by which then can most speedily and efficiently bring their men to the necessary physical condition. They must appreciate the practical details of physical instruction and be qualified to stimulate and inspire, as well as perform.[29]

The educational process of cadets included extensive training in military and academic subjects. Yet the practicality and applicability of physical training was just as, if not more important than the other educational subjects. According to MacArthur, proper physical development of cadets would then spread through the United States Army as the cadets made their way into the active ranks.

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[27]Clayton D. James, *The Years of MacArthur Vol. 1 1880-1941*. (Boston, MA: Houghton Mifflin Co., 1970), 281.

[28]Douglas MacArthur, *Reminiscences* (New York, NY: McGraw Hill Publishers, 1964), 81.

[29]Ibid. p. 81.

G. WORLD WAR TWO AND THE U.S. NAVY'S LEADERSHIP

World War Two upended the international balance of power. In order for Americans to meet and defeat the threats in the Pacific and European theaters of operation, a new type of training and preparation was implemented across the services. The U.S. Navy's example of this implementation was the most profound and illuminates the formality, scope, nature and execution of military PT on a large scale.

First, the United States Navy implemented one of the most comprehensive mass sports programs ever conceived. The significance of the world's threats was the primary driver in determining the program direction. Democracy was held in the balance of this zero-sum game. Executed at naval aviation training facilities around the country, cadets were quickly indoctrinated. This athletic program was

> designed to develop competitive spirit. Every cadet will learn there is no substitute for winning. Gracious defeat that has been a definite part of the sportsman's code during peace-loving days must be forgotten. In addition to the competition, there must be developed rugged, ruthless, determined competitors.[30]

The Navy recognized the severity and significance of this approach and competitive athletics played a major role in the much bigger picture of America's wartime involvement.

[30]The Naval Aviation Physical Training Manuals, U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *The Sports Program* (Annapolis, MD: Naval Institute Press, 1943), 3.

Figure 4. Naval Aviation Cadets Participating in the Sports Program[31]

H. INTRAMURAL PROGRAMS VS. THE US NAVY SPORTS PROGRAMS:

Although the Navy's consortium of coaches and commissioned officers used intramural programs as a model for their program, a clear distinction had to be made between intramural participation and the Navy's sports program[32]. Unlike the recreational nature of Intramural programs, the Naval Aviation Sports programs were much more aggressive. Exposure to several sports was compulsory during the initial months of aviation training. Contact sports and gymnastics were heavily emphasized while instilling a competitive spirit in cadet trainees was of utmost importance.

Competition was heavily emphasized as the sports program was officially implemented in June of 1942. Interpretation of the Navy's Physical Training manuals does indicate that sportsmanship was not altogether abandoned as the literature might otherwise indicate. Proper conduct, military decorum and discipline had to be maintained throughout the training. Therefore, proper sportsmanship had to have been present in

[31]The Naval Aviation Physical Training Manuals, U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *Mass Exercise, Games, Tests*, (Annapolis, MD: Naval Institute Press, 1943), 75.

[32]Ibid. pp. 7-8.

light of the aviation training environment. However, it is noted that the heat of athletic competition can often overshadow the pleasantries of officer conduct.

As a practical application of athletics, "competition between gun crews on the same ship, between ships of the same task force, between different task forces and divisions has been an important phase of all training."[33] Amidst the rigors of such training, the Navy knew that the results or competitive training would equip aviators with the right mental and physical skills to fly combat aircraft. The intent behind the Navy's emphasis on athletics was to "make each potential aviator a fearless, courageous, combatant capable of carrying on beyond ordinary human endurance, a Naval aviator so tough and coordinated physically that any hardships can be overcome."[34]

In addition to competition, PT was another main objective of the Navy's program. Together, competition and PT would complement each other and render an even stronger trainee. Additional motives of the program included, but were not limited to:

> A willingness to sacrifice for an ideal, to undergo untold hardships, to cooperate with others for a common cause. These attitudes could be awakened and developed to a great extent through highly organized and efficiently coached athletics.[35]

In today's parlance, this type of training doctrine may seem unnecessary or too straight forward to some. In some circles, even within the Department of Defense, this training approach would be unacceptable, too boorish. Yet, the unyielding demands of combat require well conditioned human beings, able to withstand the most horrific conditions. The uncertainties of today's terrorist foe demand the same capabilities of 21st century warriors. Sadly, training such as the Navy had in the early 1940s no longer exists on a large scale for conventional forces.

I. PRACTICAL EXAMPLES

Some military units went to extraordinary lengths to harden the resolve of trainees. In December of 1942, as the early parachute/light infantry divisions were being

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[33]The Naval Aviation Physical Training Manuals, U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *The Sports Program* (Annapolis, MD: Naval Institute Press, 1943), 4.

[34] Ibid. p.4.

[35]The Naval Aviation Physical Training Manuals, U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *The Sports Program* (Annapolis, MD: Naval Institute Press, 1943), 5.

established in the United States Army, the second battalion of the 101st airborne division accomplished an incredible feat of physical endurance. After reading that a Japanese army unit hiked 100 miles in 72 hours, Colonel Robert Sink, a regimental commander in the 101st, issued a challenge for one of his battalions. "My men can do better than that," he declared. From the training camp in Toccoa, Georgia, to Atlanta, these young Americans

> covered 118 miles in 75 hours. Of the 586 men and officers in the battalion, only twelve failed to complete the march. Lieutenant Moore's 3rd platoon of Easy Company was the only one in the 2nd battalion in which every man walked every step of the way on his own. As a reward, it led the parade through Atlanta.[36]

We know that as the years wore on, the scope and severity of the world's geopolitical and military environment changed as well. Some people believed that physical fitness was not important during the early Cold War years. With the threat of possible nuclear annihilation, training programs, particularly for ground combat units, were a low priority. Although a possibility, the validity of total nuclear destruction was not altogether realistic (excluding the imminent threat posed by the Cuban missile crisis.) In retrospect, this was a potentially irresponsible approach for any segment of the armed forces to adopt that kind of training mentality. Similar approaches to training emerged during inter-war years. The heightened threat of communism, nuclear proliferation, and American involvement in Vietnam quickly erased such approaches.

Today's fitness standards are different from those of years past. Like the USMC, the United States Army has modified its Physical Fitness Test (PFT) throughout the years. Today, the Army's PFT is comprised of push-ups, sit-ups and a two mile run. In 1946, for instance, the Army's PFT had an indoor and an outdoor variant, designed to test factors "essential to military physical fitness. The most important of these are muscular

[36] Stephen E. Ambrose, *Band of Brothers* (New York, NY: Simon & Shuster, 1992), 28-29. This story is a definitive account of one of the greatest light infantry organizations in military history. Written from the perspective of the junior officers and the Non-Commissioned Officers (NCOs), Stephen Ambrose was able to capture a unique aspect of military training, deployment and successful battlefield performance.

strength, muscular endurance, circulo-respiratory endurance, agility and coordination."[37] Though similar in intent, today's test and the one administered in 1946 are different in spirit and very different in execution. Arguably, the 1946 test is much more difficult in scope. The 1946 tests were broken down as follows:

Outdoor Tests:	**Indoor Tests:**
1. Pull-Ups	1. Pull-Ups
2. Squat Jumps	2. Squat Jumps
3. Push-Ups	3. Push-Ups
4. Sit-Ups	4. Sit-Ups
5. 300-Yard Run	5. Shuttle Run

Although today's tests still measure muscular strength and cardiovascular capacity, the tests of yesteryear appear to be more demanding both in progression and sequence. Not only does the Army's 1946 standard evaluate muscular strength, it also measures anaerobic capacity, athleticism and explosiveness. Pull-Ups, Push-Ups, and Sit-Ups are challenging in their own right, but anyone who has performed multiple sets of Squat Jumps or consecutive 300-yard runs (in addition to the other exercises) know that these drills alone can punish even the most well-conditioned athlete.

J. PURPOSE AND RELEVANCE

As mentioned before, physical fitness serves as a method of molding civilians into physically-hardened military personnel during entry-level training. Daily PT and regular performance tests give supervisory personnel an idea of the collective fitness level of each group. Depending on the initial level of group fitness, the unit's progress can be charted throughout training and reveal the overall effectiveness of the program. Specific needs and deficient areas of individuals are noted and special instruction or corrective work is implemented. Physical fitness, whether through entry level training, or later in

[37]Available from http://www.ihpra.org/1946. [database online] May 25, 2005. The IHPRA is the Iowa Health and Physical Readiness Alliance. This organization's website is dedicated to the health and physical well-being of the state of Iowa's citizens. The 1946 Army Physical Fitness test is used as a training tool by Iowa Army National Guard units to compare today's test results with World War Two's training standards.

operational or support units, "is important not only as the basis for the stamina necessary for warfare, but also because such fitness carries with it a psychological discipline that is essential to win."[38]

Today, the USMC's PFT differs only slightly from the other services' fitness evaluations. Conducted biannually, the USMC PFT is designed to evaluate upper body strength, abdominal strength and cardiovascular fitness[39]. Each respective military service has different achievement standards, but essentially, the scope of each service's PFT is the same. Each test attempts to measure upper body strength, midsection and abdominal strength, and cardiovascular capability. Only the United States Navy's PFT differs in that it adds a minor flexibility portion of the test. Each test is relatively simple to perform. The exams require little to no equipment and can be administered nearly anywhere, even aboard large-deck ships. Minor accommodations are made based on altitude or age, but for the most part, the tests are nearly exact in execution and conduct nearly anywhere. This is most certainly the case in the USMC.

K. CONSTANT THEMES AND BENEFITS OF RIGOROUS PHYSICAL FITNESS

We know that physical fitness in the military has evolved throughout the ages, particularly in martial cultures. The battlefield's demand for physically fit, enduring combatants has never relented. After studying this evolution, the author has drawn several conclusions regarding physical fitness in the military. These conclusions serve as timeless values that result from arduous PT. History and literature indicate numerous themes about military PT.

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[38]Available from http://www.ihpra.org/1946. [database online] May 25, 2005.

[39] The Marine Corps PFT is a biannual training requirement. It has three parts, pull-ups (flexed arm hang for females), crunches (modified sit-ups), and a three mile run. Each component has a maximum of 100 points for a total of 300 points. There are maximum and minimum standards for each part, and minimal accommodations are made for age and administering the exam at high altitudes. For example, a twenty-five year old male must perform twenty pull-ups, 100 crunches in two minutes, and run three miles in eighteen minutes to achieve the maximum 300 points.

Common Themes of Military Physical Training:

- **There is no substitute for challenging physical training (PT).**
- **Assists in the transformation from civilian to military environments.**
- **Yields confidence and a sense of accomplishment amongst the participants. "*The Harder the Training, the More People Brag.*"**
- **Enables Participants to adapt more easily to drastic shifts in situation.**
- **Strengthens to musculature of the body and the tolerance for discomfort.**
- **Builds and fosters esprit-de-corps in groups.**
- **Develops athletic skill.**
- **Provides a laboratory to observe human behavior under duress.**
- **Introduces adversity to people, some for the first time.**
- **Promotes a smart, military appearance in uniform.**
- **A team emphasis puts the needs of the individual aside for the greater interest of the collective group.**
- **Fosters a health-conscious disposition.**

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III. "SYSTEMS APPROACH" TOWARD FUNCTIONAL DIAGNOSIS

"No matter how great the inertia against it, there must be unremitting perseverance in the physical conditioning of military forces. If life is to be conserved, if men are to be given a fair chance to play their parts effectively, the physical demands during training cannot be less than will give them maximum fitness for the extraordinary stresses of campaigning in war."[40]

A. POINT OF DEPARTURE

Chapter III analyzes the Marine Corps' execution of its PT programs using the "Systems Approach." Additionally, the analysis provides an indication of the institutional fitness and readiness levels in the USMC. Different methods of review offer varying degrees of study, scrutiny and understanding. For the purposes outlined in this study, the systems approach is the most applicable process of problem identification, analysis and subsequent understanding. According to C. West Churchman,

> the systems approach is a straight forward and precisely rational method of reaching decisions about systems. It provides a novel and important arena for debate and enables it to be carried down to the very elements out of which policies are formulated.[41]

Churchman's systems approach is useful, but more importantly, it is an understandable method of program diagnosis and problem assessment. It is helpful to think of USMC PT programs as an entire "system" while each of its respective elements,

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[40]S.L.A. Marshall, *The Armed Forces Officer*. (Quantico, VA: Marine Corps Association Press, 1975), 214-215. Marshall's writing is a straight forward approach to the significance of a military officer's commission. Conceived by General George C. Marshall, the treatise contains timeless advice from both peacetime and wartime military officers. Its significance in the development of all military officers is particularly poignant.

[41]C. West Churchman, *The Systems Approach* (New York, NY: Dell Publishing Co., Inc., 1979), 93. Churchman uses the example of alcoholism and its range of problem identification, diagnosis, treatment and prevention as a means to communicate the elements of the systems approach. There are several key points to be gleaned from Churchman's writings. One of the most important lessons of Churchman's approach to systems thinking is that it is straightforward, rational approach to solving the complexities of major issues. The whole system must be thought of on a larger scale, after its respective sub-components have been studied.

or sub-programs, are studied in terms of their respective role in the larger scope of Marine Corps war fighting operations. Related sub-programs will be discussed in Chapter IV.

Figure 5. Boxing: An Integral Part of Military Physical Training[42]

B. PROBLEM IDENTIFICATION

The analysis of systems begins with a clear identification of a perceived or commonly known problem. Today, there appears to be a deficiency in the Marine Corps' ability to properly execute effective PT programs. The problem has been growing

[42] The Naval Aviation Physical Training Manuals, U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *The Sports Program* (Annapolis, MD: Naval Institute Press, 1943), 100.

steadily for several years, and the Marine Corps is in danger of missing the spirit and intent of Marine Corps Order (MCO) P6100.12. This order, by the admonition of the Commandant of the Marine Corps (CMC), states the elements of a proper unit Physical Conditioning Program (PCP). However, it is quite possible that the USMC is not executing MCO P6100.12 in scope, methodology and overall execution.

To some, these may be hasty or unfair generalizations. However, should the associated risks of improper, underutilized or non-existent PT programs be prevented through institutional debate, the criticism offered here is worthwhile. With USMC PT program execution as the centerpiece of the debate, this discussion strikes volatile chords throughout the institution as a whole. Ground combat units and infantry Marines may take particular offense. They place a premium on physical fitness due to their reliance on physical strength to perform occupational specialties. By reputation, PT is a cultural norm, and is often built into weekly and monthly training schedules. The response from aviation combat units may be much different, due to the different nature of their operational tempo and the technical requirements inherent to aircraft operations. The latter may not receive such findings with as much consternation.

S.L.A. Marshall's The Armed Forces Officer, outlines risks associated with a lack of rigorous physical fitness. The parallels to the USMC's current execution issues are startling.

> When troops lack the coordinated response which comes of varied and rigorous exercises, combat losses will be excessive and they will lack cohesion in the action against the enemy. In the United States, we are tending to forget, because of the effect of motorization and technology, the higher value of the discipline of the road march. In other days, it wasn't that it hardened the muscles, but that, short of combat, it separated the men from the boys. A hard road march is the most satisfactory training test of the moral strength of the individual.[43]

Marshall does not encourage officers to train their personnel with exhaustion as the sole objective. Rather, his writings emphasize "steadiness and continuity of exercise, not the working of men to the point of collapse, which keeps them upgrading until they

[43] S.L.A. Marshall, *The Armed Forces Officer*. (Quantico, VA: Marine Corps Association Press, 1975), 215.

are conditioned to the strain of whatever comes."[44] The USMC, well known for its toughness and gritty reputation, is making a potentially disastrous mistake if S.L.A. Marshall's words go without serious introspection and the possibility of subsequent remedial action.

There are indications that PT in the USMC has eroded incrementally over the course of several years. As early as 1975, when General Louis H. Wilson assumed the duties as the 26th Commandant of the Marine Corps, physical fitness standards were in decline. General Wilson, a Congressional Medal of Honor recipient from World War Two understood the importance of well trained, physically fit Marines. "'If I see a fat Marine, he's in trouble, so is his commanding officer.' Obesity would vanish, and every action of every Marine would be characterized by quality."[45] Upon General Wilson's assumption of command, the mindset of the entire institution took immediate action to remedy physical fitness and readiness levels throughout the USMC.

Further data highlights similar concerns with the physical readiness levels of Marines. Based on a study conducted by the U.S. Navy from 1993 to 1998, Navy and Marine Corps personnel accounted for $5,842,627 dollars worth of obesity-related inpatient care.[46] Part of this hospitalization cost is related to the waning strength and fitness levels of today's American youth. Although a seemingly perennial complaint for the USMC, the physical development of today's recruits presents an even greater challenge in today's age of technology and relative ease. In recent years,

> groups such as the President's council on Physical Fitness and Sport document that the average American youth appears to be in worse physical condition than in years past, especially in terms of upper body strength and muscular endurance. The typical American lifestyle, with

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[44]S.L.A. Marshall, *The Armed Forces Officer*. (Quantico, VA: Marine Corps Association Press, 1975), 216.

[45]Cyril O'Brien, "General Louis H. Wilson," *Leatherneck*, April 2003, 33. General Wilson, USMC (ret) passed away on June 21, 2005. He led the Marine Corps through some very tumultuous times during the post-Vietnam war years as the 26th Commandant of the Marine Corps (CMC). General Wilson was instrumental in the re-occupation of Guam in July, 1944. His actions warranted the nation's highest award for valor, the Congressional Medal of Honor.

[46] Since the U.S. Navy provides medical care and inpatient/outpatient treatment for Marine Corps personnel, the data indicated in the study considers both services. Specific breakdown by respective service was not available.

> dependence on riding rather than walking, sitting rather than standing, eating high-fat fast food, and endless hours of television or video games instead of outdoor activity has had its effect.[47]

As a result, the pool of potential recruits is not as physically capable as it was even twenty years ago. The demands placed on the USMC recruiters and recruit depots to transform civilian teenagers into United States Marines are becoming increasingly difficult. The Marine Corps has always placed a high premium on quality recruits and maintained high expectations for recruit training.[48] Due to the need for infantry and associated combat arms occupational fields, today's battlefield environment is as demanding as in years past. Therefore, in years to come, and in light of the Global War On Terror (GWOT), the demand for well-qualified, physically fit personnel will not subside. Due to societal influences and the aforementioned fitness levels of American youth, the available supply of quality recruits has declined, resulting in a less physically capable recruit demographic.

Consequently, the Marine Corps finds itself in a simple issue of supply and demand. As the demand for recruits continues to hold steady and the supply of qualified teenagers drops, the opportunity costs for USMC manpower levels will continue to rise. Will the Marine Corps lower their traditionally high standards? It remains to be seen what will actually occur in the recruit demographic of the next five, ten, and fifty years.

Mr. Harvey Newton, a Vietnam-era Marine infantryman, highlighted several key points in his 1998 Marine Corps Gazette article, "Marine Physical Fitness Training and Testing: A view from outside:"

> Physical conditioning has never been studied as thoroughly as it is today. Despite this, many active duty Marines glean their fitness training information from newsstand periodicals that focus primarily on appearance rather than functional performance. Dependence on this medium is common in both the military and civilian worlds, but it can lead

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[47]Harvey Newton, "Marine physical fitness training and testing: A view from outside," *Marine Corps Gazette*, February 1998, 2. The Marine Corps Gazette is the premier professional magazine of the USMC. Subjects such as military strategy, policy, tactics and current issues are regularly raised by both current and former Marines. Objectivity is encouraged, yet many of the articles stimulate intense institutional debate.

[48] Marine Corps recruit training remains the most difficult of the U.S. Armed Forces. It is longer in duration (13 weeks) than the other armed services, and male and female recruits remain segregated throughout the entire training period.

> to a questionable knowledge base. Training for functional strength that has an application to real-life situations is crucial for today's Marine.[49]

Mr. Newton's insights are accurate. Even amongst physically active Marines, bodybuilding protocols are a main (although misguided) approach to gaining muscular strength and cardio-respiratory response. The physical benefits are visible, and the aesthetic value associated with well toned, muscular bodies plays an important part in motivating individuals to exercise. Unfortunately, this approach is not easily implemented on the group level, and it does little to promote the muscular endurance and cardiovascular capabilities necessary for war fighting. Further, the individualistic nature of bodybuilding detracts from unit cohesion and group development.

Additional data supports the theory that PT in the USMC has eroded incrementally over time.

●Annually, the Marine Corps separates an average of over 7,000 Marines because of physical disability or misconduct.

●Together, separations from abuse of alcohol and weight control average an additional 789 Marines per year.

●On average, another 108 Marines die per year, most because of motor vehicle accidents, but one out of four (approximately 21) die by taking their own life.

●On average, another 108 Marines per year are lost due to death, physical disability, misconduct, alcohol, medical retirement, and weight control. The estimated dollar value for these losses (annually) is roughly $ 983 million. The manpower burden is equivalent to TWO INFANTRY REGIMENTS.

Although all of these statistics are not directly related to physical training, there are several indirect correlations. The financial implications total nearly a billion dollars annually, and in light of today's tremendous operational tempo, the manpower losses are just as significant. As a result of these statistics, the Marine Corps Community Services

[49]Harvey Newton, "Marine physical fitness training and testing: A view from outside," *Marine Corps Gazette*, February 1998, 6.

(MCCS) has developed a fitness and health promotions office at Headquarters, USMC. This office serves a central hub for health promotion funding, programming, information and training.[50]

C. THE SYSTEMS APPROACH AND USMC RELEVANCE

In the USMC's case, proper execution of PT has lost its emphasis for several reasons. Today's event-driven, short term "solution" thinking, technological conveniences, and lessened emphasis are major contributors. Should this be the case, Marines are missing tremendous opportunities for individual growth and unit cohesion. Regardless of the combat scenario, today's battlefield environment is as demanding as any conflict in the USMC's 230 years of existence.

In order to further assess this issue and authenticate the charge of improperly executed PT programs, the Marine Corps can frame the PT problem in a different light by adopting the systems approach. The commonly accepted and often benign approaches to USMC problem solving do lead to solutions, although their benefits tend to be shorter rather than longer. The systems approach yields a better diagnostic process to this difficult, yet vital issue. Potentially, the systems approach can lengthen and solidify the institutional memory of its members, providing a healthy change to conventional problem solving techniques. Although the process can often generate more questions than answers, it does serve as a catalyst for critical thought, analysis, consideration and hopefully, long term correction.

D. POTENTIAL CONTRIBUTORS: SHORT TERM VS. LONG TERM MINDSETS

The systems approach reveals several aspects of significant problem areas. The Marine Corps' PT program execution issue is an excellent example of how other factors contribute to the problem. The systems approach can provide a more in-depth analysis, and yield a more thorough diagnosis. In his book The Fifth Discipline, Peter M. Senge

[50]Available from http://www.usmc-mccs.org/fitnessrec/fithealthpromo.cfm [database online] August 15, 2005. The health promotion section of MCCS is organized under Headquarters, USMC, division Manpower and Reserve Affairs.

writes about the illusion of "taking charge" and solving problems. His writing raises essential questions for organizations, in this case, all levels of USMC leadership.

> Is taking aggressive action really synonymous with being proactive? All too often, 'proactiveness' is reactiveness in disguise. True proactiveness comes from seeing how we contribute to our own problems.[51]

If an organization states it will suddenly be "proactive," then a common belief is that problems will suddenly disappear. Often, the USMC's "proactive" plans often offer no more than cursory level recommendations, devised to appease supervisory echelons and divert attention to other command-related issues.

In many organizational cultures, the solutions posed to many institutional problems are readily accepted and can be very effective. Unfortunately, these solutions are usually good for short-term correction only, and have a useful life of a few weeks or months. Senge continues, "learning cannot be sustained in an organization if people's thinking is dominated by short-term events. If we focus on events, the best we can ever do is predict an event before it happens so that we can react optimally."[52] Senge's approach is not entirely negative since anticipating issues and preventing them or at least preparing for them, is not altogether unhealthy. The diagram below is a visual depiction of what can become a vicious cycle of desired results vs. actual program status and short-term emphasis on correction.

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[51]Peter M. Senge, *The Fifth Discipline* (New York, NY: Currency Doubleday Publishing Group, 1994), 21-22.

[52]Peter M. Senge, *The Fifth Discipline* (New York, NY: Currency Doubleday Publishing Group, 1994), 22.

Figure 6. Aggressive Problem Solving Can Lead To Short Term Solutions[53]

"Proactive" approaches to remedy issues may be disguised, actually reactive in nature, creating an unintended "law of diminishing returns." In essence, more energy, resources and manpower invested in this approach may not yield the best results. To make a simple comparison, the USMC's attempt to fix problems may often mirror that of a farmer planting crops in infertile soil. Regardless of the specific problem area, the USMC's attempts to remedy institutional shortfalls have been aggressively undertaken. These energetic attempts, particularly the more aggressive ones, may have been channeled in the wrong direction. The Marine Corps (although well-intended) has fallen into a trap that many large, bureaucratic institutions often encounter. All too often, organizational inertia and attacking problems by coming up with a "workable solution" has too easily accommodated the leadership establishment. Today's problem solutions

[53] Peter M. Senge, *The Fifth Discipline* (New York, NY: Currency Doubleday Publishing Group, 1994), 85.

might be better suited if recommended "solutions" were scrutinized more and accepted less readily. More importantly, the short and long term implications of these decisions must be addressed at length.

If the preponderance of current thinking is geared toward dealing solely with the immediacy of complex events, then long term prevention and organizational growth are potentially undermined by the "here and now." Should major problems surface, their significance cannot be ignored. Short-term, event-driven "solution" thinking will not help an organization in unfamiliar territory. The collective mindset that fosters short-term solutions as a byproduct of short-term thinking will quickly fade, and organizational confusion will result. Should this happen continuously and repeatedly, the organization will eventually fail due to its collective inability to generate resolution for long term recovery and operation.

The systems approach is an effective method of analysis and problem diagnosis.[54] PT programs in the USMC can be better studied through the straight forward methods of the systems approach. There have been several indicators that PT programs in the USMC have been losing their effectiveness throughout the years. From General Wilson's experiences as the CMC in 1975, to the costs associated with health related hospitalizations, the significance of these issues is still apparent in today's USMC environment. The Marine Corps should consider the PT program at length prior to implementing corrective action. Quick solutions often lend themselves to short term effectiveness, and do not promote institutional health in the long run. If the Marine Corps can use the systems approach to improve its diagnosis of problems, the long term implementation of change will be much more effective.

[54]C. West Churchman, *The Systems Approach* (New York, NY: Dell Publishing Co., Inc., 1979). Although this sentence is not a direct result of actual text, the formulation of the statement comes from Churchman's writing. It is therefore cited for authenticity, proper academic credit and administrative continuity.

IV. DIAGNOSIS OF PHYSICAL TRAINING PROGRAMS IN THE MARINE CORPS

"Fighting men must deal in violence and shock. They must be geared to it both physiologically and psychologically; they must accept it as a part of their stock in trade."[55]

A. PROBLEM ROOTS AND IMPORTANT QUESTIONS

When ascertaining the validity of this asserted problem, numerous questions surface. Primarily, it is important to know the basis of USMC PT program objectives. Are the current approaches to PT programs based on educational, preventative, reactive or readiness initiatives? In addition to determining the basis of program objectives, there are unanswered questions that relate to a decline in the Marine Corps' PT programs. These questions are critical in the diagnosis of the issue.

Are the USMC's issues a management control and accountability issue? Has Headquarters, USMC been unclear in outlining its intent for institutional PT? Are the competing time interests too burdensome for Fleet Marine Force (FMF) units? Is the operational tempo too high for full, effective implementation? Does the Physical Conditioning Program (PCP) have adequate resources in order to meet its requirements? Is the spirit of the order being met on the individual level, but not the group level, or vice-versa? As an institution, has the Marine Corps allowed itself to become complacent with a more lackadaisical, businesslike or casual approach to PT? Questions abound as the program is put to the test of internal scrutiny. Each question poses a legitimate issue of concern to be addressed either formally or informally via the systems approach.

The questions continue. In the current climate of resource scarcity, is there a fear that a newer, more functional approach to PT will cost too much in terms of time, money, and human capital? Has the USMC geared PT to simply preparing Marines for the biannual Physical Fitness Test (PFT) rather than "focus on combat conditioning, health,

[55] The Naval Aviation Physical Training Manuals, U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *Boxing* (Annapolis, MD: Naval Institute Press, 1943), vii.

fitness, and unit cohesion"[56] Or is this issue simply a matter of human resistance to changing the status-quo? Is the status-quo good enough to meet minimum standards? Has the USMC convinced itself that the status-quo is good enough when the truth may lie elsewhere?

Answering any and all of these questions thoroughly is an extensive undertaking for the Marine Corps. The accompanying analysis may require quantifiable standards in order to chart progress. However, qualitative analysis may be just as effective for questions that do not have quantifiable or measurable metrics. Any type of associated analysis will require Marine leaders to rely on their experiences and observations, make subsequent assumptions and derive conclusions, often from incomplete or unavailable data sets.

Although these questions are important, Churchman might recommend the study remain focused on the most significant issues, and the overall objectives. Critical to the study are questions that assist in the proper framing of the problem, their subsequent explanation, and the formulation of ideas that assist in truly understanding the problem at hand. Therefore, in the case of USMC PT, it is important to understand the true meaning of PT as a properly executed system. What are the associated advantages and disadvantages and how does PT fit into the larger scope of USMC operations? Conversely, it is as important to know the actual status of PT in its current state, and which contributing factors potentially result in a dysfunctional environment. What should then be done as a result? After fully understanding the problem and how it relates to the systems approach, the solution's objectives begin to clarify themselves. One way to clarify objectives is by breaking the USMC's PT program down into sub-programs.

B. EFFECTIVE SYSTEMS APPROACH SUB-PROGRAMS FOR USMC PT

Amidst the wide range of questions raised in the study, Chuchman's recommendation to keep the study focused on the most significant issues and objectives is particularly useful. Although the questions posed earlier are valid in their own right, they have varying levels of significance in the scope of the study's overall objectives. In

[56] MCO P6100.12 Chapter 1 page 1-3. This section of the MCO outlines the basic objectives and overall program focus for the Physical Conditioning Program (PCP). This portion of the MCO illustrates the importance of the program which also supports the overall scope and responsibility therein.

order to keep the study focused on only the most pertinent questions and issues, a breakdown of the USMC's PT programs is necessary. A proper understanding of the problem becomes clearer if the PT program as a whole is broken down into individual sub-programs. These sub-programs fall in line with the spirit of MCO P6100.12, and support the PT's role in the larger scope of USMC operations. They also assist in understanding the USMC's PT program as an entire system, recommending longer term solutions while solidifying the institutional memory of the USMC. They provide direct insight and offer possible answers to the questions mentioned earlier in the chapter.

Figure 7. Aggressive Physical Training Prepares Military Personnel for Dangerous Duties[57]

The sub-programs will have an accompanying readiness status ("Red," "Yellow" or "Green." Red will signify an "off-track" status while green will signify an "on-track"

[57] The Naval Aviation Physical Training Manuals, U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *The Sports Program* (Annapolis, MD: Naval Institute Press, 1943), 146.

status. Yellow will indicate a "needs more attention" status). The associated status will illuminate the current level of effectiveness.

The sub-programs were determined with specific aims in mind. They relate directly to, influence, or stem from the effectiveness of PT programs in the USMC. They also provide answers to overarching questions pertaining to the study's research questions. Additionally, the sub-programs take an unconventional, but understandable approach to problem diagnosis. The preponderance of these particular sub-programs is based on years of observation and behavior exhibited by Marines in numerous field and garrison environments. These sub-programs include, but are not limited to:

1. Thorough Knowledge of MCO P6100.12

This requires in-depth reading and understanding by senior enlisted and officer personnel. All Marines, regardless of rank, must have a basic knowledge of the program's basic tenets. It is particularly important for Marines of the rank E-4 (Corporal) and below to understand the order's contents. At these levels, Marines' promotion eligibility, and "cutting" score is directly affected by their physical fitness level. More points earned on the biannual PFT mean more points toward future promotion. More importantly, a working knowledge of this document is also mandatory, as it is an official Marine Corps Order (MCO) directed by the CMC.

Observed Status: YELLOW

In general, Marines are physically active, and enjoy participating in a variety of physical activities. Most Marines understand the basic components of physical fitness from exposure during entry level training. Although PT can take place at either the individual or collective level, it can be either misguided or ineffective, depending on the knowledge base and motivation of the participant. This approach reveals a basic knowledge of PT, but generally fails to capture the intent of MCO P6100.12. The effectiveness of training may be knowledge-based, but deficiencies may result from not properly understanding MCO P6100.12.

2. Athletic Background/Experience

Collegiate or High School experience is a tremendous advantage for anyone in charge of command PT programs. Marine Corps Martial Arts Program (MCMAP) instructor certifications or other related backgrounds are helpful for effective program implementation. S.L.A. Marshall would support this recommendation.

> In the nature of things, the officer who has been an athlete can fit himself into this part of the program with little difficulty and with great credit, provided he acts with moderation. The armed services put great store by this. A man with a strong flair for physical training can usually find a good berth.[58]

Should a respected and capable officer foster a spirit of physically-related activity, competition and coaching, the results are almost guaranteed to surpass expectations. In the event that some Marines do not have extensive athletic experience, it should by no means preclude them from full participation. A concerted effort, paired with creativity and sound organizational skills, can mitigate a lack of athletic prowess.

Observed Status: YELLOW

The majority of Marine Corps personnel have had exposure to organized athletics. Although the nature and specificity of backgrounds differ, there are some athletic commonalities that can be found within the USMC's ranks. Most Marine Corps approaches to PT are geared more toward PFT preparation than they are toward competition, strength development, cardio-respiratory response and athletic training. PFT preparation is not entirely bad, but the benefits of other athletic pursuits can provide simultaneous PFT conditioning and effective strength and conditioning drills. Repetitive and PFT-specific training has a tendency to focus less on athleticism, strength development and increasing lung capacity.

3. Willingness to "Level the Playing Field"

Supervisory personnel, particularly officers, should be more than willing to participate in athletic pursuits with all ranks.

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[58]S.L.A. Marshall, *The Armed Forces Officer*. (Quantico, VA: Marine Corps Association Press, 1975), 216.

Figure 8. Rigorous Physical Training Yields a Tremendous Sense of Accomplishment

> The highest form of physical training that an officer can undergo is the physical conditioning of his own men. Men like to see their officers competing and 'giving it a good college try' no matter how inept or clumsy they may be. But they take a pretty dim view of the leader who perennially acts as if he were afraid of a sweat or a broken thumb. There is nothing in the customs or the services which prohibits an officer to participate among enlisted men.[59]

"Leveling the playing field" allows an officer to compete with fellow Marines without alienating himself or compromising standards of professionalism. It humanizes the

[59]S.L.A. Marshall, *The Armed Forces Officer*. (Quantico, VA: Marine Corps Association Press, 1975), 217.

leader, often putting him in a position of vulnerability. It also enables the officer to lead, and possibly prove himself in an altogether different environment.

The opportunity for informal observation of assigned personnel (and for personnel to observe their supervisory officers), especially in the heat of competition or duress, can reveal previously unbeknownst behavior characteristics. The mundane nature of the office or workshop environment can unintentionally stifle Marines' competitive spirit while providing a habitat for cynicism and parochialism. Rigorous physical activity, particularly group activity, can remove these unhealthy detractors. In either case, full participation should be emphasized to eliminate these petty, unnecessary distractions. Marshall continues, "what counts mainly is that he should fully understand the prime importance of a personal caring for his men, so that they cannot fail of a better life if it is within his power and wisdom to lead them to it."[60] An aggressive PT program may not be the most popular or well-received initiative, but its necessity and long-term results should not be ignored.

Observed Status: RED

Some senior enlisted and officer personnel in the conventional forces are hesitant to participate with their fellow Marines, particularly if the participants are junior in rank. The reasons are varied, but many older Marines have allowed themselves to maintain only minimum USMC standards and have lost the edge necessary for higher individual readiness levels. Other hesitations lie in their fear of "looking bad" or a feeling that they are somehow above such training. Interestingly, "it should be perfectly clear that the man who has had the least active experience in this field is usually the in greatest need of its strengthening effects."[61] All officers and senior enlisted personnel must evoke a rekindled spirit of participation, and be willing to "level the playing field."

4. Creativity and Imagination

The success and morale of a unit's PT program is directly proportional to the creativity and resourcefulness of its leadership. Predictability, repetition and mindless

[60]S.L.A. Marshall, *The Armed Forces Officer*. (Quantico, VA: Marine Corps Association Press, 1975), 219.

[61]S.L.A. Marshall, *The Armed Forces Officer*. (Quantico, VA: Marine Corps Association Press, 1975), 216.

drills do nothing for the morale and competitive spirit of the participants. This kind of training, common among USMC units, is primarily geared to prepare Marines for the PFT. There is minimal exertion required, and although group participation is good for esprit-de-corps, the realized benefits of such training are often minimal. Young Marines resent the repetition, monotony and predictability of such events. On the other hand, uncertainty, diversity, and variation in PT events work extremely well in nearly any command environment. This approach also works well in the development of games, team-related fitness, individual strength and endurance events and "gut checks." Any approach that embraces a functional, randomly varied and intense approach to PT will almost certainly be successful in injecting the participants with a new attitude. Deployments and austere environments can serve as obstacles to effective PT. In the event that conventional equipment or a gymnasium is unavailable, creativity becomes a tremendous ally. Rocks, logs, trees, car axles and truck tires substitute nicely as excellent training aids. Creativity and ingenuity can overcome theses minor inconveniences. In the event of a gunfight, it is highly recommended that PT cease until the source of hostilities is neutralized, at which time the drills can resume.

Observed Status: YELLOW

There have been admirable attempts by Marine personnel to improve local PT programs. Although these efforts are noteworthy, they have not been particularly effective. In most cases, the sequence of the same drills is changed, when the overall scope, type and execution of PT is where change is truly needed. Some of the most effective changes take place when Non-Commissioned Officers (NCOs) are charged with the design and implementation of a group PT plan. Results are almost always favorable, although long term sustainability remains questionable.

5. Willingness to Learn

In order for long term change to occur, participants must be willing to learn new fitness protocols, games and competitions. From an observer's standpoint, younger officers and enlisted personnel are particularly flexible when it comes to new drills. Resistance is always greater in the more senior enlisted and officer ranks. New, unconventional approaches do not always bode well with the more experienced

personnel. Those who have experienced success with the current system, or who have been able to hide amidst the shadows of the status quo, are likely to shun new coaching methods. Like any human endeavor, new approaches to PT can enlighten even the most knowledgeable enthusiast and create new opportunities for personal growth. In turn, consistent athletic coaching can eventually convince even the most hard core resistors. By and large, a teachable spirit is refreshing and enables almost endless possibilities for growth.

Observed Status: GREEN/YELLOW:

Traditionally, young enlisted Marines and junior officers are amongst the most impressionable members of a unit. The can also be the most teachable. Their willingness to learn new fitness skills and desire to tackle new problems is one of the best aspects of any leader's job. The growth potential in this area of the USMC rank structure is nearly unlimited. Again, resistance is usually greater in the more senior enlisted and officer ranks. There are exceptions of course, but senior personnel are particularly resistant to change, especially if that change requires demanding PT regimens. Depending on the approach, implementation and leadership, the level of effectiveness at this segment of the rank structure can be either positive or negative.

6. Documentation of Progress

From a unit cohesion level, the maintenance of a record board in a corporate area the outlines exceptional feats, accomplishments and records. Exceptional performances can be substantiated with digital photos and video clips. Devised drills that have associated lessons and military tie-ins are particularly successful. Assigning a time element to drills forces participants to think and participate in order to maximize point totals. Earned points can then be used as an incentive to lead the next PT session, design workouts, or as a means to foster competition among the group. Drills can be designed that purposely develop participants' strengths and weaknesses. By assigning a myriad of complex fitness drills, participants will gain confidence when forced to confront their fears. The indirect development of competitive mindsets cultivates team spirit, closes the gender gap and provides a means to improved unit cohesion.

Observed Status: YELLOW

The Marine Corps can always benefit from a more effective approach to training documentation at the individual and group level. Pictures can often capture the essence of training much better than the written or spoken word. However, written documentation is important to chart progress and describe the details of training events. The information is also helpful for counseling entries and monitoring the improvement of assigned personnel, particularly if they have a significant deficiency or weight control issue.

USMC PT Sub-Program Summary:

- **Knowing Thoroughly MCO 6100.12**
- **Cultivating Athletic Skills**
- **Involvement Of All Ranks**
- **Providing An Interesting and Varied Program**
- **Improving Knowledge of Fitness Methods and Program Execution**
- **Documenting Progress**

The roots of PT program effectiveness run deep within the USMC organizational culture. Application of the systems approach assists in the determination of causal factors, associated questions and related sub-programs. Considering the vast breadth and depth of the issue, the various sub-programs help by focusing on the study's most important issues and objectives. They also communicate pertinence to the USMC's current PT issues.

V. MAJOR THEMES AND RECOMMENDATIONS

"Every Marine must be physically fit, regardless of age, grade, or duty assignment. Fitness is essential to the day-to-day effectiveness and combat readiness of the Marine Corps. Furthermore, physical fitness is an indispensable aspect of leadership. The habits of self-discipline required to gain and maintain a high level of physical fitness are inherent to the Marine Corps way of life and must be a part of the character of every Marine. Marines who are not physically fit can be a detriment to the readiness and combat efficiency of their unit. Accordingly, every Marine will engage in an effective Physical Conditioning Program (PCP) on a continuing and progressive basis."[62]

A. MAJOR THEMES OF THE STUDY

The research process introduced several important themes of Marine Corps PT programs. The purpose of this chapter is to restate those themes, explain them and use them as a basis to identify potential courses of action for local commanders. The study's most prevalent themes include the following:

1. Physical Fitness has a long history and is an integral part of USMC training and battlefield performance

Throughout the course of martial history, cultures worldwide have demanded physically fit members. Strategy, tactics and technology have all changed, but the inherent need for physically fit military personnel has remained constant.

[62]Marine Corps Order (MCO) P6100.12. Physical Conditioning Program (PCP) Chapter 1, paragraph 1100.

Figure 9. Challenging PT Improves Situational Awareness

Initial indoctrination periods for enlisted recruits and officer candidates in the USMC are physically very demanding. These physical fitness demands support the transition from civilian life to the profession of arms. Exposure to and emphasis on physical fitness is integral to USMC training. Today, a common PT standard unifies all Marines, regardless of occupational field, in the conduct of daily operations and the semi-annual Physical Fitness Test (PFT.)

2. The Systems Approach provided an alternative method of scrutinizing and organizing PT programs in the USMC

Using C. West Churchman's Systems Approach (SA), the author was able to understand PT programs from a different perspective. The SA enabled the author to view the complexities of USMC PT programs as a "system." Elements of the PT programs were then broken down into sub-categories and assigned a status of current effectiveness.

Viewing USMC PT programs as a system simplified the issue's inherent complexities. The SA provided a useful and fresh perspective and enriches the USMC's commonly-accepted, more traditional approaches to problem solving. If applied properly, the SA can usefully identify the potential pitfalls of short term solution thinking. Moreover, the SA can supersede short term thinking and provide more effective, long term correction.

3. The sprit and intent of official Marine Corps directives are clear and concise.[63] The official directives give Marines the "what" to do, without specifying "how" to do it. Essentially, the directives issue Commandant of the Marine Corps (CMC) intent, and leave program execution up to leaders at all levels.

An individual study of Marine Corps Order (MCO) P6100.12 gives the reader a straightforward understanding and appreciation of CMC intent for PT. Conversely, responses from the study's survey indicate that Headquarters, USMC has been only somewhat clear in communicating its intent for institutional PT programs[64]. It appears that although the most Marines know how to access official orders and directives, they are either not required to read them, or do not have an immediate need or desire to know their contents. Therefore, in-depth institutional knowledge of the orders is not prevalent (while important, the details of the documents are not nearly as critical as the embracing the spirit and intent behind physical fitness programs.)

[63]While multiple official orders and directives relate to PT in the USMC, this study focused primarily on Marine Corps Order (MCO) P6100.12 w/change 1.

[64]The study's web-based survey asked: "How clear has Headquarters, USMC been in outlining its intent for group and/or individual PT (Orders, Directives, ALMARS, etc?)" The largest category of respondents, 46.3%, responded "Somewhat Clear." 31.5% responded "Very Clear" while 19.4% responded "Vague" and 2.8% responded "Unclear."

Figure 10. Russian "Kettlebells" Are a Staple of Combat Fitness

By issuing his intent through MCO P6100.12, the CMC gives Marines at all levels a unique leadership opportunity. As long as implementation meets the CMC's intent, the "how" of conducting USMC PT programs is left to the creativity and imagination of Marine Corps leadership. The results of this process have the potential to infuse uncommon energy and motivation levels into local units.

4. As an institution, the Marine Corps is executing PT programs on a regular basis. However, subsequent to entry-level enlisted or officer training, the spirit and intent of Marine Corps Order (MCO) P6100.12 loses momentum.

The USMC is highly skilled at training enlisted recruits and officer candidates. In both environments, there is a predominant emphasis on PT. Unfortunately, the USMC is only moderately effective at sustaining these high levels of physical readiness subsequent to entry level training.[65]

The specific reasons for lack of effective sustainment PT are beyond the scope of this particular study. Without stating an additional hypothesis or assumption, potential reasons for this drop in physical readiness include, but are not limited to a high tempo of deployments and operations, lack of emphasis at the local level, apathy, competing interests, or higher priorities set forth by the local commander.

5. Observation, experience and survey results show that PT is highly valued throughout the institution. It is a cultural norm and widely accepted.

Personal experience as a Marine Officer enabled the author to obtain candid, frank and direct comments regarding PT in the USMC[66]. The author's personal background, particularly as a Marine Corps Martial Arts Program (MCMAP) instructor, was also helpful in the study. Personal experience also revealed that Marines respond extremely well to the challenges presented by difficult physical fitness regimens.

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[65]The survey asked: "The USMC is very adept at conditioning recruits and officer candidates during entry level training (Boot Camp, Officer Candidate School (OCS), etc). Subsequent to entry level training, how effective is your MOS community at *sustaining* the PT levels of these Marines? The majority, 55.1% responded "Moderately Effective," while 12.1% responded "Very Effective," and 32.7% responded "Ineffective."

[66]Throughout the research process, the author conducted numerous formal and informal interviews with fellow officers from all the military services. It was evident, especially in conversations with Marines, that PT is highly valued at both the institutional and individual level. The importance of PT, especially at the individual level, cannot be overstated. One officer, while assigned to Fallujah, Iraq in 2004 used PT to counter the effects of a combat environment. He worked for seven consecutive months without a day off in an extremely hazardous situation. Working fourteen-hour "graveyard" shifts, he would find a way to perform dozens of pull-ups and hundreds of other calisthenics-style exercises. In an interview upon his return to the U.S., he said "PT was the one gift I could always give myself."

Empirical evidence highlighted a number of these favorable responses. They include heightened situational awareness, improved morale and the erosion of organizational cynicism[67].

Survey results clearly indicated that PT is a commonly accepted aspect of Marine Corps culture. The vehemence of comments in the survey's response section show that although not all Marines agree on the best approach, type or style of PT, it is still an important, unifying element of the Marine identity. Survey respondents included experience from both peacetime and wartime environments.

SUMMARY OF MAJOR THEMES IN THE STUDY:

- **Physical Fitness is an integral part of USMC training and battlefield performance.**
- **The Systems Approach provided an alternative method of scrutinizing, organizing and viewing PT as an entire "system." .**
- **The sprit and intent of official Marine Corps directives are clear and concise[68].**
- **Subsequent to entry-level enlisted or officer training, the spirit and intent of effective PT programs is being lost.**
- **PT is highly valued and widely accepted throughout the USMC**.

Figure 11. Officers and Enlisted Personnel "Leveling the Playing Field"

[67]From January, 2002 to June 2004, the author conducted over thirty separate fitness evolutions with strictly volunteer participants. PT sessions were unconventional and specifically designed to test not only physical capabilities, but also the mettle of officer and enlisted participants. For participants dedicated to the program, the positive results were tremendous, and far surpassed the list of results listed above.

[68]While multiple official orders and directives apply to PT in the USMC, this study focused primarily on Marine Corps Order (MCO) P6100.12 w/change 1.

B. RECOMMENDATIONS

It is recommended that PT continue to maintain a predominant presence in Marine Corps culture. It is an integral part of the Marine Corps' history, mystique and battlefield prowess. For many Marines, PT is an integral part of their psyche, honed regularly in preparation for future contingencies. It is incumbent on Marine leaders at the tactical level, and to an even greater degree, the operational level, to seize the initiative and meet the Commandant's intent for PT.[69] MCO P6100.12 is clear. The flexibility inherent to CMC intent provides leaders with tremendous freedom to tailor PT programs in support their respective operational challenges. Additionally, the flexibility of CMC intent can serve as a catalyst for active program execution throughout the institution. More effective execution will further strengthen the value of PT in Marine culture.

In an attempt to execute PT programs more effectively, this study will offer two options to local commanders. First, the MCMAP has tremendous potential to reinvigorate local units. The tenets of MCMAP provide Marines with the physical tools necessary to defend themselves and their fellow Marines. In the process, carefully designed conditioning and cohesion exercises provide rigorous PT protocols for individual and group improvement. Just as important, the mental and character disciplines that complement the physical disciplines give the program a comprehensive approach. Teaching Marines to use judicious force, study martial cultures of the past and to think about the consequences of their behavior are just some of the lessons available through MCMAP.

Thus far, MCMAP has had mixed results. Just as there are risks associated with any element of USMC operations, leaders should be advised that there are also risks of physical injury in the MCMAP. There are several approaches to counter these risks. Well-prepared instruction, hands-on coaching and a challenging curriculum have proven effective in the mitigation of potential risks. Under the auspices of physical, mental and character development, the potential for individual and collective improvement far outweighs the potential risks.

[69]While execution is imperative at the tactical level, leaders at the higher, more influential, operational level can emphasize implementation for greater participation.

Second, there is a comprehensive physical fitness program called CrossFit, available in the public domain of the World Wide Web[70]. It can be accessed at www.Crossfit.com. CrossFit is a randomly varied, high intensity PT program that is executed for short time durations. CrossFit can also be described as having:

> universal scalability making it the perfect application for any committed individual regardless of experience. We've used our same routines for elderly individuals with heart disease and cage fighters one month out from televised bouts. We scale load and intensity; we don't change programs.[71]

The CrossFit program's diversity means it can be easily adjusted to fit the needs of any Marine Corps unit.

CrossFit's creativity and unconventional approach to physical development meets the stipulations set forth in the Commandant's intent for USMC PT programs. When compared to today's mainstream physical fitness models, the drills available through CrossFit are as challenging as they are unique. Each day, a new "Workout of the Day" (WOD) is posted on the website. Challenges include gymnastics, Olympic-style weightlifting, running and plyometrics. Some WODs focus on a single exercise while others blend multiple exercises together. For example, some drills are designed to be performed at random order over a designated amount of time. CrossFit's commitment to strength and conditioning transcends traditional approaches to PT.

Figure 12. CrossFit: Functional, Unconventional and Intense

[70] CrossFit can be accessed at www.Crossfit.com. A more detailed explanation can be found in Appendix D.

[71] Available from http://www.crossfit.com/cf-info/what-crossfit.html [database online] October 31, 2005.

Accessibility to CrossFit is enhanced due to the internet. USMC units in a garrison or field environment can gain access as long as connectivity is available. In the event that internet access is unavailable, CrossFit maintains an active set of workout archives that can be downloaded for use at another time. The permutations and combinations of archived workouts are virtually limitless.

Figure 13. CrossFit: A Flexible Approach to Physical Training

While the MCMAP and CrossFit are not the only PT options for local commanders, they do offer a comprehensive, well-rounded approach. Both programs meet the spirit and intent of the Commandant's guidance. Both programs are also extremely difficult. They require emphasis by the chain of command, consistent dedication, a willingness to learn and a tolerance for physical discomfort. Upon implementation, both programs may also be bet with resistance. It will require a bold commander to implement one or both programs. With that in mind, the two programs

provide revolving challenges for Marines. The USMC's battle record indicates that as an institution, it has thrived on challenge. The MCMAP and CrossFit are promising approaches to PT that support this premise.

This study serves mainly as a starting point. While it can be used for numerous purposes, it originated in the spirit of the Commandant's intent for PT. By addressing the main issue of PT programs in the USMC, the study challenged several commonly accepted institutional assumptions. Hopefully, this study helps Marines challenge these assumptions. There are a number of directions that further study of PT in the USMC can take. With that in mind, future formal or informal studies can apply and expand many of the themes found in this thesis. In addition, local commanders can use the MCMAP and/or CrossFit as effective alternatives to PT.

APPENDIX A: THE RESEARCH JOURNEY

In the quest to obtain data for this thesis, *Physical Training in the United States Marine Corps: History, Current Practices and Implications for Mission Accomplishment and Human Performance,* the research process yielded more questions than answers. In this research undertaking, the search for previous studies was lengthy and did not yield promising results. Aside from the research results, the learning process was valuable and proved that Physical Training (PT) in the United States Marine Corps (USMC) needs more official inquiry. This discussion outlines the results of the research process, describes efforts to obtain data and highlights the methods of inquiry.

In general, limiting the scope of the study to the USMC alone would better establish personal credibility. Any criticism of the USMC's current practices would be better received if it came from within service ranks. Keeping the scope fairly narrow also prevented the thesis from becoming too large. Although unintended, this approach had significant consequences. There is a vast amount of information related to Army, Navy and Air Force physical fitness, training and readiness. Conversely, there is limited information in the public domain pertaining to USMC Physical Training. There is even less information that actually applied to this particular thesis. For a service that has a tradition of physically fit and well-conditioned personnel, the minimal amount of literature on the subject is surprising. Therefore, had the study been expanded to include all Department of Defense (DOD) uniformed services, applicable and useful data would have been plentiful. Although personal credibility could have come into question with respect to the other services, taking a broader, DOD-wide approach would, in retrospect, have served the study's purposes better.

As a general rule, information pertaining to this thesis was substantial. In Chapter Two, for instance, pertinent information about physical fitness/physical training (PT) in the military as a whole was accessible via the internet and written textbooks. Since the same chapter was dedicated to the *history* of physical fitness in the military, the author accessed several older and out-of-print books in order to conduct research on past PT practices in the United States military. Although several sources provided useful insight, the best and most abundant information came from two sources.

The Naval Aviation Physical Training Manuals provided the most comprehensive explanation of group physical training. The manuals also described the athletic development of military personnel in intricate detail. Published by the United States Naval Institute in the early 1940s, these manuals described the scope and execution of physical training given to cadet aviators in naval flight training. Each of the twelve volumes published also described the theory and intent behind the demands of such training. Each volume included photos and descriptions of athletic training, competitive drills and PT.

World War Two (WWII) was the impetus for the manuals' creation. Simultaneously, a consortium of the nation's best athletic coaches and military officers created one of the most successful group fitness programs in the United States. The Naval Institute published the consortium's twelve volumes beginning in 1942. Subsequent printings continued into the 1950s, none published thereafter. Today's cadet aviation training emphasizes some of the methods highlighted in the original manuals. However, today's indoctrination training is less intense and does not emphasize athletics, competition and fighting skills.

Second, a written copy of the proceedings of the National Conference on Military Physical Fitness provided extensive information about military physical fitness. All of the uniformed services provided articles, essays and speeches at the forum which took place in 1990 and was sponsored by the conference, was presented by The President's Council on Physical Fitness and Sports and the Department of Health and Human Services. The report has a wealth of information and lends itself easily to discussion and debate. Unfortunately, the conference was the only one of its kind. In 1984, the military conducted a conference sponsored by the United States Army War College. It ran for seven days in Eugene, Oregon, but its significance is minor when compared to the 1990 symposium. Today, both the President's Council on Physical Fitness and the Department of Health and Human Services provide informative websites regarding general health issues. Unlike 1990's national conference, the Department of Defense (DOD) no longer confers with other federal agencies about PT and military physical fitness.

As the process continued, the search for updated, relevant and data specific to the USMC intensified. Using access to multiple databases courtesy of the NPS library, the

author searched dozens of articles, professional journals and other published pieces regarding military physical fitness and PT. Sources of information included, but were not limited to, medical journals, NPS thesis files, the NPS "Bosun" digital catalog, United States Army War College files, Pro-Quest Information and Learning Company, J-STOR Scholarly Journal Archives, the Naval Health Research Center, www.fedstats.gov, the Center For Disease Control and Prevention (CDC), the Consortium of Naval Libraries, Global Defense Information, InsideDefense.com, Defense Technical Information Center (DTIC), the Military Education Research Library Network (MERLIN), Air University Library Index to Military Periodicals (AULIMP), Army Physical Fitness Research Institute, usmilitary.about.com, Science.gov, the Journal of Military History, USMC records at the National Archives, Marine Corps Community Services (MCCS), the Human Systems Resource Center, the American Council on Exercise, the American Public Health Association and the Naval Environmental Health Center. The Library of Congress, a wealth of information regarding legislation and governmental oversight, did not have records pertaining to physical fitness in the military. Both www.house.gov and www.senate.gov had information regarding the military service through their respective Armed Services committees. However, nothing pertaining specifically to physical training and the USMC was evident.

Using multiple combinations of the keywords "Physical Training," "Physical Fitness," "Military Physical Fitness," "Military Physical Training," "Physical Training in the USMC," "Fitness AND USMC," "Statistics," "Fitness Statistics in the USMC," each search engine rendered vastly different results (these were but a few of the combinations of words and phrases used to generate links to information). The defense related databases such as DTIC generated more useful leads than other sites, but the overall response to each inquiry was varied. Specific inquiries yielded different results (depending on the database searched), and the significance/applicability of the results were just as varied as the responses themselves. The non-DOD related search methods such as Pro-Quest yielded the greatest variation in results. Many searches yielded responses such as "Hollywood Abs" and "Fast Slim-Down Strategies." Articles generally related more to aesthetics than combat conditioning.

The research effort also revealed that there is nearly unlimited information available in the public domain about general health and physical fitness. That is, the preponderance of available information is a result of civilian medical studies and research. Regardless of the search attempt, the internet was a tremendous asset, accessibility to databases and other electronic resources being easy. Unfortunately, information about health care and physical training was primarily geared to the general American population. Although informative, most of it simply did not apply.

Most information applicable to the study was generally inferential and of a qualitative nature. Numerical results were rare and generally less applicable. Database searches turned up many opinion and editorial articles. Some of them were useful and were incorporated into the study. The NPS research librarians assisted in the research process on three separate occasions and their results were similar to the author's personal attempts.

The major takeaway from the research endeavor was that each service within the DOD has done extensive research into the realm of physical fitness, each service, *except* the USMC. Even though the USMC is a service within the Department of the Navy, the Navy's studies pertained to sailors alone. The Army and the Air Force have done extensive studies and have published large amounts of information on the effects of PT, physical fitness and the impacts of fitness on leadership. The Naval Health Research Center in San Diego, CA has done studies on the behavioral, psychological and demographic predictors of physical fitness. The Army War College has studied the effects of fitness on leadership at senior officer levels. The Marine Corps, according to database searches, has not published nearly the same amount of research. For a service that prides itself on physical readiness and training, there is a remarkably small official, service-sponsored, or experimental data published.

There is some useful information about Marine PT programs although not especially applicable to this study. There is some quantitative data available, compiled primarily in graduate studies. The content of the studies generally consider the semi-annual USMC Physical Fitness Test (PFT). Although the studies are interesting, they answer entirely different albeit useful research questions. Some of these studies mentioned studies are scientific, but do not address the more complex (and often

undefined) issues of PT's connectedness to human performance, relations with fellow Marines, mission accomplishment and morale. The PFT-related studies tend to demonstrate that the PFT does work well for the USMC and that it is a useful method of measuring individual performance. It is a good indicator of individual physical fitness levels, although it measures only a part of overall fitness. More importantly, the PFT is a semi-annual training event. It is not comprehensive, does not simulate the punishing demands of anaerobic muscular endurance, and is usually conducted under favorable weather conditions. The PFT studies were often based on ideal conditions or a within the confines of a controlled environment. Controlled environments are often essential when conducting scientific lab work, testing models or for the purposes of measuring results. However, the uncertainties of an austere, combat environment are far from controlled, and less than ideal. Again, applicability was a major reason why available information could not be put to use.

For studies about the PFT, the author determined that their respective purposes vary greatly. Moreover, difficult questions receive little, if any attention. For instance what, if anything, works better than the PFT? What should the USMC be doing differently than what is being done now? What are the associated risks, benefits and unanswered questions? What works good? What works better? What works best? Can the Marine Corps do something better for generating esprit de corps, re-instilling discipline and fostering higher levels of physical fitness? Has the USMC allocated manning and financial resources in the wrong areas? Has the USMC led itself to believe that it is physically more capable than it actually is? More scrutiny of the PT/PFT issue inevitably leads to more uncertainty and questions in the research process.

As a result, the potential for future PT studies is extensive. From a PT program standpoint, these questions are cause for introspection. Up to this point, there has been limited data in the USMC to prove it, but field experience reveals, due to a preponderance of evidence, that there is an attainable, cost-effective approach to doing things better. It is reasonable, attainable and foreseeable to change the way the USMC conducts PT. The explanation of CrossFit and MCMAP in Chapter V are good indicators.

The research process yielded minimal applicable data. In an attempt to gather perceptions, insights and personal experiences, the author generated a basic web-based survey which was distributed to the Marine Officer population (@ 225 Marines) at NPS. The NPS Marine Officer population comprises a wide range of occupational fields (infantry, aviation, logistics, etc) which provided a useful diversity of perspectives and professional experience. The author was particularly interested in responses from combat-arms Marines and how they would compare to the responses from Marines in supporting/logistical roles. The advantage to using a web-based survey was that it could compile the responses in "real-time."

APPENDIX B: SURVEY

Physical Training in the United States Marine Corps Exit this survey >

1. Welcome

September 2005

Dear Fellow Marines,

The purpose of this survey is to determine current perceptions with respect to Physical Training (PT) in the United States Marine Corps (USMC). The data compiled from this survey will be used in my Master's Thesis: Physical Training in the United States Marine Corps: History, Current Practices and Implications for Mission Accomplishment and Human Performance.

All answers will remain confidential, as all names will be converted to numbers. In the event that you provide specific information that is useful to the study, it will not be associated or attributed to you as an individual. Your cooperation is helpful and I appreciate your assistance.

Please fill out the electronic survey no later than 7 October 2005. It will be active on the NPS intranet from 26 September 2005 through 7 October 2005. The survey will take approximately 20 minutes.

Please contact me with any questions. Thanks again for your assistance with this research.

Very Respectfully,

Captain Andrew J. Thompson, USMC

Physical Training in the United States Marine Corps Exit this survey >

2. Participant Consent Form and Minimal Risk Statement

* **1. Introduction: You are invited to participate in a study entitled Physical Training in the United States Marine Corps: History, Current Practices and Implications for Mission Accomplishment and Human Performance being conducted at the Naval Postgraduate School.**

Please read the following statements before proceeding.

Procedures: If I agree to participate in this study, I understand I will be provided with an explanation of the purposes of the research, a description of the procedures to be used, identification of any experimental procedures, and the expected duration of my participation. Synopsis: There will be two sessions. One is multiple choice and the other is an optional narrative section to highlight specific experiences or recommendations you might have. The entire survey should take 20 minutes to complete.

Risks and Benefits: I understand that this project does not involve greater than minimal risk and involves no known reasonably foreseeable risks or hazards greater than those encountered in everyday life. I have also been informed of any benefits to myself or to others that may reasonably be expected as a result of this research.

Compensation: I understand that no tangible reward will be given. I understand that a copy of the research results will be available at the conclusion of the experiment.

Confidentiality & Privacy Act: I understand that all records of this study will be kept confidential and that my privacy will be safeguarded. No information will be publicly accessible which could identify me as a participant, and I will be identified only as a code number on all research forms. I understand that records of my participation will be maintained by NPS for five years, after which they will be destroyed.

Voluntary Nature of the Study: I understand that my participation is strictly voluntary, and if I agree to participate, I am free to withdraw at any time without prejudice. I also understand I may refuse to answer any particular question.

Points of Contact: I understand that if I have any questions or comments regarding this project upon the completion of my participation, I should contact the Principal Investigator, Captain Andrew J. Thompson, USMC (817) 706-0532 ajthomps@nps.edu or Professor Leslie Sekerka (831)-656-2811.

Statement of Consent: I have read and understand the above information, including the nature and purpose of this study, the risks and benefits involved, as well as the option to withdraw at any time. I have asked all questions and have had my questions answered.

By clicking on the "Yes" button, I am acknowledging that I have read and understand this information and that I agree to voluntarily participate in this

online survey. I also understand that I may discontinue at any time simply by exiting this website.

- Yes
- No

Physical Training in the United States Marine Corps Exit this survey >

3. Survey: Section One

*** 1. What is your Military Occupational Specialty (MOS) numerical code and written description (i.e. 7562 CH-46 Pilot)?**

2. Time in Service: (check only one)

- Less than 5 years
- More than 5 years
- More than 10 years
- More than 15 years
- More than 20 years

3. Based on your experience, how have USMC Physical Training (PT) programs affected your unit's performance?

- Significantly
- Noticeably
- Adequately
- Not At All

4. Based on your experience, what is your overall perception of PT programs in the USMC?

- Outstanding
- Above Average
- Average
- Inadequate
- Unacceptable
- Other (please specify)

5. Should the USMC scale its PT standards to account for the myriad of combat arms and support-related MOSs?

- Yes
- No
- Other (please specify)

6. The USMC is very adept at conditioning recruits and officer candidates during entry level training (Boot Camp, Officer Candidate School (OCS), etc). Subsequent to entry level training, how effective is your MOS community at *sustaining* the PT levels of these Marines (consider occupational field schools as a part of this process)?

- Extremely Effective
- Very Effective
- Moderately Effective
- Ineffective

7. How clear has Headquarters, USMC been in outlining its intent for group and/or individual PT (i.e. Orders, Directives, ALMARs, etc)?

- Very Clear
- Somewhat Clear
- Vague
- Unclear

8. Assuming you are in a field environment, how critical would PT be in the execution of your job?

- Essential
- Important, but Not Essential
- Not Critical
- Irrelevant

9. Is physical conditioning a natural part of your primary MOS functions?

- Yes. Physical conditioning is a byproduct of my MOS, especially when conducting field exercises.
- No. Regardless of MOS demands, PT is still required outside of the normal job parameters.
- Other (please specify)

10. Based on your experience, select the five (5) most important important elements of PT.

- Muscular Strength

- [ ] Cardiovascular Capabilty
- [ ] Anaerobic Capacity
- [ ] General Physical Endurance
- [ ] Athleticism
- [ ] Health and Wellness
- [ ] Fitness
- [ ] Combat Conditioning
- [ ] Weight Control/Weight Management
- [ ] Appearance/Aesthetics
- [ ] Other (please specify)

11. Throughout your career, has PT been emphasized and exemplified consistently by your superiors in the Chain of Command?

- ◯ Regularly
- ◯ Sometimes
- ◯ Rarely
- ◯ Never
- ◯ Emphasized but not exemplified
- ◯ Exemplified but not emphasized

12. In your experience, has the Marine Corps Martial Arts Program (MCMAP) been implemented regularly?

- ◯ Yes. MCMAP is implemented regularly in my unit's PT program
- ◯ Yes. But MCMAP is not emphasized or implemented often enough.
- ◯ No. Our unit has not implemented MCMAP enough for it to be effective.
- ◯ No. MCMAP is too dangerous and causes too many injuries.
- ◯ Other (please specify)

13. In your opinion, how effective is the MCMAP?

- ◯ Extremely Effective
- ◯ Very Effective
- ◯ Moderately Effective
- ◯ Ineffective
- ◯ Other (please specify)

14. What is the highest belt level you have achieved in the MCMAP?

- None
- Tan
- Gray
- Green
- Brown
- Black +

15. In your experience, have USMC PT programs been a means to prepare Marines for the Physical Fitness Test (PFT) or a means to prepare personnel for combat?

- PFT Preparation Based
- Combat Conditioning Based
- Both
- Neither
- Other (please specify)

Physical Training in the United States Marine Corps Exit this survey >

4. Survey: Section Two

This section of the survey is designed to add additional information, share professional experience or amplify any of your previous responses.

1. Include any additional insights regarding PT in the USMC.

Physical Training in the United States Marine Corps Exit this survey >

5. Thank You

This concludes the survey. Thank you for taking the time to complete the questions. Your responses will be extremely helpful in my thesis work.

Semper Fidelis,

Captain Andrew J. Thompson, USMC

APPENDIX C: SURVEY RESULTS

These results were automatically generated by the program www.surveymonkey.com.

SurveyMonkey.com
because knowledge is everything

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Saturday, October 29, 2005

Results Summary Show All Pages and Questions Export... View Deta

Filter Results
To analyze a subset of your data, you can create one or more filters.

Edit Filter... **Total:** 115 **Visible:** 107

Share Results
Your results can be shared with others, without giving access to your account.

Status: Enabled
Reports: Summary and Detail

2. Participant Consent Form and Minimal Risk Statement

1. Introduction: You are invited to participate in a study entitled Physical Training in the United States Marine Corps: History, Current Practices and Implications for Mission Accomplishment and Human Performance being conducted at the Naval Postgraduate School.
Please read the following statements before proceeding.
Procedures: If I agree to participate in this study, I understand I will be provided with an explanation of the purposes of the research, a description of the procedures to be used, identification of any experimental procedures, and the expected duration of my participation.
Synopsis: There will be two sessions. One is multiple choice and the other is an optional narrative section to highlight specific experiences or recommendations you might have. The entire survey should take 20 minutes to complete.
Risks and Benefits: I understand that this project does not involve greater than minimal risk and involves no known reasonably foreseeable risks or hazards greater than those encountered in everyday life. I have also been informed of any benefits to myself or to others that may reasonably be expected as a result of this research.
Compensation: I understand that no tangible reward will be given. I understand that a copy of the research results will be available at the conclusion of the experiment.
Confidentiality & Privacy Act: I understand that all records of this study will be kept confidential and that my privacy will be safeguarded. No information will be publicly accessible which could identify me as a participant, and I will be identified only as a code number on all research forms. I understand that records of my participation will be maintained by NPS for five years, after which they will be destroyed.
Voluntary Nature of the Study: I understand that my participation is strictly voluntary, and if I agree to participate, I am free to withdraw at any time without prejudice. I also understand I may refuse to answer any particular question.
Points of Contact: I understand that if I have any questions or comments regarding this project upon the completion of my participation, I should contact the Principal Investigator, Captain Andrew J. Thompson, USMC (817) 706-0532 ajthomps@nps.edu or Professor Leslie Sekerka (831)-656-2811.
Statement of Consent: I have read and understand the above information, including the nature and purpose of this study, the risks and benefits involved, as well as the option to withdraw at any time. I have asked all questions and have had my questions answered.
By clicking on the "Yes" button, I am acknowledging that I have read and understand this information and that I agree to voluntarily participate in this online survey. I also understand that I may discontinue at any time simply by exiting this website.

Response Percent	Response Total

Yes	**100%**	**107**
No	0%	0
	Total Respondents	**107**
	(filtered out)	**8**
	(skipped this question)	**0**

3. Survey: Section One

1. What is your Military Occupational Specialty (MOS) numerical code and written description (i.e. 7562 CH-46 Pilot)?

View	**Total Respondents**	**107**
	(filtered out)	**2**
	(skipped this question)	**6**

2. **Time in Service: (check only one)**

	Response Percent	Response Total
Less than 5 years	6.5%	7
More than 5 years	25.9%	28
More than 10 years	**41.7%**	**45**
More than 15 years	22.2%	24
More than 20 years	3.7%	4
	Total Respondents	**108**
	(filtered out)	**-1**
	(skipped this question)	**8**

3. **Based on your experience, how have USMC Physical Training (PT) programs affected your unit's performance?**

	Response Percent	Response Total
Significantly	17.6%	19
Noticeably	30.6%	33
Adequately	**39.8%**	**43**
Not At All	12%	13
	Total Respondents	**108**
	(filtered out)	**-1**
	(skipped this question)	**8**

4. **Based on your experience, what is your overall perception of PT programs in the**

USMC?

	Response Percent	Response Total
Outstanding	5.6%	6
Above Average	**40.7%**	**44**
Average	32.4%	35
Inadequate	10.2%	11
Unacceptable	0.9%	1
View Other (please specify)	10.2%	11
Total Respondents		**108**
(filtered out)		**-1**
(skipped this question)		**8**

5. **Should the USMC scale its PT standards to account for the myriad of combat arms and support-related MOSs?**

	Response Percent	Response Total
Yes	20.4%	22
No	**74.1%**	**80**
View Other (please specify)	5.6%	6
Total Respondents		**108**
(filtered out)		**-1**
(skipped this question)		**8**

6. **The USMC is very adept at conditioning recruits and officer candidates during entry level training (Boot Camp, Officer Candidate School (OCS), etc). Subsequent to entry level training, how effective is your MOS community at *sustaining* the PT levels of these Marines (consider occupational field schools as a part of this process)?**

	Response Percent	Response Total
Extremely Effective	0%	0
Very Effective	12.1%	13
Moderately Effective	**55.1%**	**59**
Ineffective	32.7%	35
Total Respondents		**107**
(filtered out)		**-1**
(skipped this question)		**9**

7. **How clear has Headquarters, USMC been in outlining its intent for group and/or individual PT (i.e. Orders, Directives, ALMARs, etc)?**

	Response Percent	Response Total
Very Clear	31.5%	34
Somewhat Clear	**46.3%**	**50**
Vague	19.4%	21
Unclear	2.8%	3
Total Respondents		**108**
(filtered out)		**-1**
(skipped this question)		**8**

8. **Assuming you are in a field environment, how critical would PT be in the execution of your job?**

	Response Percent	Response Total
Essential	18.5%	20
Important, but Not Essential	**53.7%**	**58**
Not Critical	24.1%	26
Irrelevant	3.7%	4
Total Respondents		**108**
(filtered out)		**-1**
(skipped this question)		**8**

9. **Is physical conditioning a natural part of your primary MOS functions?**

	Response Percent	Response Total
Yes. Physical conditioning is a byproduct of my MOS, especially when conducting field exercises.	14.8%	16
No. Regardless of MOS demands, PT is still required outside of the normal job parameters.	**82.4%**	**89**
View Other (please specify)	2.8%	3
Total Respondents		**108**
(filtered out)		**-1**
(skipped this question)		**8**

10. **Based on your experience, select the five (5) most important important elements of PT.**

	Response Percent	Response Total
Muscular Strength	67.3%	72
Cardiovascular Capabilty	81.3%	87

Anaerobic Capacity	16.8%	18
General Physical Endurance	**86.9%**	**93**
Athleticism	11.2%	12
Health and Wellness	62.6%	67
Fitness	45.8%	49
Combat Conditioning	59.8%	64
Weight Control/Weight Management	49.5%	53
Appearance/Aesthetics	20.6%	22
View Other (please specify)	1.9%	2
Total Respondents		**107**
(filtered out)		**0**
(skipped this question)		**8**

11. **Throughout your career, has PT been emphasized and exemplified consistently by your superiors in the Chain of Command?**

	Response Percent	Response Total
Regularly	29.6%	32
Sometimes	**53.7%**	**58**
Rarely	13.9%	15
Never	0%	0
Emphasized but not exemplified	2.8%	3
Exemplified but not emphasized	0%	0
Total Respondents		**108**
(filtered out)		**-1**
(skipped this question)		**8**

12. In your experience, has the Marine Corps Martial Arts Program (MCMAP) been implemented regularly?

	Response Percent	Response Total
Yes. MCMAP is implemented regularly in my unit's PT program	13.1%	14
Yes. But MCMAP is not emphasized or implemented often enough.	**35.5%**	**38**
No. Our unit has not implemented MCMAP enough for it to be effective.	31.8%	34
No. MCMAP is too dangerous and causes too many injuries.	6.5%	7
View Other (please specify)	13.1%	14
Total Respondents		**107**

(filtered out)	-1
(skipped this question)	9

13. **In your opinion, how effective is the MCMAP?**

	Response Percent	Response Total
Extremely Effective	8.3%	9
Very Effective	14.8%	16
Moderately Effective	**41.7%**	**45**
Ineffective	17.6%	19
View Other (please specify)	17.6%	19
Total Respondents		**108**
(filtered out)		-1
(skipped this question)		8

14. What is the highest belt level you have achieved in the MCMAP?

	Response Percent	Response Total
None	15.7%	17
Tan	**47.2%**	**51**
Gray	22.2%	24
Green	9.3%	10
Brown	4.6%	5
Black +	0.9%	1
Total Respondents		**108**
(filtered out)		-1
(skipped this question)		8

15. **In your experience, have USMC PT programs been a means to prepare Marines for the Physical Fitness Test (PFT) or a means to prepare personnel for combat?**

	Response Percent	Response Total
PFT Preparation Based	**53.7%**	**58**
Combat Conditioning Based	5.6%	6
Both	29.6%	32
Neither	7.4%	8
View Other (please specify)	3.7%	4
Total Respondents		**108**
(filtered out)		0

(skipped this question)	7

4. Survey: Section Two

1. Include any additional insights regarding PT in the USMC.

View Total Respondents	62
(filtered out)	1
(skipped this question)	52

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APPENDIX D: SURVEY INTERPRETATIONS

SURVEY RESULTS AND EXISTING DATA:

In an attempt to address the study's research questions, a web-based survey was designed to gather perceptions and experiences of Marine Officers assigned to the Naval Postgraduate School (NPS). The survey included questions regarding the officer's occupational field or Military Occupational Specialty (MOS)[72] years of total military service, and Physical Training (PT) in the United States Marine Corps (USMC). The survey was divided into two parts. The first section included multiple-choice and short-answer questions. The second section was an optional narrative portion, designed to provide a forum for written discussion unavailable in section one.

Of the approximately 225 officers petitioned, 50.6% (114 officers) responded. The responders were from a good cross section of MOSs. Officers from 29 different occupational fields shared insights, experiences, perceptions and opinions. Respondents also represented a healthy cross section of land combat arms (infantry, artillery, etc), aviation (pilots, flight officers, maintainers) and support-related (logistics, communications, intelligence) MOSs.

Of the 114 Marine Officers that responded, 41.7% had more than 10 years experience. Those with at least 5 years, but less than 20 years of experience, accounted for 89% of the participants[73]. Respondents can therefore be regarded as a seasoned, experienced and well-rounded population of Marine Officers. The respondent demographic also reflects the typical student officer profile of the NPS.

Most respondents agree (78%) that the USMC has been somewhat to very clear in outlining its intent for group and individual PT. Seventy-eight percent (78%) of respondents felt that PT programs in the USMC were at least average, and maintain minimum USMC physical fitness standards. Forty point seven percent (47%) of

[72]For the purpose of this discussion, the terms Military Occupational Specialty (MOS) and "occupational field" are synonymous and will be used interchangeably.

[73]Experience base per respondent varied. The breakdown is as follows: 25.9% had more than 5 years, 41.7% had more than 10 years and 22.2% had more than 15 years of USMC experience. Collectively, the 89% of the respondents had at least 5 years, but less than 20 years of service.

respondents felt that USMC PT programs were above average, and a small 5.6% of respondents indicated that PT programs in the USMC are outstanding.

The USMC has a number of occupational fields. Jobs encompass a wide range of specialties from administrative clerks and cooks to jet aircraft pilots and infantrymen. Taking the range of MOSs into consideration, the survey asked if the USMC should scale its PT standards to account for the differences between the physically demanding MOSs, and the more administrative, less physically demanding MOSs. Seventy four percent (74%) of respondents were opposed to scaling PT standards. They agreed that one PT standard should apply to all Marines, serving more as a common thread to maintain service identity than a means to physically harden Marines for combat. In the same vein, the survey results indicated that one common standard would continue to promote a "Rifleman First" attitude throughout the USMC.

While PT is commonly accepted and inherent to the USMC's organizational culture, survey results indicate that sustaining high levels of physical fitness is a more difficult proposition. The USMC is adept at conditioning enlisted recruits and officer candidates during entry level training. The survey specifically asked how effective PT programs were at sustaining high levels of physical fitness subsequent to Boot Camp or Officer Candidate training. Eighty eight point one percent (81.1%) of respondents felt that USMC PT programs were either only moderately effective or ineffective at sustaining fitness levels after entry level training.

Another question asked how critical PT is the execution of duties in a field environment. Fifty three point seven percent (53.7%) of the respondents felt that PT was important, but not essential. Only 18.5% of the respondents felt PT was essential to job execution in a field environment. One of the most telling responses revealed that 27.8%, or over a quarter of the respondents, felt that PT was either not critical or irrelevant in the execution of their duties.

Although many of the physically demanding MOSs naturally lend themselves to PT in the conduct of daily duties (especially in a field environment), most USMC occupational fields do not. Unless otherwise specified by higher headquarters, PT is often conducted on either an individual or small group basis. In some cases, although rare, PT is not emphasized and even ignored entirely. Aside from institutional

participation in PT, the survey asked if physical conditioning was a natural part of primary MOS functions. Eighty two percent (82%) of the survey respondents agreed that physical conditioning, regardless of MOS demands, is required outside of the normal job parameters.

Using a list of 10 significant elements of PT, the survey asked participants to identify five of the most important. The 10 elements were chosen by the author based on personal observation and experience[74]. All of the elements include, but are not limited to, reasons why people participate in PT. The 10 elements of PT included in the survey were (in no particular order) muscular strength, cardiovascular capability, anaerobic capacity, general physical endurance, athleticism, health and wellness, fitness, combat conditioning, weight control/weight management and appearance/aesthetics. The survey's results found the five most important elements of physical fitness to be (in order of precedence and % of respondents): general physical endurance (87%), cardiovascular capability (81%), muscular strength (67%), health and wellness (63%) and combat conditioning (60%.)

Another question asked if PT has been emphasized and exemplified consistently by superiors in the chain of command. Fifty-four percent (54%) of respondents felt that PT is sometimes emphasized and exemplified by superiors. Thirty percent (30%) of respondents stated that PT is regularly emphasized and exemplified by superiors. Fourteen (14%) felt that PT was rarely exemplified by superiors in the chain of command.

There were three survey questions related to the Marine Corps Martial Arts Program (MCMAP). One question dealt with implementation, the other with MCMAP's effectiveness and the last question queried the audience about their respective level of certification. The MCMAP has five basic levels of certification which are represented by colored belts. Upon earning a subsequent belt level certification, the recipient is then authorized to wear the belt with the basic utility uniform.

[74]This list was generated by the author based on personal experience, Marine Corps Order (MCO P6100.12) and observation. Five years of intercollegiate athletics, nine years of commissioned service as a Marine Officer, a background of fighting skills in the Marine Corps Martial Arts Program (MCMAP), and experience as a CrossFit certified trainer all served as the impetus for the survey list.

The survey's results show the questions regarding the MCMAP received the greatest degree of variation. Only 23% of respondents felt the MCMAP was very or extremely effective. Conversely, 59% felt that the MCMAP was either moderately effective or ineffective. Eighteen percent (18%) responded altogether differently and included 19 short answer responses.

Thirteen percent (13%) of respondents indicated that the MCMAP has been implemented regularly into unit PT programs. Thirty-six percent (36%) responded that although MCMAP had been implemented, it was neither heavily emphasized nor used to maintain learned skills. Thirty-eight (38%) of respondents indicated that MCMAP was either not implemented or too dangerous. Thirteen (13%) of respondents added other insights in short essay format.

When queried regarding the respective certification level, 63% of respondents were either not qualified or had only achieved the first certification level. The four subsequent belt certification levels represented 37% of the total respondents combined. The data shows that the majority of the MCMAP questions were answered by Marine Officers who were either basically or unqualified in the program.

The last question of the survey asked if PT programs in the USMC were a means to prepare Marines for combat or the semi-annual Physical Fitness Test (PFT). Fifty-four percent (54%) of respondents felt that USMC PT programs were PFT preparation-based, while only 6% felt that PT programs were designed exclusively for combat conditioning. Thirty percent (30%) of respondents felt that PT programs prepared Marines not only for the PFT, but also conditioned them for combat. Seven percent (7%) responded that PT programs did neither.

The second and last portion of the survey was designed to give respondents an opportunity to share experiences, opinions and insights regarding PT in general. It was also designed to give respondents an opportunity to comment on or expand their responses from the previous questions. There were 63[75] total responses which varied in length and content.

[75]While the response rate for the first section of the survey was 50.6%, the response rate for the second section of the survey was 28% (63 responses over 225 officers queried = 28%). The essay responses contributed invaluable insight to the survey.

Many of the responses address major themes of the study. Four particular themes were amplified in the survey's essay section. Four of these themes magnified by the survey results are: First, physical fitness has a long been an integral part of Marine Corps training and battlefield performance. Second, the spirit and intent of Marine PT programs are clear and concise. Marine Corps Order (MCO) 6100.12 outlines the Commandant's intent for institutional PT. It gives Marines the "what" to do without telling them "how" to do it. Third, the institution's collective execution of PT programs is taking place, but subsequent to entry-level training, the spirit and intent of MCO 6100.12 is being lost. Fourth, observation and survey results show that PT is a highly valued cultural norm. It is widely accepted throughout the USMC as a whole.

The responses speak volumes about the respondents' sentiment toward PT in the USMC. Some of the more profound responses are include below, group by respective study theme. Only minor changes were made to accommodate for spelling.

1) Physical Fitness has a storied history and is an integral part of USMC training and battlefield performance.

- I would have liked to have seen some questions regarding conditioning hikes. I did many of those in preparation for combat with my infantry battalion. Not only do I have significant back and knee problems now that will cost the government more dollars over time, but oddly enough, I fought an entire war from the seat of a HMMWV.
- In the Corps most of those who are fit see it as a personal statement and part of being a Marine. Others do it only because they have to or because of some negative experience from prior training or leader. Others just don't care because they can do their job (isolated from real world or contingencies) without being in shape. Look at some of our sister services. Asking anyone who has been to combat or in an environment that is not hospitable for a long period and those that are physically fit tend to fare better both mentally and physically
- If every Marine is a Rifleman, then every Marine needs to have the same physical fitness level. The Corps is growing too business-minded and losing focus on the need for physical fitness as a morale booster, cohesion catalyst, source of stress relief, and USMC identity.
- I feel that any job requires good combat conditioning in the Marine Corps. I am an Adjutant, having deployed to the war, I can say that endurance and

physical fitness are necessary for the rigors of combat stress and work. Not as much in the physical sense in my MOS, but being in outstanding shape most definitely contributes to keeping mentally alert in long, stressful situations.

- Should be more structured toward combat, as should the PFT. Standards should increase, not decrease to provide lower standards for support personnel. Additionally, for the future of the Marine Corps and the admiration the public has for us, every Marine should appear fit and every Marine should have hand to hand combat training.
- PT should be combat conditioning based regardless of MOS.

2) The spirit and intent of USMC PT programs are clear and concise.

Marine Corps Order (MCO) P 6100.12 outlines the Commandant's intent for institutional PT. It outlines "what" to do without stating "how" to do it.

- Combat arms MOSs should have to undergo an ANNUAL combat endurance test - a "Zero Day" test given to Infantry Officers at IOC. It tests the retention of critical knowledge under physically stressful conditions, and it tests the practical application of individual decision-making. Those are the skills necessary to be effective in combat. Minimal acceptable standards of endurance (with combat equipment), communications, navigation, close combat (pugil sticks), obstacle negotiation, call for fire, and weapon systems knowledge are evaluated. PT, in general, is just a physical outlet for stress (among officers especially). MCMAP is viewed by many enlisted Marines (in the infantry community) as another part of the harassment package, having very little application in today's combat environ. Yes, MCMAP helps Marines understand the fundamentals of close combat, but it should be the domain of the commander to determine how much focus should be given to it. The Army Rangers have a far more effective program for teaching light infantry close combat. Also, for your survey, you might want to ask how much combat experience the respondent has.
- The Marine Corps ideal for a male is six feet tall and 170 lbs. That looks great in uniform but I would much rather have Marines built like Terrell Owens, Marshall Faulk and Jerry Rice who all are over weight by the current USMC standards. Marines need to be able to lift heavy objects such as a wounded Marine. Yeah great he can run 3 miles in 18 minutes but can he carry that M825 round or a wounded buddy to a corpsman?
- The value of MCMAP to combat effectiveness is a product of the instruction. If the instruction is inadequate, so will the results.

3) After entry-level training, the spirit and intent of MCO P6100.12 dissipates.

- PT programs within the fleet are seen as a way to begin the day, but are used to define careers. Outside of the few combat arms MOSs that truly participate in combat conditioning, I feel that the PT regime in the fleet is adequate at best and should most definitely be redefined and enforced for all MOSs
- In helicopter world, PT is done on an individual basis, except for rare occasions. The flight schedule and maintenance efforts are regularly around-the clock efforts with 2 or 3 shifts, and it is hard to get everyone in the same place/time to PT.
- I think unit PT is important and should train Marines for combat, but many commands do not support this. I have been in units where the CO does not believe in MCMAP, boots and utes runs, obstacle courses, etc. then both unit effectiveness and morale suffered.
- As a Pilot in a squadron the focus is different than Ground Combat units. I personally find physical fitness important, but with the rigors of flying and maintaining combat ready aircraft, unit PT does not take priority.
- The PT requirement of 3 hours a week, while admirable, is not always attainable, especially in the aviation community. The officers of the aviation community often have the time, but the enlisted Marines, unless they extend what currently amounts to a 12 hour day an extra hour, don't get enough time to PT. The MCMAP program is next to impossible to implement in the wing from a squadron ground training officer's standpoint due to all other requirements put forth. I think PT is an integral part of mission accomplishment, regardless of MOS. I've personally experienced the benefits during OIF I when we would fly 8-10 hour missions in 135 degree plus weather. Once I started PT-ing regularly, those missions became more bearable and could be done more frequently with less fatigue. However, there was never a time to conduct the training as a unit or even for the Marines to conduct training on their own.

4) Survey results show that PT is a highly valued cultural norm, accepted throughout the USMC.

This is the most under-utilized, yet most important aspect of our training. For the most part, there is a tendency for this program to live and die by the egos or fears of those in charge. The sad thing is that most forget that this is the best way to form a bond with your marines without getting drunk.

As mentioned before, PT is as good as the leadership makes it. That said, I have seen a general decrease in the PT performance of many newer Marines. I attribute this to several factors: Not enough warm up and stretching; Leaders who are afraid to enforce PT requirements and "be the bad guy";." Marines get fat and lazy between boot camp and the fleet; Staff NCO's who are either injured or lazy and don't want to lead challenging PT; and Officers who are afraid to address PT shortfalls on fitness reports.
One of the greatest byproducts of all unit PT programs that I have taken part in is the teamwork/camaraderie aspect of athletic competition. By building competitive PT events, where there is a winner/loser, we feed the war fighter within individual Marines.

In summary, the survey generated useful and applicable data. A healthy respondent base clarified perceptions and experiences about PT programs in the USMC. Additionally, the survey's findings highlighted areas that are also main themes throughout the study: First, PT has an important history in the evolution of the USMC. Today, it remains an important part of Marine Corps training, operations and battlefield performance. Second, MCO P6100.12 clearly identifies expectations for PT programs in the USMC. Third, there is evidence that PT programs lose effectiveness subsequent to entry-level training. It is clear that the spirit and intent of MCO P6100.12 dissipates as Marine Corps personnel are assigned to their respective operations units. Lastly, the survey supported the idea that PT is highly valued throughout the entire USMC.

DATA INTERPRETATION:

The web-based survey program (www.surveymonkey.com) enabled survey results to be viewed in "real time." Of the 225 officers queried, the initial expectation was to achieve 75 total respondents. This would have been an acceptable number and provided a healthy cross section of MOSs. As the survey "live" time progressed, the actual number of respondents surpassed the original expectation with a total of 114. This was a better response number and far surpassed the original expectation of 75. One hundred

fifty respondents (150), or roughly 75%, of the NPS Marine Officer population would have been ideal. The preponderance of the respondents finished the survey within the first few days of its offering. Survey participation was noticeably less in the second week when compared to the first.

Initial impressions of the survey results were varied. Although the final response rate was 51%[76], the author was surprised that there were not more total responses[77]. In an attempt to get as many respondents as possible, the survey went "live" and was electronically distributed to the Marine Officers at NPS on the first day of the new quarter. Students have had time to re-charge after the previous quarters' final exams and have a fresh perspective. Timing was important to achieving a satisfactory response rate and the author wanted to capitalize on this opportunity. Therefore, the survey ran for the first two weeks of the new academic term.

The Marine Corps has unclassified, public documents available via the USMC website (www.usmc.mil) that outline the requirements for PT. Based on the survey results, it appears that most Marines know these documents are available and where to access them. However, Marines' actual knowledge of the content, intent and spirit of these documents is open to question. Generally, most Marines understand PT in terms of what they've seen, heard, or been exposed to; indeed, knowledge of the intricacies of USMC orders is much less important than capturing the spirit of PT mandates. Unlike field experience, where observation is a clear indicator of what works, the survey did not indicate if knowledge of PT directives naturally led to effective PT program execution.

The survey responses indicate that Marines are familiar with PT programs, and that PT is a cultural norm. On a larger scale, it is safe to conclude that PT is widely accepted throughout the institution, and it is regarded as inherent to being a Marine. Responses also communicate that PT is a common thread that unifies all Marines,

[76]Of the 225 Marines Officers petitioned (sample size), 114 (n) responded. 114/225=50.6%, rounded up to 51%.

[77]Although the survey results and response rate were favorable, the author was surprised that more Marine Officers did not participate in the survey. In an academic environment where the USMC officer corps is tightly knit, it is surprising that the response rate was not higher. The survey was strictly voluntary, so the expectation of more participants may have been unrealistic.

especially in the indoctrination periods of Boot Camp or Officer Candidate training. The respondents' emphasis on maintaining one common PT standard, regardless of occupational field, clearly supports this.

As the survey transitioned from background and experience-based questions to PT-specific questions, the results were sometimes surprising, but fairly predictable. Although the responses to several structured questions were predictable, the open-ended essay responses were both revealing and unpredictable. The final survey results indicate that PT is an extremely important part of Marine Corps culture. Responses were helpful with respect to post-indoctrination PT, but they did not address whether PT programs themselves or the current leadership is ineffective in sustaining physical conditioning. A better distinction between the two would have yielded better results, and clarified if leadership or the PT programs themselves are greater contributors to effective execution.

Many responses supported the idea that Marines value PT, especially when the nature of occupational fields is considered. With technological advances for nearly all MOSs, physical labor has lessened through the years. Therefore, PT can supplement the lack of physical exertion in the conduct of daily duties. The preponderance of respondents clearly recognizes and supports this proposition by putting it into regular practice. The daily execution of PT is another example of how physical fitness in the USMC is a cultural norm.

Other survey results revealed that a large percentage of respondents do not believe that PT in a deployed, austere environment is important[78]. If over a quarter of the response population believes that PT is not essential in the performance of duty, especially in an austere environment, than the USMC may have a larger issue than PT to address. Given these results, this same group of respondents probably does not value PT at any time in the conduct of USMC operations. Based on the survey results, this is a potentially dangerous proposition, particularly in a deployed combat environment. Unfortunately, the survey did not fully capture the reasons for these responses. In retrospect, an additional dialogue box could have illuminated the responses or at least clarified possible confusion regarding this question in particular. In the future, research will add value if the survey's responses are indicative of commonly accepted beliefs.

[78]In the first part of the survey analysis, the data reveals that over a quarter of the respondent population (27.8%) does not believe that PT is either critical or irrelevant in the execution of duties.

With respect to the question about PT's important elements, the responses are varied. As the Marine Corps is first and foremost a war fighting organization, it is interesting to note that two of the most important elements of combat, athleticism and anaerobic capacity, received the smallest percentage of responses (30 of the 107 responses-28% combined.) The respondents may have confused some of the elements as being too similar. Although the elements chosen for the original list of 10 fall under the umbrella of PT in general, each of the individual elements is distinctly different, and was included to determine if and how the respondent population would or could distinguish the difference.

Prior to the survey, there were numerous institutional perceptions about the Marine Corps Martial Arts Program (MCMAP). Observation indicates that implementation throughout the USMC has undergone an interesting evolution since its inception nearly five years ago. Results, effectiveness and program emphasis have varied throughout the USMC. As a Marine Corps Martial Arts Program (MCMAP) black belt recipient and certified instructor with a secondary MOS (8551), the author found opinions regarding MCMAP insightful, illuminating and also a cause for concern. When compared to the other responses in the survey, it was interesting that the majority of the most opinionated and vehement responses came from Marine Officers who were either not qualified or minimally qualified in the program.

There was a limitation to the MCMAP responses. The results also call into question the validity of the response demographic. Data from the survey, although interesting, may not be informative about the MCMAP as a whole because the results revealed the opinions of a fairly inexperienced group. A more experienced survey population may have responded differently.

The web-based survey program made results much easier to compile and analyze. The responses varied, and provided a number of different insights. Respondents from a wide range of occupational fields enriched the depth of the answers. Questions from the first part of the survey were of a general nature, but the open-ended essay questions were some of the most revealing. Responses suggest that regardless of USMC direction and guidance, effectiveness of implementation is primarily due to PT's emphasis by local

commanders. What is important and emphasized by the boss usually becomes important to the staff. The effectiveness of subsequent execution or non-execution is a result.

FUTURE SURVEY RECOMMENDATIONS:

The purpose of this survey was to support the study's research questions. Specific inquiries were written to gain a general understanding of perceptions, experiences and opinions regarding PT in the USMC. Future surveys could be designed to inquire about PT in more specific terms. For instance, an entire survey could relate to PT in the USMC, but could be written to ask questions solely related to the MCMAP or the PFT. Specific wording could be used to clarify questions' intent for the respondents. It is now clear that a minor change in a question's wording could have elicited additional insights. Different wording could also have better explained the wide variance in responses to some questions.

Questions could easily be expanded to include additional elements and benefits of PT programs. In future surveys, the following additional elements of PT could be measured: physical toughness, mental toughness, esprit de corps, ability to deal with adversity, unity of purpose (from a group perspective), individual improvement, group improvement, and physical rehabilitation from injury. Other measured elements could include competition, instilling the USMC "fighting spirit" and alternative approaches to PT.

The survey neither asked nor specified if there was a difference between PT sustainment levels between officer and enlisted populations. In the future, it is imperative that a survey be distributed to both the officer and the enlisted ranks. The insight from a cross section of enlisted MOSs throughout the rank structure would lend tremendous credibility to a future survey. While potentially useful, distribution to an enlisted population was not feasible in the execution of this particular survey.

The NPS respondents were an experienced group of officers. The group was professionally credible, which strongly supports the validity of this survey's data. Future surveys would be better suited if distribution included a greater cross section of officers, as well as the enlisted force.

In the end, this survey answered many of the study's research questions. It provided an experienced respondent demographic from a number of occupational fields. As a result, the mix of answers to multiple choice questions and open-ended essay questions yielded useful findings applicable to the study. In retrospect, minor modifications to questions, different angles of inquiry and altogether different research questions would have yielded different results. However, actual results achieved were more than acceptable.

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APPENDIX E: CROSSFIT SANTA CRUZ, CA

While assigned to the Naval Postgraduate School (NPS), I had the opportunity to train at the CrossFit Headquarters in Santa Cruz, Ca. Located roughly forty miles North of Monterey, I made over 100 trips as an NPS student. The experience exposed me to an entirely different approach to physical fitness. My background as a collegiate athlete, which I consider to be well-rounded, was very useful. However, it had not exposed me to CrossFit's emphasis on functional exercises, which are randomly varied and simultaneously performed at high levels of intensity.

The time spent at CrossFit Santa Cruz (SC) enabled me to conduct an informal field study in the realm of human performance. The physical, mental and emotional transformation of CrossFit's participants (myself included) were tremendous. It is easy to presume that CrossFit's intense program only works for highly conditioned athletes. Certainly, there are exceptional athletes that work out at CrossFit SC. Olympians and Special Forces military personnel are regular attendees. However, CrossFit's program can be scaled to meet the needs of men and women, regardless of age. It is not uncommon to witness elementary age children, teenagers, young adults, middle-aged adults and senior citizens participate with one another.

CrossFit's affects are particularly evident in the over-50 age population. Range of motion, mobility and physical capability are as impressive as they are exceptional. My recommendation for CrossFit's implementation into the Marine Corps is based on my field experience at SC and through personal experimentation. CrossFit's approach to fitness meets the spirit and intent of Marine Corps doctrine. It is my opinion that CrossFit has no peer in the mainstream athletic training and physical fitness environment. Implementation into Marine Corps training would be a tremendous advantage to the institution.

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BIBLIOGRAPHY

Ambrose, Stephen E. *Band of Brothers*. New York, NY: Simon & Shuster, 1992.

Churchman, C. West. *The Systems Approach*. New York, NY: Dell Publishing Co., Inc., 1979.

Glassman, Greg. "What is Crossfit?" [database online].Available from http://www.crossfit.com/cf-info/what-crossfit.html cited November 1, 2005.

Hanson, Victor Davis. *The Western Way of War*. New York, NY: Oxford University Press, 1989.

Iowa Health and Physical Readiness Alliance. [database online]. Available from http://www.ihpra.org/1946 cited May 25, 2005.

James, Clayton D. *The Years of MacArthur Vol. 1 1880-1941*. (Boston, MA: Houghton Mifflin Co., 1970).

Krause, Colonel Michael D. United States Army. "History of U.S. Army Soldier Physical Fitness." *National Conference on Military Physical Fitness*, Proceedings Report, 1990.

MacArthur, General Douglas. *Reminiscences* (New York, NY: McGraw Hill Publishers, 1964).

Marine Corps Community Services (MCCS) "Fitness and Health Promotions" [database online]. Available from http://www.usmc-ccs.org/fitnessrec/fithealthpromo.cfm cited August 15, 2005.

Marine Corps Order (MCO) P6100.12 Available from www.usmc.mil. [database online] November 1, 2005.

Marshall, S.L.A. *The Armed Forces Officer*. Quantico, VA: Marine Corps Association Press, 1975.

Naval Aviation Physical Training Manuals, The. U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *Boxing*. Annapolis, MD: Naval Institute Press, 1943.

Naval Aviation Physical Training Manuals, The. U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *Mass Exercise, Games, Tests*. Annapolis, MD: Naval Institute Press, 1943.

Naval Aviation Physical Training Manuals, The. U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *The Sports Program*. Annapolis, MD: Naval Institute Press, 1943.

Naval Aviation Physical Training Manuals, The. U.S. Navy, Aviation Training Division, Office of the Chief of Naval Operations: *Track and Field*. Annapolis, MD: Naval Institute Press, 1943.

Newton, Harvey. "Marine physical fitness training and testing: A view from outside," *Marine Corps Gazette*, February 1998, 2.

O'Brien, Cyril. "General Louis H. Wilson," *Leatherneck*, April 2003, 33.

Pope, Steven W., "An Army of Athletes: Playing Fields, Battlefields, and the American Sporting Experience, 1890-1920." In *The Journal of Military History*, 59 (July 1995): 438.

Senge, Peter M. *The Fifth Discipline*. New York, NY: Currency Doubleday Publishing Group, 1994.

Wikipedia. Online Encyclopedia, category Sparta. [database online].Available from http://en.wikipedia.org/wiki/Agoge cited July 6, 2005.

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