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MILITARY LEADERSHIP AND ORGANIZATIONAL INNOVATION: A CASE STUDY OF THE PACIFIC THEATER IN WW II

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Abstract

The US military, faced with unprecedented challenges, has sought to transform its services and other commands into more innovative organizations and has struggled in trying to understand the process to accomplish this. Studies that have been conducted to determine how best to make this transformation have not offered a comprehensive methodology or model that has proven useful. The purpose of this study was to explore the relationship between the practices of military leadership teams and organizational innovation in historic and highly successful military commands, specifically in the World War II Pacific theater of operations, to gain insights into how current and future leadership may influence innovation. The research examined historical documents, leader accounts, and scholarly literature on innovation. Through this case study, insights were gained into how current and future leadership may influence the transformation into innovative organizations through their practices. The insights gained included understanding the importance of organizational culture, context and contingency, characteristics of effective innovation leaders, structure of innovative organizations, and components of a viable innovation process. Recommendations are made as a result of the study findings regarding military leadership selection, education, training, and development. Organizational changes and processes development recommendations are also included as are recommendations for the private sector and future research.

Keywords: innovation, innovative organizations, innovative leadership, innovation processes, teaming

Dedication

This dissertation is dedicated to the military members of the Greatest Generation who served our country during World War II in the Pacific theater of operations.

Acknowledgements

This program has been demanding and challenging and as a result I gained a great deal from it. I would like to acknowledge the mentorship of my committee chair, Dr. James Martin, committee member, Dr. Elliot-Meisel, my faculty advisor, Dr. Candace Bloomquist, and all the faculty members involved in the program. Their leadership and knowledge made my journey exceptionally rewarding.

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CHAPTER ONE: INTRODUCTION

"Innovate or die" has become the 21st Century mantra for many organizations that want to survive or thrive in a challenging environment (Stevenson, 2012). The start of this century has seen a greater than ever demand for new technological and conceptual breakthroughs and innovations that can drive sustainable success and growth (Stevenson, 2012). As a result, innovation has become the single biggest trend in corporate strategies and initiatives (Kelley, 2001). Embarking on a major transformation effort toward becoming an innovative organization, however, can be highly disruptive, change established relationships, change organizational structure and internal relationships, and incur significant risk and cost (Khazanchi, Lewis, & Boyer, 2007).

These fears often lead to organizations, of all sizes, taking small, cautious, and risk-averse steps such as creating a separate entity within the organization to manage innovation efforts or holding periodic brainstorming sessions to guide specific innovation projects (Keeley, Pikkel, Quinn, & Walters, 2013). Thirty-six percent of CEOs say their organization's approach to innovation is ad hoc, reactive, or occurs on a silo basis (Lockwood & Papke, 2018). These kinds of partial approaches result in ninety-five percent failure (Keeley et al, 2013). By not involving and engaging the entire organization in developing innovative approaches, organizations may not get the full benefit of hearing from all their members and only get a narrow view of the environment.

One example of this is Kodak, a company that once dominated the photo industry. Ignoring the warnings by many of the organization's technical experts, the company stuck with film instead of digital picture development, despite having pioneered the technology (Keeley et al, 2013). This led to bankruptcy in 2012 as digital technology, adopted by

Kodak's competitors, took over the market (Keeley, et al, 2013). The reality is that organizations have to face the risks to their brand and fully, or holistically, transform and innovate to survive and successfully compete in the current highly competitive environments in today's world (Lindic, Baloh, Ribere, & Desouza, 2011).

An example of an organization that innovated successfully is IBM. It went from a declining developer of computer hardware and software with a sales orientation, in an increasingly competitive field, to a developer and integrator of solutions with a service orientation. This was a major business model transformation based on a profoundly different strategy that required the transformation and reorientation of a deeply ingrained culture, established over eight decades, toward an entirely new market (Satell, 2017). Successful transformation to an innovative organization such as IBM accomplished is not an easy process. It must be purposeful, systematic, managed, and monitored (Drucker, 2015).

Like businesses, the military faces the challenges of new competitors, advanced technology, changing threats, and new operating models. Throughout history, militaries have had to transform to meet a changing environment. Two examples of this for the US military were the inter-war period between World War I and World War II and the post-Vietnam period. These transformations required changing cultures and adopting innovative approaches to military components such as materiel, structure, leadership, education and training, and operational concepts.

I have spent forty years in the military and twenty years in the corporate world. With this perspective, that of a commanding general officer and a corporate executive officer and chairman of the board, I realized that the similarities between the two worlds

of the military and corporate business are not readily apparent. Obviously, the mission of the military is different since it deals with existential threats and life and death decisions; however, both worlds consist of leaders, organizations, processes, structures, strategies, competition, technology, operational models, and other like components. For both the military and business worlds, innovation is critical to survival.

Military Innovation

The United States military, the focus of this study, like businesses and other types of organizations, is currently faced with significant challenges and is seeking to transform itself into an innovative organization. The Department of Defense (DOD) describes its operating environment as increasingly complex and defined by rapid technological change, challenged from adversaries in every operating domain, and impacted by declining readiness from the longest continuous stretch of armed conflict in our nation's history (The National Defense Strategy of the United States, 2018). The former Secretary of Defense who issued this strategy, James Mattis, sought to have the military services be a more lethal, resilient, and rapidly innovating force (The National Defense Strategy of the United States, 2018). As a result, DOD is currently attempting to "organize for innovation" with each service and agency within it adopting an innovation transformation strategy (The National Defense Strategy of the United States, 2018).

As mentioned, this is not new. Militaries have had to transform throughout history after conflicts, advances in technology, emerging new threats, and evolving concepts of dealing with conflict that change their operating environments (Murray & Millett, 1996). The inter-war period, between the two world wars of the last century (1920s-1930s), saw each of the United States' military services struggle with the looming new forms of

warfare that they speculated they would face in future conflicts (Murray & Millett, 1996). A few visionaries in each of the services realized that change, or even radical transformation, was necessary to meet the challenges ahead (Murray & Millett, 1996).

As examples, Major General Billy Mitchell, an outspoken Army Air Corps leader, who was court marshaled for insubordination for his outspokenness, publicly and forcefully predicted the dominance of airpower in naval warfare (Gauvreau & Cohen, 1942). Major General John Lejeune, the Commandant of the Marine Corps, who resisted turning the Marines into naval security forces after World War I and into counter-guerrilla forces after the Banana Wars in the Caribbean in the 1920s and 1930s, predicted the viability of, and need for, large-scale amphibious operations and began preparing his service for this mission (Murray & Millett, 1996). Not surprisingly, critics condemned their revolutionary predictions and ideas (Murray & Millett, 1996) and it was left to the commanders who fought World War II to validate these visionaries' prescient views and apply their own innovative leadership to translating their theories and concepts into the actual conduct of wartime operations.

Organizational experts have identified the many barriers inhibiting militaries from learning, innovating, and changing, especially in wartime (Schultz, 2016). Yet, there have been times in history when military commands overcame these barriers and developed innovative organizations that met the significant challenges they faced.

This case study examined how the relationship between the leadership practices, the manner in which leaders develop innovative organizations, and the actual organizational innovations of the World War II commanders and their teams in the Pacific theater of operations led to victory. Lessons from this conflict can still provide

insights for today's military leaders on developing and implementing innovative solutions to challenging wartime missions and tasks, and may provide lessons for leaders outside of the military as well.

Statement of the Problem

There are several common aspects to the problem of transforming militaries and other organizations into innovative organizations. The first is the problem of definitions. The second is the role of leadership in innovative organizations. Third is articulating the need for innovation.

The Problem of Definitions

There are no universally accepted definitions for some key terms, nor is there a common language used to discuss innovation (Stevenson, 2012). An initial literature review revealed numerous definitions for terms regarding innovation such as the broad definitions of innovation. Two examples are; "The development and introduction of new ideas and concepts applied to initiating or improving products, processes, services, or models" (Robbins & Judge, 2016, p. 293) and, "An organization that engages everyone throughout the organization in the task of developing and implementing new ways to reach organization goals" (Galbraith, 1982, p. 6). Based on the literature review, however, large-scale innovation and innovative organizations, such as the US military, require more definitional specificity. In the absence of a suitable definition, the following, more detailed, hybrid definition was developed by the author for the study. For large scale organizations true innovation is: "a process that has multiple activities; that are new; performed by multiple actors in the organization; in a systematic and structured manner; by a combination of means; that results in the development, production, and

implementation of new concepts, strategies, methods, technology, tactics, and/or organizational designs and models developed to accomplish organizational missions, goals, tasks". Although there may be value in studying innovations that do not lead to positive results, this study focuses on those that do since the ability to translate innovation into success (implementation) is a critical leadership practice examined in this study.

The hybrid definition combines important elements emphasized in definitions found in the literature review. These include the newness and novelty of innovations (Satell, 2017) (Keeley, 2013); the presence of a process or system to develop innovations (Keeley, 2013); and the ability to design (Lockwood & Papke,2018), map (Satell,2017), and diffuse (Rogers, 2003) innovation throughout the organization.

How Leadership Influences Organizational Innovation

The second aspect of the problem involves how the leadership changes the various parts of the organization such as the culture, relationships, processes, and structure, in order to achieve a holistic innovation transformation. The initial literature review of peer reviewed studies, articles, and books indicated that no single clear path or model to transform into an innovative organization has been developed and, in some of the sources, more research was strongly recommended. This study examined the leaders and their leadership practices in the Pacific commands during World War II to gain insights into how they influenced innovation.

The Current Reality for the Military

Today's US military has global commitments and is faced with threats ranging the spectrum from nuclear capable and conventionally modernized peer competitors, such as

China and Russia, to regional threats such as North Korea and Iran, to non-state sponsored threats such as terrorist groups and insurgents. China's military and political leadership continues to modernize in pursuit of strategic military goals to deny access to US forces in the western Pacific region. Russia has modernized its forces (including its nuclear forces), and expanded its reach into the Middle East, Arctic, Africa, and Eastern Europe. North Korea continues to develop nuclear and missile capabilities that threaten the US and our allies. Iran threatens US interests and allies with its hegemonic designs in the Middle East. Ongoing regional conflicts in the Middle East, Africa, Central Asia, and South and Central America also have the potential of causing US military involvement. In addition, space and cyberspace are new domains within which the military must be prepared to engage potential enemies At every level, whether it is strategic, operational, or tactical, technology is available to significantly challenge US forces' materiel dominance. Missile, submarine, drone, robotic, and information technology are examples. The military is now expected to not only fight the nation's wars, but to also provide humanitarian assistance, disaster relief, counter drug enforcement, border security, peace enforcement, peacekeeping and other non-traditional military missions.

The Current Need for Military Innovation

The current need for creating innovative military organizations is presented in the United States National Defense Strategy, "Increasingly military leaders are faced with highly competitive security environments within which they must operate and consistently and successfully develop innovative conceptual, technical, operational, and technological approaches to meet challenges. These demands are requiring our military

organizations to transform into innovative organizations that do not operate in traditional ways or models" (United States National Defense Strategy).

This 2018 statement in the new National Security Strategy reflects the lessons learned from the misguided employment of the so called Shock and Awe doctrine that relied mainly on superior technology, precision engagement, and information dominance (Ulman & Wade, 1998) in the Iraq and Afghanistan conflicts in the early 2000s. This reversion to the traditional reliance on technological, physical, and kinetic superiority (the weight of hi-tech systems, firepower, materiel, and forces) that failed the US in Vietnam was reborn in those invasions of Iraq and Afghanistan. This approach has again failed to achieve positive outcomes.

After the Vietnam War, there was renaissance in thinking about the operational art; the way the military fights wars. The United States became over reliant on technology and overwhelming materiel and manpower advantages. These advantages are applicable against peer threats; however, this attrition approach is costly and its application in other non-conventional situations has proven ineffective. Reliance on these advantages allowed our military considerations for strategic planning, deterrence, maneuver, and indirect approaches to be forgotten. New kinds of threats such as those from insurgent groups and terrorist organizations negated our power advantages. Unfortunately, the US military reverted to destruction and controlling terrain as military objectives rather than winning hearts and minds. The military needed more in the way of Information Operations, Civil Affairs, and Psychological Operations units rather than tank and artillery battalions. A coherent assessment and follow-on strategy produced and accepted by the military and political leadership was lacking.

Problem Statement

Although there has been an increasingly growing number of efforts conducted by the military services in the last two decades attempting to describe the requirements for military leaders to affect an innovation transformation, none have provided a roadmap or example for leaders to use to generate innovation in practice. In the early 1980s, for example, the United States Navy and Marine Corps developed a maritime strategy to complement the strategies developed by the Army and Air Force for the manner in which the US would fight a war against the Soviet Union (Stavridis, 2017). This strategy guided the US naval forces in developing the requirements for doctrine, acquisition, training and education, structure, and technology throughout the Cold War. The US currently lacks this kind of cohesive strategic direction and focus since the same comprehensive strategic concepts are not being developed to meet the challenges of the current threats as they were in the post-Vietnam transformation era (Stravidis, 2017).

Purpose of the Study

The purpose of this qualitative case study was to explore the relationship between the practices of military leadership teams and organizational innovation in historic and highly successful innovative military commands, specifically in the World War II Pacific theater of operations, to gain insights into how current and future leadership may influence innovation.

Research Questions

The research question was designed to gain insights into the relationship between military leadership team practices and the development of consistently successful solutions within a chosen set of organizations with an exceptional reputation for

innovation. The research question was, "What occurred within the World War II United States Pacific commands during the time when innovations were successfully developed and implemented?"

Aim of the Study

The aim of this study was to gain insights into how the military leadership of a successful set of innovative organizations transformed themselves in time of war to meet the complex challenges they faced *and to apply those insights* to the current military efforts to transform into innovative organizations. The current leadership of the US military may learn valuable lessons by examining how the relationship between the practices of military leadership teams and organizational innovation led to victory against great odds in the Pacific theater of operations during World War II. The applied leadership principles and practices gleaned from the case study may be relevant to the efforts by US military leaders to meet current challenges. Although conflict can take many forms ranging from nuclear or conventional war to insurgency and terrorism, the applicable principles remain constant.

Proposed Methodology

The methodology I chose was a qualitative approach with a case study of a historic set of military commands in a demanding theater of operations during wartime. This choice was based on: the current emphasis the United States military places on innovation; the importance of uncovering and understanding what lies behind the phenomenon of becoming an innovative organization about which much is still being learned and studied; and the desire to provide intricate details of the phenomenon of conversion into an innovative organization through a narrative approach that is superior

to a quantitative research approach. The qualitative case study methodology further allowed the researcher to identify culture-sharing groups and small teams, establish meaning of the phenomenon from the perspective of those groups and teams, and study how they developed over time (Gerring, 2004).

Why a Case Study Approach

A case study is; "an intense study of a single unit for the purpose of understanding a larger class of (similar) units" (Gerring, 2004, p. 342). While no two periods, institutions, or settings are the same, the overall study is sufficiently analogous to elucidate actionable recommendations. The single unit is a relatively bounded phenomenon that has features of a larger class of a similar phenomenon (Gerring, 2004). In this case study, the Pacific theater commands in World War II represent the single unit/bounded phenomenon that can aid in understanding, through in-depth study, the process of creating an innovative organization for the current US military services and commands. Although there are some obvious differences in current US military commands from those of World War II, the similarities are significant and remain applicable to current US military organizations.

Pacific Commands During World War II

The Pacific theater of operations during World War II consisted of three major commands and several smaller commands. One major command, reporting to the Chief of Naval Operations (CNO), Admiral Ernest King, was commanded by Admiral Chester Nimitz as Commander-in-Chief (CINC) Pacific Ocean Areas (POA) and Commander-in-Chief Pacific (CINCPAC). Another, reporting to the Army Chief of Staff (COS), General George Marshall, was commanded by General Douglas MacArthur as Commander-in-

Chief (CINC) Southwest Pacific Area. Later in the war, a strategic air command structure was created by General Henry Arnold, Commander of the US Army Air Forces. These were the three major US commands; however, there was also a British command in the China-Burma-India theater and a US military support operation in Burma and China. Initially the US maintained command of its forces in this theater but later passed command of US forces to the British. Each of these three major US commands and the US command in the China-Burma-India (CBI) Theater were addressed in the case study (Toll, 2012).

Admiral Nimitz took over command at Pearl Harbor on December 31, 1941, just a few weeks after the devastating attack on that US naval base. He faced a powerful threat in the superior Japanese forces in the Pacific and led a greatly weakened command (Pogue, 1986). General MacArthur was evacuated from Corregidor in the Philippines shortly after his forces experienced a crushing and humiliating defeat days after the Pearl Harbor attack . He arrived in Sydney, Australia and was given command of a newly created Southwest Pacific Command that had few assigned forces beyond the Australian Home Guards who were fighting a desperate battle in New Guinea (Toll, 2012). Three and a half years later, these two commanders received the Japanese surrender on board the battleship *Missouri* in Tokyo Bay (Toland, 1970). In those intervening years and months, their commands and commanders initially fought superior forces, with superior weapons, training, and battle experience, in totally new forms of warfare. Through unprecedented innovative strategy, tactics, equipment development, restructuring of organizations, and other initiatives, they prevailed. The creative leadership in their commands made victory possible largely through the innovations they simultaneously

developed during the war and the culture of innovation developed throughout their commands. General Curtis LeMay was sent to the Pacific theater by Arnold as the new B-29 Superfortress bomber was developed and deployed. That allowed for sustained strategic bombing. LeMay had to meet the challenges of establishing effective basing, developing new tactics, correcting technology problems, and training personnel. Eventually the bombing, to include the dropping of two atomic bombs, would convince the Japanese to surrender.

The Pacific commanders' innovative efforts were supported by the Joint Chiefs of Staff: Admiral William Leahy, Chief of Staff to the President; General George Marshall, Chief of Staff of the Army; Admiral Ernest King, Chief of Naval Operations; and General Henry Arnold, Commanding General of the Army Air Forces. As well, President Franklin Roosevelt played a direct hand in selecting the commanders and approving their operational and innovative methods (Persico, 2014). This phenomenon was chosen for the case study because of the remarkable circumstances and successes. The potential existential threat resulting from failure, unprecedented challenges, and exceptionally creative leadership in the commands presents a unique example of innovative transformation under stark challenges.

Definition of Relevant Terms

The following definitions are relevant to this study.

Innovation

Innovation is; "A process that has multiple activities; that are new; performed by multiple actors in the organization; in a systematic and structured manner; by a combination of means; that results in the development, production, and implementation

of new concepts, strategies, methods, technology, tactics, and/or organizational designs and models developed to accomplish organizational missions, goals, and tasks."

Innovative Organization

The definition of an innovative organization is; "An organization that engages everyone throughout the organization in the task of developing and implementing new ways to reach organizational goals" (Galbraith, 1982, p. 6).

Limitations, Delimitations, and Personal Biases

To ensure there were no negative aspects that could influence the study, potential limitations, delimitations, and personal biases were considered.

Limitations

Limitations are features of this study that may negatively affect the results, but must be addressed (Roberts, 2010). Limitations include access to living members of the case study organization (although extensive personal accounts and official documents exist), the time frame of the study, and the technology differences between the World War II era and the present. Another limitation considered was the attention and focus on only a particular instance that is characteristic of a case study approach (Babbie, 2017).

Delimitations

Delimitations are negative, or potentially negative, effects over which the researcher has control (Roberts, 2010). Delimitations may include the historic military organizations chosen in the case study, their applicability to modern military organizations, and the time period of the study (World War II). The choice of studying the entire Pacific theater commands was selected to capture the full breadth and depth of innovations at all levels (strategic to tactical) and dimensions (technical, structural, and

conceptual). However, this broad approach may obscure some valuable pathways to innovation where greater detail may be essential to understanding how they developed.

Personal Biases

As a former general officer in the United states Marine Corps, I have written, lectured, and taught courses on organizational topics and on the case study organizations chosen. To ensure objectivity, I have asked a military historian and a senior general officer to check my findings and conclusions for any discernible bias that may be present. I have also spent forty years in the military and this may lead to assumptions on operational issues that I may unconsciously make.

The Role of Leadership in this Study

Traditionally, leadership research has been analyzed at an individual level (Haslam, Reicher, & Platow, 2011). Had this case study been done in the late 1940s immediately after World War II, the entire leadership focus would most likely have been on heroic, individual leadership examining traits, character, styles, personalities, and other aspects that made up those who led the forces in the Pacific theater. This study, however, also explored leadership through the lens of the "new psychology of leadership" (Haslam et al., 2011, p 1) that goes beyond the individual leader and includes the consideration of the group dynamics, the environment, leadership relationships, followership, and leader practices.

A number of leadership theories and concepts were examined in the this study. Those chosen for examination appeared most applicable to the leadership of the Pacific commands, and their practices, based on the literature review. These included adaptive leadership, participatory leadership, process leadership, context and contingency, in-

group leadership, teaming, followership, transformational leadership, and the heroic leadership theory (Haslam et al., 2011). Leadership practices, traits, styles, characteristics, and theories were at the center of this study and key leaders in the case study were examined based on these. How leadership influences and affects innovation, organizational transformation, organizational culture, and other factors were important issues explored and examined in the study as well. Particularly important were the relationship, or linkage, of the operating environment, leader characteristics, leadership approaches, organizational learning, openness to organizational culture changes, organizational structure, development of organizational creativity, establishment of an innovation process, and successful performance. While it is beyond the scope of this study, it is particularly important that future studies measure this against, or in comparison to, other World War II commands.

Adaptive Leadership

Adaptive leadership focuses on how leaders help others do what is needed in order to adapt to new challenges. It is primarily concerned with how people change and adjust to new situations and circumstances. It is leadership that mobilizes people to address change (Northouse, 2019). The Pacific theater was deemed to be secondary to the European theater with President Franklin Roosevelt's Germany First strategy (Toll, 2012). This had implications regarding forces allocated and strategy choices. The leadership in the Pacific theater also faced new forms of military operations including carrier and large-scale amphibious warfare, long-range bombing, and deep raider and penetration operations. The senior leadership did not have a traditional base of doctrine,

strategy, or tactics to guide their approaches and were compelled to adapt to these conditions.

Participative Leadership

A natural counterpart to adaptive leadership is participative leadership. This form of leadership invites followers to share in the decision making. Followers are consulted to obtain their ideas and opinions. Their suggestions and recommendations are integrated into decisions (Northouse, 2019). This form of leadership is evident in the freedom of operational decision making and action given to subordinate commanders by the senior leadership in the Pacific theater. One example is the widely different operational styles and priorities that the two major fleet commanders, Admiral Raymond Spruance and Admiral William Halsey, maintained throughout the war. Their superior, Admiral Chester Nimitz, allowed both to operate in their own styles and resisted pressures from within his command to be more directive in establishing a single command approach to fleet operations (Hornfischer, 2016).

Process Leadership

Process leadership is not based on the individual. It is based on the context of interaction between leaders and followers and makes leadership available to all in the organization (Northouse, 2019). Admiral Kelly Turner led the amphibious forces in the Central Pacific. Amphibious operations are considered the most complex form of military operations. It requires an extensive degree of coordination and synchronization under highly stressful conditions. After the disastrous British landing at Gallipoli in World War I, large-scale amphibious operations conducted against an entrenched enemy beachhead were considered impossible (Bartlett, 1983). The transition from ships packed with

troops, equipment, and materiel to a hostile shore and into a major fight, while under intense fire, is a monumental challenge. Many components and leaders must operate in close cooperation. Commanders have to execute their missions with precision. Yet, they need to operate with a great degree of freedom to make decisions within the framework of the senior leader's intent and established process for execution (Dyer, 1969).

Context and Contingency

Studying the leadership in the Pacific commands in World War II from a contingency approach required taking into account the interaction between features of the specific environment (situation, circumstances, etc.) and the leadership components (context, qualities, personalities, and character) at the time (Haslam, et al, 2011). Simply put, contingency is the relationship between leadership and the environment. The uniqueness of the environment (operational, opposing forces, geographical, etc.) and the leadership relationship to it were important in understanding the how the commands' successes were achieved.

In-Group Leadership

A great deal of autonomy was given to Pacific theater commanders, from top to bottom, that allowed them to create or reform units to meet mission requirements. An in-group is a group that is perceived to be self-defining in a particular context such as a social-self category (Haslam et al, 2011). This dimension refers to the degree members of a group express pride, loyalty, and cohesiveness in their organization (Northouse, 2019). The Pacific commands had several unique units that had these traits such as the Marine Corps, Carrier Air Wings, Underwater Demolition Teams, Bomber Units, Marine Raiders, Marauders, and many others. The leadership ability to create elite units and

generate this collective spirit and identity were critical components to the commands' ability to innovate.

Teaming

Team building requires leadership that establishes clear, elevating goals, develops a results-driven structure, selects competent team members, creates a collaborative and unified climate, sets standards of excellence, and leads in a principled manner (Northouse, 2019). Effective teams possess the adequate resources and other contextual influences, the right composition, and the effective processes to achieve the assigned goals and tasks (Robbins & Judge, 2016). Numerous examples existed in the Pacific commands of effective teams and team building where different service and allied units and personnel were mixed in creative ways to meet mission requirements..

Followership

Followership is the process whereby members of an organization accept the influence of others to accomplish a common goal (Northouse, 2019). In this study, followership was examined from a relational-based approach (Northouse, 2019). The interpersonal process between leaders and followers that created the followership environment in the Pacific commands was part of the leadership examination in the study. Particularly addressed in the study was the unique and unprecedented inter service relationships that existed in the Pacific commands.

Transformational Leadership

Transformational leadership is a process whereby a leader engages with followers and creates a connection that raises the level of motivation and morality for both (Northouse, 2019). It requires leaders who possess the capacity to develop and promote

values and goals that are shared by the organization's members (Haslam, et al, 2011). This form of leadership was a major factor in the Pacific commands' ability to prevail under difficult, and often dire, conditions and circumstances. The significant transformations undergone by naval, amphibious, aviation, and special mission units were specifically examined in the study.

Heroic Leadership

Heroic leadership is the restless drive to look for something more in every opportunity and the confidence that one will find it (Lowney, 2003). There were legendary leaders in the Pacific commands during World War II at all levels. Admiral Chester Nimitz, General Douglas MacArthur, Admiral William Halsey, Admiral Raymond Spruance, General Holland Smith, General George Keeney, General Curtis LeMay, and many others. Understanding their personal traits and characteristics and how those influenced their organizations was a key part of the leadership examination. It is important to note that heroic leadership should not be confused with the "great man" theory that has been largely discounted by modern theorists as the driver of success.

Significance of the Dissertation in Practice Study

Creating innovative organizations is a major theme in the business world as well as in government agencies and in the military. It is often listed as the number one or two most important issue in surveys of organizational top leadership. Innovation has become the major theme in military organizational development replacing transformation, the buzz word of the 1990s (Williams, 2009). Transformation became more of a marketing slogan rather than a viable means to change organizations into more relevant entities able to meet modern challenges. Innovation may be a natural follow-on to transformation in

that it describes what transformational change should seek to achieve, an innovative organization.

Understanding the influences of leadership in creating an innovative organization by studying an organization that was successful in developing extraordinary numbers of innovative solutions while under the stresses and existential threats of a wartime environment can be extremely valuable for modern military organizations trying to effect the change in a complex environment. Particularly valuable is to understand how the leadership dealt with risk and the implementation of holistic change throughout the organization while engaged in a global conflict.

Summary

This chapter began with the quote "innovate or die" that was not an exaggeration for the US military in the Pacific theater in World War II. As discussed in this first section, the US military currently faces a world described by DOD as complex, volatile, ambiguous, and uncertain with potential adversaries who are rapidly modernizing their military forces in every respect (The National Defense Strategy of the United States, 2018). It is not inconceivable that the US military could face a conflict that is as challenging as the one in the Pacific in the early 1940s. The importance of successful change into more innovative organizations is becoming more understood, urgent, and studied. Leaders are seeking answers to questions on how to transform their organizations into innovative organizations; however, at present they are not getting those answers while facing the growing challenges and risks of embarking on a path of significant change without a model to guide them.

The leadership theories and concepts discussed warranted examination in the study in order to gain insights into how their relationship to developing the leadership practices that promoted innovation. This study provided a detailed identification of the linkage and an interpretation of relationships initiated through leadership practices that resulted in innovative solutions to the challenges faced by the Pacific commands. It also explored emergent themes that the research identified. Through the case study approach, examples gleaned from a set of large organizations, the United States Pacific commands in World War II, that successfully met their challenges through innovation while under extreme stress provided more clarity in understanding the phenomenon of evolving into an innovative organization.

As described in the next section, the literature review for this study researched the need for creating an innovative organization, the current research findings on how to effect the transformation to an innovative organization, the military's need and approach toward innovation, and a description of a successful innovative military organization (case study).

CHAPTER TWO: LITERATURE REVIEW

This chapter provides a description and discussion of the themes regarding organizational innovation that have been drawn from a literature review. It also includes descriptions of the current efforts to understand how the transformation into an innovative organization occurs. Specifically discussed and examined are the current military trends, efforts, and challenges in transforming United States military forces into innovative organizations. Woven throughout this section are relevant elements drawn from a literature review of sources regarding the case study, an exploration and examination of the ability of the United States Pacific commands to consistently develop innovative solutions to meet the existential challenges the commands faced during World War II.

Innovation in Organizations: A Discussion

There is an insatiable thirst in organizations today for knowledge, expertise, methodologies, and work practices around innovation (Kelley, 2001). The myth that a lone creative genius working in isolation creates innovative solutions for organizational challenges is widely believed but rarely true (Kelley, 2001). As mentioned in Chapter One, neither is selective brainstorming an effective way to create consistent innovative solutions within an organization (Keeley et al., 2013). Overwhelmingly scholars suggest that transitioning an organization into an innovative one that consistently produces successful creative solutions to organizational challenges requires deliberate approaches that take into account the factors that influence the creation of a successful innovative organization (Edmondson, 2013) (Rogers, 2003) (Drucker, 1985). Studies indicate that innovation processes deliberately constructed by design (Lockwood & Papke, 2018) or

by carefully mapping out an organization's strategy for innovative efforts are most effective (Satell, 2017). "Innovations don't happen just because someone comes up with one big idea. It takes many ideas to solve an important problem, and that requires a collective effort" (Satell, 2017, pp xviii-xix). Studies of innovative organizations indicate that the establishment of an innovation process was the key to transforming into a successful innovative organization (Rogers, 2003).

Organizational Innovation: What Factors May Influence It?

The literature suggests several prominent factors regarding influences on innovative transformation within organizations. These are:

- the defining, describing, and understanding of the environmental factors driving the need for innovative transformation;
- the characteristics of an innovative leader;
- the practice of innovative leadership;
- the advantages of effective teaming;
- the development and promotion of organizational learning;
- the dynamics of changing organizational culture and behavior;
- the establishment of an innovation process;
- the development of organizational creativity; and
- the achievement of desired performance through innovation.

These nine themes form the framework for the discussion and examination of the case study. They also offer a potential conceptual basis for developing a process or model for innovative organizations.

The Environmental Factors Influencing Innovation

Why is there a driving sense today in organizations, from business to the military, that leaders must transform into innovative organizations in order to survive or remain competitive? It begins with the complex and highly competitive operating environment that they find themselves within. Unprecedented technological breakthroughs, increased globalized competition, new operating models, unforeseen challenges, and many other factors have made sustainable success and performance difficult to achieve (Stevenson, 2012). The current operating environments are too dynamic to rely on traditional models or long-range plans to predict futures given the current frequency, scale, and sophistication of technological and conceptual changes (Horth & Bucher, 2014). A decision to embark on a risky organizational change requires, first, a thorough assessment of the environment to understand the risks (Khazanchi, et al., 2007) and then to shape the strategic vision for, and course of, the change (Spahr, 2015). An example of a successful analysis of the environment was Nike, a maker of athletic gear. In the early 1990s, the company correctly assessed the market desire for more variety and more special equipment designed especially for different sports and activities such cross-fit training. Nike invested in specialized engineering and design along with a dynamic marketing campaign. It was a high-risk undertaking but proved highly successful primarily because the company saw the signs, shifts, and changing customer desires and acted on them (Keeley, et al. 2013).

The Characteristics of Innovative Leaders

Innovative organizations require innovative leaders. There does not appear, based on the literature review, to be a single style or formula that leads someone to become an

innovative leader who alone can affect the transformation into an innovative organization (Adjei,2013). A Myers-Briggs Type Indicator questionnaire or a Gallup Strengths Finder assessment will not predict future innovative leader. There are, however, certain leadership practices and behaviors that generally and consistently characterize innovative leaders.

Who Can be Innovative Leaders? The Pacific theater of operations was full of diverse leaders with opposing styles of leadership and unique personalities. It started at the top. No two commanders could be as different as Douglas MacArthur and Chester Nimitz. MacArthur was flamboyant, dramatic, pompous, and media hungry (Perry, 2014). Nimitz was quiet, reserved, calm, and collegial (Potter, 1976). Both were brilliant, innovative, creative, and in their own way, charismatic. Fleet commanders William Halsey and Raymond Spruance, Marine commanders Holland Smith and Archibald Vandergrift, aviation commanders Gregory Boyington and James Thach, strategic air commanders Curtis LeMay and George Kenny, and other comparable commanders with differing styles leading similar commands presented significantly contrasting approaches to leadership (Hagen, 2003). Yet, each of them was successful and highly innovative. Although styles and personalities differed, they did have certain common traits and characteristics that supported those described in the literature research as key to innovative leadership. They tended to be bold, action-oriented, delegating, risk tolerant, systems thinkers, and team-builders.

Theorists writing and studying innovative organizations in recent years advocate developing teams made up of diverse leaders in style and personality in order to generate the creativity necessary to transform organizations (Plucker, 2017). More emphasis today

is put on the criteria for teambuilding than in the past when top-down direction was more the norm. Teaming is crucial to innovation (Edmondson, 2013). Innovation thrives when a diverse group of people come together to develop new possibilities that could not have been envisioned by each of them working alone (Edmondson, 2013). The diverse collection of leaders that fate brought together in the Pacific during World War II were a significant contributing factor to the rich set of innovations developed at the time. The "great man" model of leadership that promotes idealistic attributes in a single person or leader to successful performance is deeply flawed (Haslam, et al., 2011). Studies conducted after World War II to find measures of personality to predict or identify leaders of the future failed to produce consistent predictors of leadership potential based on personal attributes of the war leaders studied (Haslam, et al., 2011).

What characteristics do innovative leaders possess? Although successful innovation leaders do not possess certain unique leadership styles, innate traits, or particular personalities, they do have certain consistent ways in which they think, behave, and operate. Innovative leaders are abductive in their thinking process in that they draw logical inferences from observations (Spar, 2015). This ability is conducive to making innovative connections (Spar, 2015). They are also collaborative, direct and straight forward, and non-prescriptive in their orders (Spahr, 2015). They are also highly self-disciplined; passionate about their work; accepting of risk, uncertainty, and failure (Bel, 2010); trusting; and open and charismatic (Alsolami, Cheng, & Twalh, 2016). The charisma took many forms in the Pacific theater, from the flamboyance of Douglas MacArthur to the fatherly demeanor of Chester Nimitz. These leadership characteristics

are more likely the products of nurture (experience) rather than nature (inherent traits) and are developed through experience and learning (Haslam, et al., 2011).

The practice of innovative leadership.

Assumed roles and behaviors of effective innovation leaders have been identified in much of the literature reviewed. Innovative leaders initiate, sponsor, and steer innovation in their organizations (Alsolami et al., 2016). They set clear direction, create alignment, remove barriers, and build commitment in work efforts (Horth & Bucher, 2014). They often view their functions as encouragement, providing resources, freedom for subordinates to operate, generating challenging work, and creating high performance teams (Horth & Bucher, 2014). They see as a key role the encouragement and management of diversity in order to gain the richness it offers in creativity (Agbor, 2008). They provide a climate where their people feel a degree of psychological safety that allows them to take interpersonal risks by speaking up and sharing concerns, questions, or ideas (Edmonson, 2019). Effective innovation leaders also see their roles as designers (Senge, 2006). In practice, they design the strategy, structure, organization, network, processes, and policies that encourage innovative and creative thinking and solutions within their teams (Senge, 2006).

Innovation in Teams

Teams are created within organizations where there is a need for innovative, coordinated action (Senge, 2006). Teams are organizational groups that are composed of members who are independent, who share common goals, and who must coordinate their activities to accomplish the goals. Teaming enhances the ability to innovate since it offers concentrated expertise, provides focus on a goal or challenge, and creates more

efficient use of resources. The most important consideration in forming teams is the selection of team leadership positions (Northouse, 2019).

There are four pillars of effective teaming that apply to all teams regardless of mission (Edmondson, 2012). Team members should be encouraged to speak up and challenge; should possess a collaborative mindset; should experiment; and should reflect on observations (Edmondson, 2012). For teams created to learn then execute, innovate, and create, there must be a degree of psychological safety, a belief that the work environment is safe for interpersonal risk taking and trust and respect for each other (Edmondson, 2019). The flattened structure, one with fewer tiers and greater span of control resulting from teaming, that circumvents the bureaucracy shortens decision making processes and encourages collaboration (Edmondson, 2012).

The development of organizational learning.

"Unless an organization continuously adapts to the environment via speedy, effective learning, it will die "(Marquardt, 2011, p 1).The transformation to an innovative organization from one that follows traditionally accepted operational models requires leaders to create a learning organization before moving forward with establishing an innovation culture and structure. Organizational learning is a collective process and not just the efforts of a few individuals designated to gain and apply the knowledge necessary to become more innovative. It involves supporting professional development and information sharing throughout the organization (Hsiao & Chang, 2011). As mentioned, two of the pillars of successful teaming are experimentation and reflection. For those two to be meaningful, the organization and its members must value knowledge, understand

the changing environment, see the potential in new technologies, and possess other learning skills that enhance creativity and innovation (Marquardt, 2011).

There are three methods or approaches to learning that are of significance and value to an organization. The first is adaptive learning. It involves reflection on past experience and using that to modify future actions. The second is anticipatory learning that is a process of acquiring knowledge from envisioning futures in order to build options or ways to achieve those futures. The third is action learning that involves the ability to learn while engaged in action (Marquardt, 2011). Each of these methods were present in the Pacific theater commands as the commands moved from battle-to-battle and quickly processed lessons learned from each previous encounter..

The dynamics of changing organizational culture and behavior.

Organizations throughout the world are in an era of unprecedented and constant change (Cameron & Quinn, 2011). Change can be evolutionary or revolutionary. Evolutionary change, the most common in organizations, is normally a measured, continuous process that is linear (Burke, 2014). Revolutionary change occurs in leaps, spurts, and disruptions and is not an incremental or linear process (Burke, 2014). The focus of this study is revolutionary change. Despite detailed planning and design to effect revolutionary change, several studies reported that the most frequently cited reason for the dramatic failure rate in accomplishing the desired change was a neglect of the organization's culture and its failure to modify that culture (Cameron & Quinn, 2011). Any organizational change requires changing or modifying the organizational culture in order to succeed (Schein, 2017). It begins with understanding that organizational culture consists of a set of assumptions, values, symbols, norms, and artifacts within the

organization that convey meaning to members regarding what is expected and what shapes behavior (Daher, 2016). The culture must support the innovation process or it will fail (Hogan & Coote, 2014).

Changing organizational cultures is often met with resistance. The challenge for the leaders in the Pacific theater was to change cultures in certain military service organizations, particularly traditional service cultures, and to create different cultures in the many newly formed organizations. All this had to be accomplished while actively fighting a war. To change, or create, cultures requires developing an organizational climate, set of espoused values, group norms, identity and self-image, and models of thinking and acting (Schein, 2017).

The establishment of innovation processes.

Becoming an innovative organization means establishing an innovation process, or set of processes, for idea generation, evaluation, and implementation (Alsolami et al., 2016). It may not be successful if there is not total organizational involvement and commitment where each member of the organization feels part of the transformation and informed as to the direction and progress of the process (Keeley et al., 2013). This holistic approach creates an organizational mindset regarding innovation (Stevenson, 2012).

An innovation-decision process consists of gaining initial knowledge, forming a concept of innovation, making a decision to adopt or reject, implementing the decision, and evaluating the results (Rogers, 2003). The literature review produced a number of different proposed approaches for creating innovations such as teaming (Edmondson, 2012), diffusion processes (Rogers, 2003), and modeling (Plucker, 2017). The sources

reviewed, however, emphasized that a deliberate process was required and that unstructured brainstorming was not an effective means to successfully transition into an innovative organization. Unlike military innovation in peacetime, innovating while fighting a war requires quick turn around and implementation of innovations as well as timely assessments of effectiveness and dissemination of results. This is a cyclical process that necessitates speedier execution than the enemy who may be going through the same process. This is described by military leaders as an observation-orientation-decision-action (OODA Loop) cycle that keeps repeating itself at the faster rate than the adversary and creates an effective "Battle Rhythm" (Coram, 2004).

The development of organizational creativity.

If the elements of correctly assessing the environment, acquiring innovative leaders, practicing innovative leadership, creating a learning organization, changing the organizational culture, and establishing an innovation process are in place then the next step is encouraging and promoting creativity, the production of new ideas (McLean, 2005). A framework should be in place to capture and analyze these ideas in a systematic and structured manner that is not present in those organizations that choose ad hoc brainstorming as an approach to innovation (Keeley et al, 2013).

The new ideas should be novel, useful, and within a specific social context (Plucker, 2017). The social context for this study is the military during periods of conflict. Novel, in this context, is the development of nontraditional or original concepts, strategies, structures, technologies, or techniques. Useful, in this context, means that it leads to greater efficiencies and effectiveness in mission accomplishment. Innovative organizations will develop innovations that are novel but do not work (not useful).

Learning organizations that are able to understand why they did not work are able to modify or scrap innovations that are not useful. There were certain innovations developed in the Pacific commands, such as the formation of special elite fighting units, that did not have the desired effect on enemy behavior, but these laid the ground work for the post war creation of special operations forces (SOF) that evolved into highly effective units in later conflicts (Rottman, 2005).

The achievement of desired performance through innovation.

The final step, or theme, deals with performance, the ultimate purpose of transforming into an innovation organization. Performance is the successful achievement of the desired and stated goals of the organization. Understanding and judging performance should be a deliberate process that involves clarification of responsibilities, performance evaluations, feedback, strong task orientation, adaptability, clear strategic goals, and achievement criteria (Carmeli, Gelbard, & Gefen, 2010). In the Pacific air and amphibious commands, continuous and thorough post operational evaluations led to honing and fine tuning tactics, procedures, coordination, and technology requirements that incrementally improved performance with each operation.

The Nature of Military Innovation

In addition to the initial broad or general literature reviews relating to the topic of innovation, a more specific literature review regarding the nature of military innovation was needed as the nine themes described above was examined within the context of the military.

Characteristics of Military Organizations

The United States military is a huge bureaucracy. Bureaucracies are hard to change and over bureaucratization of innovation processes guarantees their stagnation and increasing inefficiency and ineffectiveness (Murray & Millet, 1996). Many of the changes and transformations that have occurred in the US military historically did so as a result of influences from outside forces such as civilian leaders and thinkers, the lessons learned after wars, or the advancements in technology (Rosen, 1991). The military environment spans a spectrum from peace, to tensions and threats, and to war. Like in all other organizations, the need in the military to assess the current environment correctly is key and drives any decisions to embark on significant change. The role of contingency, the interaction between leaders and the environment in which they operate (Haslam et al., 2011), is significant in developing innovative military organizations (Murray & Millett, 1996). The presence of specific military problems such as an emerging threat or an adversary's development of an advanced technology, can force or encourage innovation (Murray & Millett, 1996).

Military Leadership

Traditionally, the military has been a highly hierarchical leadership organization. Technology, particularly information-communication technology, has created a competitive speed in decision making that has forced change. Flattened structures that have larger spans of control and fewer tiers, task organization, faster information and decision making processes, more trust down the chain of command, are among the changes in recent years. Military leadership has been characterized by some of its members as stereotyped thinking in a "frozen middle" majority of mid-level and senior

leaders who do not think or act in innovative ways (Stokes & Bethke, 2019). This was especially true in the 1970s and 1980s in the wake of the Vietnam War when strong resistance to change from within the ranks and from some of the more traditional leadership had to be overcome by reformers. This seems to be changing and the concept of, and need for, innovation has recently reached the status of "holy writ" (Millett, 2019, p 40.). The current environment is ripe for significant change and the senior leadership throughout the military services is encouraging innovation and change (Karsten, Boudreau, & Wellendorf, 2019). In the past, innovative leaders such as Billy Mitchell, the general officer mentioned in Chapter One who predicted the dominance of air power in future conflicts, were considered mavericks, outside the mainstream, even after they created new ideas and capabilities that were successfully proven and implemented (Price, 2014). These mavericks are now sought, encouraged, and valued. In the military, creative individuals are still few but now exercise greater influence over the creation of innovation processes as a result of recent operational and planning failures (Murray & Millett, 1996).

What is Innovation in a Military Context?

According to Joint Publication 1-02 Department of Defense Dictionary of Military and Associated Terms, United States military organizations are composed of doctrine, organization, training and education, materiel, leadership, personnel, and facilities (DOTMLPF). Most military innovations have been materiel or technological advances (Adamsky, 2010). True innovation, however, comes in the recognition and exploitation of the opportunities inherent in new technologies not in the technology itself (Adamsky, 2010). A new weapon system may be developed, but the understanding of its effects and

how best to employ it usually comes after experimentation and innovative thinking about the strategic, operational, or tactical implications of the system (Rosen, 1991). As an example, a major technology advance like the stirrup, machine gun, tank, or bomber may be introduced onto the battlefield, but the accompanying doctrine, structure, training, concept of employment, and innovative use usually comes much later after trial and experimentation. Erwin Rommel famously used the superb German 88 millimeter anti-aircraft gun as a lethal direct fire tank killer in the desert of North Africa during World War II, a purpose it was not designed for. This weapon was, nonetheless, quite effective in this role. It is not difficult to find examples of isolated military innovations or innovative military organizations scattered throughout history. It is rare to find a large concentrated number of innovations and innovative organizations in one theater's set of commands during a specific period of time that stretched across the DOTMLPF spectrum.

The Military Requirement to Continuously Innovate

The 2018 National Defense Strategy emphasizes the need to innovate and the services and agencies of DOD, like many in the corporate world, have started innovation programs, internal innovation departments, and innovative idea collecting mechanisms. This is, however, a scattershot and bureaucratic approach that does not allow for the holistic change to an innovative organizational process that a systematic step/theme approach could produce. The military does have some of the components in place for a transformative process along the lines of the steps and themes discussed, such as a robust professional military education system and education culture (Reed, 2015). Education at all levels and in all forms, is encouraged, often provided, and rewarded if individuals

seek additional schooling outside the military (Reed, 2015). This emphasis on education and the structure of a progressive military education system was fully developed in the post-Vietnam era and permits the introduction of new ideas and innovations throughout the military in a systematic and consistent manner. It greatly aids in creating learning organizations and culture changes.

Military culture is slowly but deliberately changing to become more accepting to innovative change (Millett, 2019). Certain military organizations will move quicker in establishing an innovation identity, especially those whose mission and organization are formed around high technology such as space, cyber, and missile forces. The will and commitment to transform to develop more innovative solutions to challenges and to create innovative organizations is there; however, the military, like other organizations, is struggling to understand how to best make the transformation (Adamsky, 2012). One can see this in the recently debated issue on forming a space command or service. President Trump wants such an organization; yet, the military leadership is struggling with the best way to consolidate its military efforts in space.

Unless one is familiar with military organizations, it is confusing to understand the difference between a military service such as the Army, Navy, Air Force, and Marine Corps (the Coast Guard is not in the Department of Defense but can be in time of war), and a joint command such as the Pacific Command, Strategic Command, European Command, or Transportation Command. Services train, organize, and equip US forces in accordance with their service specialties. Joint commands integrate and employ those forces to meet mission requirements. Joint commands include functional or integrating commands such as Special Operations, Transportation, and Strategic (nuclear)

organizations, and regional commands such as the European, Pacific, Southern, Northern, African, and Central commands. Many civilians think that the military still fights primarily as services. That is no longer the case. Service chiefs do not have a role in employing their forces, only in providing them. Employment is passed to the joint commands. The Goldwater-Nichols Act, passed in 1983, created the joint structure and spelled out the responsibilities and authorities. Space would better fit a joint command rather than a service based on this joint structure. It should be noted that this joint structure differs from the one that existed during World War II. The lessons learned from operations in the Pacific during World war II led directly to the eventual creation of the joint command structure. First, the 1947 National Security Act created the Joint Chiefs of Staff structure. This was a step forward in the eyes of many reformers; however, there was not the synergy expected and, in 1984, the much more transformative Goldwater-Nichols Act created the extensive joint structure that exists in our current military.

The Views of Scholars on the Pacific Theater

The literature review sources selected in researching this case study, the Pacific commands during World War II, consisted of those that describe the operational environment; key leaders who had the greatest influence on innovation and recorded their experiences; their leadership approaches; the processing of lessons learned while engaged in a war; the organizational culture transitions that took place; the innovations developed; and the performance results. The case study describes specific innovations that were examples of conceptual, strategic, operational, tactical, technical, procedural, structural, technological, and adaptation solutions generated by the Pacific commands' leaders and units. These, along with the challenges the leaders sought to overcome, are described in

detail as is their impact, the risks they presented, and how they were implemented. The leadership aspect of the case study research consisted of a literature review of sources that described the specific leaders in the commands who were most responsible for generating the environment that encouraged innovation or were directly responsible for developing innovative solutions and putting them into practice.

Revolutionary military innovation and the creation of innovative organizations, such as occurred in the Pacific commands during World War II, are rare because, unlike other transformations, they were accomplished in the midst of fighting in a desperate conflict (Murray & Millett, 1996). It was a phenomenon driven by top-down leadership (Murray & Millett, 1996), that included the Presidents of the United States, both Roosevelt and Truman. There were also several prescient leaders who inspired some of the innovations prior to the outset of the war period in the case study (Murray & Millet, 1996). Their contributions are discussed as part of the leadership examination; however, the innovative implementation of their ideas fell to the leadership of the Pacific commands' leaders.

To provide a unique perspective that cannot be gained by reviewing literary sources and conducting interviews alone, I visited fifteen of the battlefields and areas of naval engagements in the Pacific theater of operations during World War II and will visit more sites. Walking the ground on Iwo Jima, Guadalcanal, Okinawa, the Philippines, Saipan, Guam and other battle areas, as well as boating over the narrow straits where naval battles took place and interviewing survivors of the atomic bomb in Nagasaki, while studying the events, provided a much clearer sense of the challenges and circumstances, what took place, and why the events unfolded as they did. Also, several

Japanese military sources were reviewed in order to gain a fuller perspective on the effects of the innovative approaches presented in the case study. In addition to memoires written by Japanese combatants, personal contacts were made in previous years with an atomic bomb survivor, a former Japanese Iwo Jima officer, a contemporary Japanese general who studied the war, a former Kamikaze pilot (his plane failed to start on the day before surrender), and several Japanese soldiers who were veterans of island battles. Much of this personal research was done to develop lectures and guided studies of the battles and battlefields in the Pacific theater that I have given in past assignments.

The literature review of sources for this case study revealed a unique set of US military organizations faced with unique challenges. While the war technically began on December 8, 1941 with the US declaration of war against Japan, the US had been involved in continental defense with Canada since 1938 and earlier in 1941 had participated in Atlantic convoys to Great Britain, added Greenland to its defense perimeter, constituted the Greenland Patrol, and given materiel support to Great Britain and the USSR with the Lend Lease Program established by President Roosevelt. Thus, even after Pearl Harbor, the strategic priority set by President Roosevelt and General George Marshall was "Germany first" meaning that the European theater had the priority of resources and attention (Murray & Millett, 2001).

American volunteer aviators were flying in support of the Chinese with General Claire Chennault's Flying Tigers (Samson, 1987) and materiel support was flowing to Russia and China before the attack on Pearl Harbor (Murray & Millett, 2001). However, few outside the Chief of Naval Operations and the naval establishment viewed the Pacific as the greater threat (Buell, 1980).

Despite pre-war predictions going back to the 1920s that war with Japan was a very real possibility, the Pacific commands started the war on December 7, 1941 with their primary naval base devastated, their naval forces severely damaged or destroyed, their forces in the Philippines, Guam, and Wake Island defeated, their enemy already experienced by five years of war in Asia, and their forces inferior to the enemy in virtually every military capability. Yet, three years and eight months later they accepted the unconditional surrender of the enemy in the harbor of its capital aboard the battleship USS Missouri. In that time, they engaged that enemy in new forms of warfare never experienced before such as aircraft carrier warfare, large-scale amphibious operations, and atomic warfare. They developed advanced technologies that included new ships, aircraft, decoding capabilities, and detection technology. Further, they experimented with new organizational structures, tactics, and joint service operations.

The literature review produced a number of examples of innovative approaches. The April 1942 Doolittle Raid launched large B-25 bombers off aircraft carriers to attack Tokyo with no previous trial or assurances of feasibility (Doolittle, 1991). A special group of volunteer pilots were formed in 1941, the Flying Tigers, to support Chinese forces (Samson, 1987). Newly created Marine Raider Battalions (Gilbert, 2006) and an Army long range penetration group, the Marauders, (Ogburn, 1959) were formed to fight behind enemy lines. Underwater Demolition Teams (UDT) were created to clear lanes through mined water approaches (Liptak, 2014). Long range strategic bombing tactics were developed through trial and error (Hansell, 1986). Navajo code talkers were employed to ensure security in communications (Nez, 2011). Coast watchers and local native militias were formed to support operations and provide

intelligence (Feldt, 2014). New landing craft were designed and developed in the theater (Rottman, 2004). The Japanese code was broken and led directly to the defeat of Japan's Navy at Midway and the shoot down of Admiral Yamamoto, the commander of the Japanese navy (Winton, 1993). Radar was used in ingenious ways (Hornfischer, 2016). The Cactus Air Force, a conglomeration of US services' and Australian planes, was patched together to defend Guadalcanal and the sea approaches to the Solomon Islands (Shaw, 1992). The Thach Weave, an innovative air maneuver created by US pilots, confounded experienced Japanese fighter pilots flying technologically superior aircraft (Ewing, 2004). Most importantly the strategic, operational, and tactical innovations in fighting the aircraft carrier and amphibious wars and conducting long range strategic bombing attacks surpassed the enemy's ability to challenge them and eventually led to victory.

An existential threat to the military forces and to the country existed throughout much of the period of the Pacific war. Despite the catastrophic implications of mission failure, there was a clear freedom to experiment and an acceptance of risk and failure from the Commander-in-Chief through to the senior military leaders and to the tactical leaders. There was a rejection of standard operational approaches as many commanders used widely differing ways to conduct operations. Cautious, traditional style generals and admirals were removed by senior flag officers such as Nimitz, MacArthur, and LeMay. Boldness and unorthodox approaches were encouraged and rewarded (Toll, 2012).

In the initial offensive operation of the Pacific war, the August 1942 invasion of Guadalcanal, Admiral Robert L. Ghormley was chosen to command the naval forces supporting the landing. He was a reluctant choice for command by Admiral Chester

Nimitz. Ghormely was too cautious and removed his ships in mid-operation leaving the Marines, under command of Major General Archibald Vandergrift, stranded ashore without half their equipment. Nimitz replaced Ghormely with Admiral William H. "Bull" Halsey, a tough, aggressive commander who went on to gain a highly regarded reputation and a fifth star based on his successful fleet campaigns against Japanese naval forces during the Pacific war. This change in the early stages of the war set the pattern for selecting more daring commanders and sidelining or relieving cautious, traditional commanders (Hughes, 2016).

The successful senior leaders in the Pacific were "mavericks", a term frequently contained in biographies and descriptions of them, and often flawed in many respects. They did not fit the mold. Some suffered from bouts of depression, over use of alcohol, and undisciplined behavior. They were driven men who drove their subordinates hard as well. Yet, they cared for their troops and agonized over the loses encountered in battle. Today, a zero-defects mentality exists in the military leadership selection process. Many of these individuals might never have attained these high command positions in the current US military due to significant flaws and failures in their records. Chester Nimitz, Douglas MacArthur, Raymond Spruance, William Halsey, Kelly Turner, Marc Mitscher, Holland Smith, Archibald Vandergrift, Roy Geiger, Graves Erskine, George Kenny, Curtis Lemay, Gregory Boyington, and others were not the stereotypical generals and admirals and might not have survived a peacetime military career. They had colorful nicknames given to them by their troops such as "Bull" Halsey, "Howlin' Mad" Smith, "Pappy" Boyington, "Terrible" Turner, "Vinegar Joe" Stillwell, and "Bombs Away" LeMay. They were fast learners, experimenters, out-of-the-box thinkers who encouraged

innovation and changed the cultures of their organizations. Their leadership and innovative practices deserve exploration and examination because the military will continue to face new challenges that require bold and creative, thinking leadership.

Summary

As described in Chapter One, the literature compiled produced nine leadership theory and concept themes that influenced the structuring of the study. These nine themes provide the framework used to explore and examine the leaders and their leadership practices that influenced innovation. The literature also provided insights into the process of transforming an organization into an innovative organization, as described in Chapter Two. From the literature sources, a complete process or model was constructed with nine components. These are: the relationship between the leadership and the operating environment; the leader characteristics and traits necessary to influence transformation to an innovative organization; the leadership practices and approaches conducive to transformation; the ability to build effective innovation teams; the establishment of a learning organization; the ability to change the organizational culture; the establishment of creativity in the organizational decision making and solution development; the establishment of innovation processes to bring ideas to fruition; and the ability to successfully implement innovative solutions.

The flow from the general to the military specific to the military example (case study) in order to develop findings and conclusions is a logical and congruent sequencing approach. Leaders and leadership in practice within a military context and how that influences the building of an innovative organization is the focus and the qualitative case

study methodology chosen best supports this approach and structure. It is described in the following chapter.

CHAPTER THREE: METHODOLOGY

As described, the United States military, like many current organizations, is seeking to transform itself into an innovation organization (United States National Defense Strategy, 2018). It has successfully accomplished this to meet challenges in the past and an exploration of a previously successful transformation that used innovation to meet challenges and secure victory during war can be informative to current efforts. The purpose of this qualitative case study was to explore the relationship between the practices of military leaders and leadership teams and organizational innovation in the historic and highly successful innovative military organizations while under the stresses war, specifically the Pacific commands of World War II. Key individual leaders were examined in the case study to determine their leadership characteristics and behavior. How these men created a learning organization that gained the knowledge to develop innovative solutions in order to meet their challenges is described as well as how the leaders and leadership approaches changed the organizational culture. The innovation processes that were the result and the creative solutions that led to operational successes are then presented. The insights gained from the exploration and examination of the organizations chosen for the case study offer applications and directions for current military efforts to transform itself into an innovative organization and perhaps for other organizations as well.

Research Question

The research question is, "What occurred within the World War II United States Pacific commands during the time when creative innovations were needed, developed, and implemented?"

Proposed Research Design

This study is a case study analysis (Babbie, 2017). The design was chosen because it provided a basis for determining patterns within a historical observation (Babbie, 2017). The criteria for selecting the particular case study organization was the unique repeated successes the organization achieved through innovation during a time of extreme stress, specifically war. A narrative research design of inquiry was used to study leaders in the case study organization and in describing their leadership characteristics and leadership practices (Creswell & Creswell, 2018). Narrative research involves studying the lives of individual leaders and how they influenced their organizations (Creswell & Creswell, 2018). The case study design explored, in depth, the commands they successfully led in a particularly noteworthy time, in this case the Pacific theater of World War II, by examining the change process into innovative organizations. The findings were hand coded and categorized by themes (Babbie, 2017). The discernible patterns that emerged were examined and discussed in narrative form in both Chapters 4 and 5.

Data Sources and Collection Tools

Data sources included literature reviews of historical writings and examination of archival resources (Babbie, 2017). Data collection tools included archival research and literature reviews. A source data chart and a literature review matrix was prepared to catalogue sources used. Findings were validated by triangulating data received from reviews and original sources with archival data to ensure consistency (Creswell & Creswell, 2018). Reliability was established by documenting the procedures used in

detail and setting up a detailed set of case study protocols and data bases (Creswell & Creswell, 2018).

Proposed Data Collection Procedures

Data collection procedures included a review of archival documents in places such as the Marine Corps Research Center and the Joint Forces Staff College Library. In addition, a literature review of current publications and studies on innovation, efforts at transforming organizations into innovative organizations, efforts of US military organizations in that transformation, and historic sources and accounts of the case study organization during the war period covered was conducted.

Ethical Considerations

The assurance of factual accuracy is an imperative ethical consideration and constant and consistent cross-checking of facts were necessary throughout the course of the study and data collection procedures were strictly followed. Careful and appropriate citing were used throughout the research. IRB permission and approval from Creighton University was obtained. The IRB approval letter is at the appendix.

Data Analysis Plan

I used an open coding plan. Initial research indicates significant amounts of evidence will be derived from the analysis. As I collected data, I did initial classification and labeling of emerging or discovered innovations and concepts. These were then compared and closely examined, using axial coding, for similarities and differences (Babbie, 2017). From these axial codes, themes emerged. These formed the basis for my findings, and ultimately, with insights from the literature, lead to my recommendations.. I

used memoing throughout the research process in order to effectively categorize the large amount of data anticipated.

Timeline for the Study

I anticipated an eight to ten-month timeline to complete the study. Much of the research material was gathered and many sources identified. No significant interfering events or commitments were anticipated or occurred that affected the timeline.

Reflections of the Researcher

The subject of transforming an organization into one that becomes predominantly, and by reputation, an innovation organization has been an ongoing concern addressed by organizations I engage within my business consulting work. I have aided leaders in business in developing a strategy for doing so. It has been difficult. The literature on innovation and transformation into an innovative organization that I have reviewed has often been confusing, incomplete, and contradictory. Much more research is needed, by admission of most researchers and writers on the subject. There are general principles that apply to all organizations desiring to become innovative organizations. The literature review brought out a number of these described in this paper. Further research and analysis in this case study will allow those to be developed and others to emerge.

The military appears to be struggling, like the business community, with trying to understand how to create an innovation transformation. As a retired Marine general officer, this has drawn my attention to these efforts within the military. I have long been interested in military history, both professionally, as a military officer, and personally. I have lectured extensively on the organization and events in the proposed case study, traveled throughout the battle areas, and interacted with veterans from both sides of the

World War II conflict. As a result, I have seen a connection between the experiences of the case study organization and the current ongoing efforts at creating innovative organizations. I believe there were enduring lessons drawn from the case study that will inform current leaders and provide insights and direction in their efforts.

Summary

This chapter provided the research project methodology, research design, data sources, data collection tools and procedures, ethical considerations, data analysis plan, timeline for the study, and reflections of the researcher.

The methodology chosen and described is selected was the most appropriate means to identify the attributes possessed by a historically innovative military organization during time of war. The research and questions were designed to examine and explore the leaders, leadership approaches, organizational changes affected by the leadership, organizational cultures, innovation processes, and successful performances through innovation in the case study organization. The data sources were selected based on gaining insights into these areas. The data collection and analysis process and the ethical considerations were designed to be thorough and in compliance with protocols and appropriate procedures. Timelines have been determined regarding proposal defense and IRB approval has been granted.

The findings (described in the following chapter) are useful for current military, and other, organizations as they attempt to transform into innovative organizations able to perform successfully through creative solutions to the challenges they face.

CHAPTER FOUR: FINDINGS

This study examined the relationship between the practices of military leadership teams and organizational innovation in the World War II Pacific theater of operations. I pursued this study to gain insights into how current and future leadership may influence innovation. Peer reviewed studies on innovation, works by noted military historians, original source accounts, and official historical records were referenced in this study. References on leadership theories and practices provided themes that were explored in the research.

This chapter contains an overview of the Pacific theater of operations during World War II, examples of the innovations that were developed in the course of the conflict, a description and analysis of the US military leadership in the theater and their practices, the themes and patterns that were drawn from the research, the findings that resulted, and a summary of the chapter.

The Pacific Theater of Operations in World War II

The challenges facing commanders in the Pacific theater after the attack on Pearl Harbor required leadership that went beyond simple military competence. There was no playbook or precedence for what they would encounter. Leaders had to be chosen with skills that were not readily evident by just examining past records of performance. This theater of operations was a whole new world of unique challenges.

The Pacific theater in World War II has been described as unprecedented, unique, and complex. It was an aberration, a "different kind of war" as some military historians have called it (Miles, 2007). It was fought over 63,800,000 miles of ocean and islands and on the southern rim of the Asian continent, in total one third of the earth's surface

(Winchester, 2015). In that geographic space, 27 campaigns were fought and 100 amphibious landings conducted (Costello, 1981). The enemy was highly competent and combat experienced in the new forms of warfare that characterized the Pacific theater. He was well armed with modern weapons systems and fanatical in his commitment to victory. Rarely did he surrender. US forces had to rethink the commonly and universally accepted rules, conventions, and laws of warfare when faced with this enemy that did not adhere to them (Coffey, 1970). The Japanese military and population were also unlike any enemy previously encountered by US forces in that they possessed a code of behavior in war entirely alien to the Americans (Hornfischer, 2016). The key forms of strategic and operational warfare in this theater (e. g. carrier warfare, amphibious assaults, and long-range strategic bombing operations) were never experienced by US forces prior to this conflict (Toll, 2012, 2015, 2020). The logistics and support challenges were daunting and unprecedented in military history (Toll, 2012, 2015, 2020).

For the US, the Pacific War lasted three years and nine months. It started with the humiliating and devastating defeat of US forces at Pearl Harbor, Wake Island, and in the Philippines. By the start of the US involvement in December of 1941, the Japanese military had four years of combat experience in their ongoing conquest of China and Southeast Asia and in seizing island nations and colonies in the western and southwestern Pacific (Toland, 1970). The dream of this conquest was to form, as Japanese leaders called it, a Greater East Asia Co-Prosperity Sphere that encompassed most of Asia and stretched throughout the Pacific (Toland, 1970). For this ambitious undertaking, the Japanese needed energy, mineral, and other resources that they did not possess to fuel

their military and industrial bases (Hotta, 2014). These resources had to be gained through conquering resource-rich Asian and Pacific nations and colonies (Toland, 1970).

From the start, Japan's military had superiority over US capabilities in naval, air, and ground forces and in weapons systems within each of those areas (Hagen, 2003). Faced with a war on two fronts after the Pearl Harbor attack and Hitler's declaration of war against the US four days later, and influenced by British Prime Minister Winston Churchill, President Roosevelt declared a policy of "Germany first" (Marshall, 2006), relegating the Pacific theater to a secondary front with a lower priority for forces and resources to be allocated. This strategy added to the initial mismatch of forces. The commanders of the US Army and Navy forces in the theater were immediately relieved of their commands at Pearl Harbor and new, inexperienced, or controversial commanders were chosen to take charge (Barker, 1969). Awkward and complicated chains of command were established, or evolved, that violated the principle of unity of command (one of Principles of War traditionally taught in professional military schools) and immediately created internal rivalries, service conflicts, and confusion that lasted throughout the war and long after.

Despite these and many other challenges, US and allied forces totally and unconditionally defeated the Japanese at the end of that three year, nine month period. Victory was not gained by traditional war fighting doctrine and methods. Rather, it was achieved through a remarkable number of innovative solutions to the existential challenges the Pacific commands faced. The unusual and exceptional Pacific theater commanders that I researched had no choice but to innovate in the face of this existential

threat. Today, seventy-five years later, many of those innovations are still part of US military doctrine, organization, and methods of operation.

Prelude to War

Although there is a prevailing belief that the attack on Pearl Harbor and the following war with Japan came as a stunning surprise, US military services and schools were predicting the inevitability of the war with Japan and studying its probable course and conduct as early as the 1920s and 1930s (Murray & Millett, 1996). Japan had denounced naval armament treaties well before the Pearl Harbor attack and had attacked China four years before the "day that would live in infamy", as President Roosevelt called it in his address to Congress following the attack (Toland, 1970). The US had generated war plans to deal with the growing Japanese aggression before the war started, such as the Navy's War Plan Orange that began in 1919 (Miller, 1990) and the Army's Victory Plan that was developed over decades and updated just prior to Pearl Harbor in anticipation of imminent war (Kirkpatrick, 1991). New and highly controversial war fighting concepts were being proposed in the services with the emergence of new thinking about such power projection capabilities as strategic airpower, carrier-based fleet operations, and large-scale amphibious assault operations. A small but growing number of officers from all ranks were beginning to propose new ways to think about the next war. These ideas were developed, war gamed, and tested in service planning staffs and doctrine and education centers such as the General Board of the US Navy in Washington, D.C., Marine Corps Schools in Quantico, Virginia, and the Naval War College in Newport, Rhode Island (Murray & Millett, 1996).

Admiral Chester Nimitz claimed after the war that everything the Japanese did during the war was predicted in the Newport games except the use of Kamikaze attacks (Potter, 1976). Military exercises in the 1930s in the Caribbean Sea and off the eastern coast of the US tested a variety of theories (Kuehn, 2008; Murray & Millett, 1996). Visionaries who predicted the new forms of warfare that were faced in the Pacific were considered radical by most of their seniors and peers. These included US Army Air Corps' General William L. "Billy" Mitchell, predictor of the dominance of airpower, and Marine Corps General John A. Lejeune, advocate for developing large scale amphibious capabilities. They were either dismissed as unrealistic dreamers or punished for advocating theories on future warfare that went against traditionally accepted ways of fighting. Some of these new thinkers from each of the services such as Marine Corps Lieutenant Colonel Earl H. "Pete" Ellis, who wrote the Amphibious Operation Plan 712 in 1921 under Lejeune's direction, did receive some attention and growing support for developing their ideas (Murray & Millett, 1996). Often the concepts they developed or advocated for, however, were still challenged by certain senior leaders who resisted change and were also challenged by the peacetime inability to gain the resources and funding support to test and fully develop the ideas that they proposed.

Every military leader is trained and educated to appreciate the value of planning, but to be careful not to "fall in love with your plan", as the commonly used military saying puts it. Helmuth von Molke, the brilliant Prussian field marshal, once stated that "no plan survives first contact with the enemy" (Hughes & Bell, 1993. p 92). General Dwight Eisenhower added that "plans are worthless, but planning is essential" (Galabos, 1984. p1516). The interwar planning was valuable, as Eisenhower claimed, yet, for all the

debate, planning, gaming, testing, and focus regarding a looming war with Japan, the US military was caught unprepared at the moment of attack. The commanders who led the Pacific theater forces after the attack were left with turning the interwar concepts into the operational design and tactics that led to victory. Then the implementation demands under the stresses of combat and the "fog and friction" of war difficulties that Clausewitz famously described (Rapoport, 1968) were added to these problems of developing innovative solutions to unprecedented challenges.

Opening Rounds 1942

As one would expect, the first year of the war in the Pacific was chaotic. The US commands' beginning clashes with the enemy were not based on any grand strategic plan but more as reactions to Japanese actions (Toll, 1012). Remarkably, however, the first year ended with major defeats of the Japanese Navy and Army, and the commencement of offensive operations. This was achieved far ahead of the European theater's offensive that began in North Africa at the end of 1942 (Murray & Millett, 2001). Before the march began to the culminating point at the surrender ceremony in Tokyo Bay, four challenging initial tasks had to be accomplished in the Pacific theater based on the research for this study. With no single theater command or commander designated for the Pacific region, analysis of relevant documents led this author to identify these four challenging initial tasks to be accomplished in the Pacific. First, the Japanese threat to Australia and the advancement of their forces into the southern Pacific area had to be stopped. Second, the support for Chinese forces fighting the Japanese invaders had to be increased to keep them in the war to tie down Japanese forces on the Asian mainland and to prevent the conquest of India and Burma. Third, the threat of the Japanese naval ability to attack

across the Pacific toward the east again had to be eliminated. Fourth, for psychological and morale reasons, the early vulnerability of the Japanese mainland had to be demonstrated. In my research, these tasks were, again, not approached from any centralized strategic design. Instead, they were immediate problems that confronted the individual commanders and were addressed in real time.

Defending Australia and Stopping the Japanese Drive South

When Pearl Harbor was attacked, Australia found itself with its best forces deployed to operate with the British in North Africa. Its poorly trained and equipped Home Guard found themselves fighting a desperate jungle battle along the Kokota Trail in New Guinea. Air attacks in Darwin along Australia's northern coast and the discovery of a Japanese submarine in Sydney Harbor led Prime Minister John Curtin to ask for US help (Costello, 1981). The US needed a base in the western Pacific after the defeat in the Philippines and Australia fit the bill. A joint US and Australian command was formed and stopped the Japanese attempt to conquer New Guinea and further threaten Australia.

Supporting the China-Burma-India Theater

A China-Burma-India (CBI) command was established by the US with a volunteer air group from the US, the Long Range Jungle Penetration Group formed to interdict Japanese forces threatening Burma and India, a covert behind the lines detachment to gain intelligence established by William Donovan, and a major airlift and bomber force established to provide logistics and air support to Chinese and US forces. A Lend-Lease program was established before the Pearl Harbor attack to provide support for the Chinese military efforts against the Japanese invaders as well. It was hoped by the US leadership in Washington that the British would be in overall command in this theater.

However, Their defeat in Singapore and the commitments the British faced in Europe and North Africa prevented them from standing up a capable theater command until later in the war (Toll, 2012).

Preventing Another Pearl Harbor

The attack on Guadalcanal, August 1942, and the battle of the Coral Sea, May 1942, halted the Japanese advance south through the Solomon Islands. With the Australian victory at Milne Bay in New Guinea and the US victory on Guadalcanal, the myth of Japanese ground forces invincibility was removed. Even though the naval battle in the Coral Sea, the first naval battle in history fought where neither side saw each other's ships, was a draw in terms of material losses, it was regarded as another defeat of Japanese invincibility. The powerful Japanese navy had to be drawn into a major battle to end its ability to attack eastern Pacific bases. The Battle of Midway, fought later in 1942, inflicted a decisive defeat on the Japanese navy and ended any ability to threaten US bases in the eastern and northern Pacific. Operations were also planned in the Aleutian Islands in 1942 to dislodge Japanese forces that had earlier landed at Attu and Kiska in an attempt to split US naval forces prior to the battle of Midway. This would end the Japanese occupation of any US territorial land or sea space (Toll, 2012).

Bombs Over Tokyo

The daring Doolittle Raid shocked Japan by the bombing of Tokyo and five other Japanese cities. Despite the minimal damage, this raid off the carrier deck of the USS *Hornet* lifted US morale and brought the war home to Japan's main islands for the first time (Scott, 2015).

By these actions the four initial tasks had been accomplished in this declared secondary theater before the first year of the war ended. These were phenomenal early accomplishments. They were not achieved by traditional military thinking and operating methods as will be discussed. By December of 1942 the US forces in the Pacific were poised and preparing for that march to Tokyo Bay. The Pacific theater was no longer a defensive one. This caused the strategists in Washington to rethink their plans for the Pacific.

Lessons From Year One

The battles of Buna-Gona in New Guinea, Guadalcanal and the Coral Sea in the Solomon Islands, Midway in the central Pacific, the Doolittle raid off Japan's coast, and the air battles in China were costly victories that were won primarily by sheer courage and luck (Toll, 2012). These battles were the keys to accomplishing those initial four tasks. They were victories. However, they demonstrated the weaknesses in US forces' training, equipment, tactics, and understanding of the enemy. The US commanders in these battles, many of whom took command under chaotic circumstances from relieved officers, became the innovators for the next phases of the war. Fortunately, commanders like Admiral Chester Nimitiz, chosen to lead US naval forces after the debacle of Pearl Harbor, possessed an innovative mindset aligned to the challenges ahead. These leaders were also able to select in turn subordinates like Admirals Spruance, Halsey, Mitscher, and Turner who were capable of learning and innovating through the remaining years of the war. They also were able to select their own subordinate commanders who learned most from the experiences of those initial bloody battles compared to their peers. They also became innovators in the remaining years of the war. The same was true for General

Douglas MacArthur who, like Nimitz, removed senior commanders not able to meet the demands of his theater and put in place commanders such as Generals Eichelberger and Kenny.

Organizing for War

On December 6, 1941, the US military presence in the Pacific consisted of two major commands, the Navy's Pacific Fleet commanded by Admiral Husband E. Kimmel and the Army's Hawaiian Department commanded by General Walter C. Short. Both commands were headquartered at Pearl Harbor. In the Philippines, General Douglas MacArthur was recalled from retirement and given command of the newly formed US Army Forces in the Far East. He was, at the time, serving as a Field Marshall in the Philippine Army commanding that country's military forces. Also forming at this time was the 1st American Volunteer Group, to become known as the Flying Tigers, under command of General Claire L. Chennault. This unit consisted of a group of aviators, most from the US Army, Navy, and Marine Corps, who agreed to serve as civilian volunteers in the Chinese military under Chennault. Later in the war this group would be activated in the US military structure and many of its members would return to their respective services (Kleiner,2018).

After the attacks on US bases in the Pacific and the declaration of war that followed, key decisions were made in Washington regarding the command structure for executing the two-front war and the selection of the senior leaders to fill the top command positions. President Roosevelt directed that a joint chiefs of staff be established to lead the US war effort in Europe and the Pacific and that this team would also be the US contribution to the combined chiefs of staff that included other allied military leaders,

primarily British (Marshall, 2006). He directed Admiral William D. Leahy to lead the joint chiefs. Leahy was an old friend of Roosevelt's who was recalled from retirement to be the president's chief of staff, a newly created position (O'Brien, 2019). Chosen for the three member positions on the US joint chiefs were the two chiefs of the then two services, Admiral Earnest J. King, Chief of Naval Operations, and General George C. Marshall, Chief of Staff of the Army, and, at the insistence of General Marshall, the commander of the Army Air Corps, General Henry H. "Hap" Arnold. These men were considered co-equal, although Marshall would later emerge as a first among equals and, under the Truman administration, would become Secretary of State and Secretary of Defense (Pogue, 1986). Marshall's focus was primarily on Europe (Marshall, 2006). King's was primarily on the Pacific (Toll, 2012, p 127). Arnold's was more balanced, although toward the end of the war it became more oriented to the Pacific because of the need to develop a more effective strategic bombing strategy (Arnold, 2006). Although strong service rivalries would surface throughout the war, there was no evidence discovered in the research to indicate that each of them, and their services, was not supportive of their commitments and responsibilities in both theaters. It mainly reflected the nature of the theaters and which services would be the dominant contributor to the fight in each. These men would play a significant role in the development of innovative ways the war was fought in the Pacific. Their roles will be discussed and examined later in this paper. One key role that had an immediate and critical impact was the selection of the top leadership in the Pacific theater.

Kimmel and Short were immediately removed from command in Hawaii following the Pearl Harbor attack. King chose a surprisingly junior admiral, Chester A.

Nimitz, who had to skip a grade in rank to take command of the Navy's forces in the Pacific (King, 2006). Nimitz had built a reputation as a rising star in the Navy (Potter, 1976). Despite General Douglas MacArthur's blatant failure to prepare for the attack on the Philippines after the Pearl Harbor attack, Marshall convinced President Roosevelt to rescue him from his doomed retreat position on Corregidor, award him a controversial Medal of Honor, and send him to Australia (Marshall, 2006). Marshall made the decision to retain the often self-serving MacArthur because he felt that the country needed a hero at this point and MacArthur's penchant for overly dramatic showmanship with the media could serve to boost morale at home (Pogue, 1986).

Although China-Burma-India (CBI) was never designated as a formal US theater of operations, Marshall chose General Joseph W. "Vinegar Joe" Stillwell, regarded as the finest corps commander in the Army at the time (Pogue, 1986), to be in overall charge of US forces and military support programs in this region as though it were a formally designated theater of operations. Stillwell was to also serve as the chief advisor to the Chinese leader, Generalissimo Chiang Kai-shek (Tuchman, 2017). Stillwell's abrasive personality, conflict with General Claire Chennault (commander of the volunteer air group), dislike and public disparaging of Chiang, lack of having a formally established command and theater, and resistance to serving under British command created problems as the war progressed and lead to his eventual transfer by Marshall (Marshall, 2006).

These initial command assignments led to an odd command structure in the Pacific. Nimitz was designated as Commander-in-Chief Pacific Ocean Areas and had under him the South Pacific Command, the Central Pacific Command, and the Northern Pacific Command. A Southeast Pacific Command was formed to protect the Panama

Canal area and the southern route to Australia at the beginning of the war (not under Nimitz's command). This area was also known as the US-Australian Lifeline (Toll, 2012).

MacArthur was given command of the Southwest Pacific Area, initially Australia and New Guinea and later expanded north to include the Philippines. He was also given joint command of US and allied forces in that region (primarily Australian, New Zealand, and British forces) (Marshall, 2006). Unlike the European Theater where Eisenhower was Supreme Allied commander with all forces under his command, there was no single theater commander in the Pacific. This led to problems such as the issue of command of naval forces in MacArthur's area, the nominal overall command by the British in the CBI theater, the control of strategic air assets, and the authority over ground forces between the Army and Marines (Costello, 1981).

As the war progressed and long-range bombing of Japanese main islands became feasible with the introduction of the Boeing B-29 Superfortress, a separate air command was set up commanded by General Curtis E. "Bombs Away" LeMay, selected by, and reporting directly to Arnold. Arnold initially envisioned three separate strategic air commands, one in China, one in the Philippines, and one in the Mariana Islands. Eventually he decided on one command under Lemay (Arnold, 2006). Technically all these commands reported to the joint chiefs of staff. In reality, Nimitz reported to King, Stillwell to Marshall, LeMay to Arnold, and MacArthur, reluctantly, to Marshall (Pogue, 1986). It was truly amazing that the war in the Pacific was so successfully prosecuted with the challenges, like this unorthodox and awkward command structure that lacked strategic cohesion, being imposed on the commanders from the outset.

Competing Strategies

With all the pre-war planning and war gaming, one might think that an agreed upon strategy for winning the war against Japan was a given. However, the challenges the commands faced from the beginning, the ad hoc establishment of the command structure, and the surprising early successes of the US forces, caused different views to emerge as to the strategy to defeat Japan developed. Three strategies were advocated that required completely new forms of warfare in order to succeed. The first was developed by Nimitz and supported by King and Leahy. It called for a naval island-hopping campaign across the Central Pacific and through nine island chains. The second, advocated by MacArthur and supported by Marshall, was a thrust through New Guinea and up the Philippine islands. The third, which never fully developed until the last year of the war, was a strategic bombing campaign, launched from China, the Philippines, and the captured islands in the Central Pacific, designed to bring Japan to surrender. The first two needed a decision from the top. It would be left to Roosevelt to decide whether the main effort would be Nimitz or MacArthur. Roosevelt flew to a conference, held in Hawaii, to hear both proposals (Marshall, 2006). It was decided to do both. Nimitz's plan called for the final stepping stone for an invasion of Japan to be either Formosa (now Taiwan) or Okinawa, a large Japanese island in the Ryukyu chain south of the main Japanese home islands. MacArthur's plan culminated on Formosa as the launching pad to the main islands Toll, 2012).

In the end, the decision was made in favor of Nimitz taking the fight to Okinawa but MacArthur was placated by being named overall commander for the ultimate invasion of the Japanese main islands (Pogue, 1986). It was fortuitous, in this case, that

no single theater commander existed. Roosevelt's decision may have been most influenced by not having to choose between Nimitz and MacArthur more than it was a strategic decision. He also faced the split in support between Marshall, who supported MacArthur, and King and Leahy's support for Nimitz. In addition, the forces were in place, or coming into the Pacific theater, to execute both. One benefit of this decision was that it did result in confusing the Japanese and causing them to have to move forces back and forth trying to anticipate which was the main attack (Hornfischer, 2016).

The Encircling of Japan 1943-1944

Throughout 1943-1945 a series of hard fought naval, air, and island ground battles were conducted to close a contracting ring around Japan. In the east, Japan faced a growing CBI theater forming around British, US, and Chinese forces gaining the offensive. In the north, the possibility of Russian involvement loomed as a continuing threat. In the west, US naval forces were closing in on the island chains occupied by the Japanese from the northwest through the Aleutians and through the islands in the central and southern chains. In the south, US and allied forces were moving through New Guinea and the Philippines. Japan faced a 360 degree encirclement that was inexorably contracting(Toll, 2015) .

The first year's battles provided valuable experiences and insights into how to develop new ideas and capabilities that would aid US forces in winning the fights in this phase of the war. Unlike the first year of the Pacific war when forces and materiel were scarce and there was a great need to improvise based on being an economy of force (a military term for using the minimum force required and/or conducting only essential operations) theater, now the challenge was to adjust to the second pillar of the Roosevelt

strategy that was in full gear, the massive production of war materiel from the arsenal of democracy. This had an opposite effect in that new technologies and more of everything rapidly flowed to the theater from America's industrial base and experimental labs. These had to be adapted to the new forms of warfare being practiced and experienced for the first time. Again, innovation was the only course to take.

The converging campaigns saw new strategic, operational, tactical, and technological changes, adaptations, and innovations with each succeeding battle as the lessons from the last battle, the adjustment to the new capabilities provided, the creation of new organizations, and the adoption of new methods of fighting were assimilated. What would emerge, based on analysis, was a reinvented Navy and Marine Corps, the creation of new military organizations, such as a separate strategic air force and special operations units, and unmatched power projection forces with a global reach that would change America's role in the world ever since (Hornfischer, 2016).

A year into the war saw another aspect of change. MacArthur and Nimitz removed senior officers from key positions who were too cautious or could not meet the challenges requiring more than traditional approaches to operations. Later in the war, Arnold followed suit in removing ineffective commanders. Nimitz removed Admirals Frank F. Fletcher and Robert L. Ghormely from fleet commands and placed Admirals Raymond A. "Electric Brain" Spruance and William F. "Bull" Halsey in command of his two fleets (Hornfischer, 2016). MacArthur removed his ground commander, General Forrest Harding, and air commander, General George H. Brett, and replaced them with Generals Robert L. Eichelberger and George C. Kenny (Borneman, 2012). Arnold removed General Haywood S. Hansell from command of the bomber forces in the Marianas and

consolidated all strategic bomber assets under LeMay (Arnold, 2006). These chosen replacements were highly talented, bold, and creative officers. In turn, they chose the same type of leaders to command their subordinate forces. What resulted, all the way down the chain to the tactical levels, was the creation of teams and organizational cultures consisting of like-minded leaders free to innovate and adapt.

End Game 1945

A monumental task lay ahead for the forces that took Okinawa, the final stepping stone to the hoped for ultimate victory, and those waiting to join them from elsewhere in the Pacific for the invasion of Japan. Predictions of US and allied casualties based on previous battles against the Japanese to this point of the war ranged as high as a quarter of a million wounded and killed. There were still over two million Japanese troops on the mainland islands (Hornfischer, 2016). One thing that bloody battles like Iwo Jima, Okinawa, Saipan, Buna, Manila, and numerous others taught the US forces in the Pacific was that every remaining Japanese soldier and civilian would fight and die for the emperor if directed to do so and the planning had to take this into account.

Operation Downfall, as the invasion of Japan was named, consisted of two operations. Each was designed to take one of the two major Japanese home islands; Operation Olympic, the taking of Kyushu, and Operation Coronet, the taking of Honshu. Over two million US and allied troops were in the plan. Macarthur would command, and consideration was being given to adding a sixth star to his collar for the unprecedented mission that would exceed, in scale, any other military US operation in history. Casualty estimates were staggering. The line-up of commands and commanders for this operation included Pacific theater battle hardened units and well-tested commanders who had

established reputations for high quality leadership, boldness, competence, and innovation (Costello,1981). Experienced units from the European theater, where the war had ended, were designated to be part of the invasion as well (Hornfisher, 2016).

The two atomic bombs convinced the Japanese leaders, although not without dissenters and debate, to finally agree to unconditional surrender before Operation Downfall would be executed. These were the only two bombs in the US arsenal that were assembled on Tinian, the launching base for Tibetts B-29s. One was a uranium bomb and the other a plutonium bomb (Costello, 1981). Had the atomic strikes on Hiroshima and Nagasaki not resulted in surrender, Operation Downfall would have commenced immediately. On September 2, 1945 the Japanese signed the surrender documents aboard the USS *Missouri* in Tokyo Bay. Fittingly the decommissioned *Missouri* is now anchored beside the USS *Arizona,* standing watch over the ship sunk with its crew on December 7, 1941.

Aftermath

The war in the Pacific was unique for the many reasons discussed in this study. One of those reasons, and the focus of this study, was the remarkable number of innovations that were developed during the fighting. Although not part of this study, it is important to note that innovation carried over to the occupation of Japan when MacArthur, with the support of Truman and Marshall, rebuilt Japan rather than seeking painful reparations as was the historic norm after war victories (Marshall, 2006). This approach changed history and created a new and positive order in Europe under the Marshall Plan and a vibrant and democratic Japan under MacArthur's direction and with the contributions of many of the same commanders mentioned in this study who were

part of the occupation forces (Hornfischer, 2016). From pre-war prescient leaders to wartime commanders to post-war nation builders, a group of truly remarkable men orchestrated a victory under demanding conditions. They innovated the victory. Those leaders, their leadership practices and processes, their creative teams, and their brilliant innovations are discussed and examined in the next parts of this chapter.

The Innovations

The adage attributed to Plato that "necessity is the mother of invention" truly applied the Pacific theater during World War II. There were no detailed blueprints, doctrinal manuals, or standing operating procedures to guide the leaders. Although there were some new emerging concepts and capabilities being tested, there were still traditionalists who clung to old, outdated ways to conduct operations, and cautious officers who were averse to risk taking. The pre-war plans that were developed did not fit the reality faced once the war began. As an example, the "Big Gun Club" or "Black Shoe Navy", as the old battleship-centric advocates of the pre-war Navy were called, had to give way to the "Brown Shoe Navy", the hot shot young aviators who replaced them as commanders of fast carriers (Hornfischer, 2016). The resisters to change were pushed aside quickly from command positions as a new breed of leaders seemed to cascade through the ranks after the initial top appointments and the experiences of the first year of the war. From the outset new ideas flowed and the license to innovate passed throughout the Pacific commands.

I reviewed over fifty innovations for this study. Some were strategic such as the development of the fast carrier task, amphibious assault, and strategic bombing forces. Some were relatively small such as the concept for the Marines' fireteam structure and

adoption of new "Corkscrew" tactics for combination employment of the white phosphorus grenade, flamethrower, and satchel charge. As stated in Chapter One, the definition of innovation used for the purpose of this study is "a process that has multiple activities; performed by multiple actors in an organization; in a systematic and structured manner; by a combination of means; that results in the development, production, and implementation of new concepts, strategies methods, technology, tactics, and/or organizational designs and models developed to accomplish organizational missions, goals, and tasks". It was not the purpose of this study to look for lists of scattershot ideas or occasional innovative approaches to solving the challenges that the Pacific commands faced. To some degree or other, innovation occurs in all military organizations in time of war (Murray & Millett, 1996). The key words in this definition are "process" and "systematic and structured manner". Some military historians, who have written on military innovation, incorrectly claim that analyses of existing literature failed to find any patterns or systematic processes in military organizations that have produced innovations (Murray & Millett, 1996; Rosen, 1991). In this study, discovering the ways commanders and commands systematically developed and processed innovations is the focus and challenges that theory.

Origins of Innovations

Each of the major Pacific commands developed significant innovations. These ranged from the strategic to the operational to the tactical way things were done. There were also technological, structural, and procedural innovations. Based on the research for this study, the original ideas for the innovations came from outside the commands, and

even outside the military. They also came from inside, either driven from the top down or the bottom up.

Examples from outside the Pacific commands include the creation of Marine Raider units that originated with President Roosevelt and his discussions with Prime Minister Churchill (Gilbert, 2006). Churchill put a great deal of stock in using his Royal Marine Commandos to conduct raids in places like Norway and France against Nazi targets. He felt that these small offensive operations kept up morale on the home front and provided some form of offensive capability in the early stages of the war before Britain could muster any kind of major offensive capability on the European continent while desperately defending the British Isles. Since Roosevelt's strategy was Germany first, he saw the need for an initial defensive posture in the Pacific and the British concept of commando raids appealed to him. Roosevelt's son James, a Marine officer, was an advocate for creation of the Raiders as well. A friend of Roosevelt's, William "Wild Bill" Donovan, creator of the Office of Strategic Services (OSS) and head of covert operations, encouraged the development of the raiders and offered to command them despite resistance from the Marine Corps leadership at the time (Gilbert, 2006). Donovan became the "Father of American Intelligence" and establish the first coordinated network of intelligence throughout the world. Early in the war he established a covert force called Detachment 101 operating behind enemy lines in China (Waller, 2011). The Marines fought off the idea of outside command and brought an infantry battalion to Marine Corps Schools in Quantico, Virginia and began experimenting with training, organizing, and equipping a raider unit (Gilbert, 2006). General Evans F. Carlson, a decorated Marine and friend of Roosevelt's son, was among the leaders tapped to develop the raider

units. He was an unusual character who had spent time with Mao's forces in China and had different ideas about the military leadership, skills, and training a force like the raiders should have. He and other leaders chosen to develop the raider capabilities proposed changes in structure down to the fire team level designing the fire team of three to four Marines organized around the newly adopted Browning Automatic Rifle (BAR) and training in specialized skills such as rubber boat infiltration, hand-to-hand combat, and knife fighting. Even a Marine combat knife was specially designed, the KBAR, that is still issued today. Carlson introduced the term "Gung-ho" into the Marine lexicon. It was a Chinese word for teamwork that he picked up from his time with Mao's forces. Eventually six Marine Raider battalions and one Marine Parachute battalion were organized and sent to the Pacific. Carlson and James Roosevelt would later command raider battalions (Gilbert, 2006).

Another example of an outside the military idea was the concept of using Native Americans, specifically Navajos, as "code talkers". There had been some minor efforts before the war to test the idea of using Native Americans as tactical radio operators since encrypted radios did not exist at that level. The Germans even sent spies to the US to try to learn Native American languages before the war started. These efforts were never fully developed or accepted. A missionary's son, Philip Johnson, who grew up on a Navajo reservation, managed to get a meeting with Marine general Clayton B. Vogel, who was responsible for the preparation of Marine units for deployment to the Pacific, to make the case for using Navajos in this role. Johnson convinced him of the uniqueness of the Navajo language. It was never written and less than a handful of non-Navajos could speak it (none fluently). I wast unbreakable. Vogel was fascinated by the idea and agreed

to a test. Thirty Navajos volunteered for service in the Marine Corps to develop the concept. They formed a test unit that developed a Navajo "dictionary" for military terms and the unit was expanded and successfully deployed to the Pacific Marine units. Johnson was accepted as a volunteer in the Marines to work on the program and given the rank of Staff Sergeant upon joining (Nez, 2011).

An example of an inside top down generated innovation was the creation of the Underwater Demolition Teams (UDT) forerunners of today's Navy SEALs. Admiral Kelly Turner, the commander of Nimitz's amphibious forces, realized, after near disastrous landings such as Tarawa, that underwater intelligence on beaches, reefs, tidal effects, obstacles, mines, etc. was crucial. He specifically sought out Draper L. Kauffman to head up the development of a UDT capability to survey beach approaches and destroy obstacles. Draper served in the US Navy, British Navy, and French Army prior to returning to the US Navy. He built a legendary reputation in bomb disposal techniques and the use of explosives before joining Turner's command. He developed the UDT teams through trial, error, and experimentation and they first proved their value in the island invasions of the Marianas chain (O'Dell, 2000).

An inside bottom up initiated set of innovations was the development of the Navy's fighter tactics such as the Thach Weave (Ewing, 2004). These were formations and maneuvers designed and tested at the squadron level and distributed and adopted throughout the carrier aviation units. The Thach Weave was developed early in the war and was primarily a defensive maneuver. As the pilots and planes grew more capable, more offensive formations and maneuvers were developed (Hornfischer, 2016). Under Admiral Marc A. Mitscher, the commander of Nimitz's fast carrier task force, pilots at the

squadron level, such as Thach, were encouraged to develop and design new tactics and formations based on their combat experience and experimentation (Taylor, 1954).

There were also examples of outside innovations that were rejected by all other military commands but accepted and fully developed by Pacific commands. One such innovation was the use of napalm. The use of napalm fire bombs, flame tanks, and flame throwers was initially only accepted by Nimitz's command. The capability was enhanced through experimentation and testing within his command. Use of fire as a weapon was controversial. However, the command felt it necessary as a more effective way to defeat dug in and heavily fortified positions manned by Japanese soldiers willing to fight and die to the last man. Eventually, firebombing became a major part of LeMay's strategic bombing campaign against the Japanese home islands and cities (Hornfischer, 2016).

General Hap Arnold strongly desired to establish airpower as the dominate force in the US military. Beside his emphasis on strategic bombing and airlift, he also was committed to testing experimental air capabilities as well. Despite resistance from some senior officers, he deployed the first helicopters used in war to the CBI theater where they were used for limited tactical missions (Bergin, 2019).

Innovations from allied forces were adopted by the Pacific commands as well. Operation Ferdinand was an Australian intelligence structure or system of over 600 "Coastwatchers" consisting of ranchers, missionaries, and, later, Australian, New Zealand, British, and American military personnel who established a network throughout the South Pacific to provide early warning of Japanese naval movements and intelligence regarding Japanese garrisons on occupied islands. Those non-military Coastwatchers were given commissions in the Australian military to protect them from execution as

spies if captured. Admiral Halsey stated that the Coastwatchers saved the US forces on Guadalcanal (Feldt, 2014).

Another innovation initiated by the Australians and adopted by US commands was the use of native militias recruited on the islands. Besides intelligence, these militias saved downed pilots and rescued POWs. Some were part of forced labor groups impressed into service by the Japanese and therefore had access to valuable intelligence. On Guadalcanal, a legendary native militia member was Sergeant Major Jacob Vouza, a Coastwatcher for the British and native scout for the Marines. His heroic actions throughout the Solomons campaign earned him a US Silver Star and Legion of Merit. He was also decorated by the British with the Medal of St. George. (Wheelan, 2017).

These examples of innovations created or adopted provide a sense of the culture changes that encouraged creativity and innovation in the commands flowing all the way down to the tactical level. Added to these were the demands from constantly growing organizations with new missions, structure, and technology that had to be deployed and employed without any previous command leadership experience with them.

The Rush of Technology and the Expansion of Forces

During every war new technology and new kinds of forces are developed. Also, the expansion of forces from peacetime structures to war time requirements occurs. In my search of military history, I have not discovered any other conflict that saw a greater rush of new technology and the rapid expansion of forces as occurred in World War II. To those without military experience, it may seem that better and more is all good. However, the requirements this brings in retraining, logistics and maintenance adjustments, development of tactics, techniques, and procedures, increased levels of leadership, and

numerous other factors make the introduction of new technology and larger forces a significant challenge. It is a tough challenge in peacetime but an exponentially greater challenge when fighting a war while developing and implementing these changes.

The three years and nine months of conflict in the Pacific saw Roosevelt's arsenal of democracy deliver overwhelming quantity and quality in the materiel needed to wage war. Along with this came the ever increasing sizes of the forces. During the course of the war, for example, the Navy saw the development of six different fighter aircraft, the Army Air Corps the development of seven different bombers. The size of the Army grew seven times its initial strength at the start of the war. The Marine Corps grew to nine times its starting strength and the Navy twelve times (Toll, 2012, 2015, 2020).

Advanced technology and increased size of forces required new approaches to employment. The increased scale of operational capability meant coming to understand how to lead and manage huge forces never before experienced by commanders. As an example, the Marine Corps never deployed more than a brigade sized unit of a few thousand men in combat before the Pacific War. The Army insisted that even the brigade deployed in World War I be commanded by an Army general since it was inconceivable that a Marine general could lead a force of brigade size. By war's end, Marine generals would lead Corps and Army size forces made up of units from both the Army and Marine Corps. The Army objected to these assignments, however, Nimitz had Marine General H. M. Smith command the amphibious corps, made up of Army and Marine forces, under his command. Marine General Roy Geiger, deputy commander of the Tenth Army on Okinawa, assumed command after the death of its commander, Army General Simon Bolivar Buckner.

The freedom to innovate went down to the small unit level and Sergeants and Corporals felt they had approval to use or develop innovative methods to accomplish the mission. Marines on Saipan could not use vehicles to follow the attacking units through rough jungle and mountainous terrain so they commandeered local oxen and carts, formed them into units to bring ammo and supplies forward to the front lines, and established procedures for their protection and caring (Hornfischer, 2016). Numerous examples of this kind of initiative taken by small unit leaders was reflective of the organizational created by senior leaders who encouraged innovation to meet challenges.

The Pacific Commands

A culture of openness to new ideas, willingness to experiment, acceptance of failure, eagerness to learn from trial and error, ability to quickly adapt to new changes, and the constant adoption of new approaches existed in each command in the Pacific. Leaders led the efforts to innovate, remove obstacles to innovation, and build the teams that could develop and implement the changes. What follows is a brief description of some the innovations and the innovation processes adopted by Nimitz's, MacArthur's, Stillwell's, and LeMay's commands.

Admiral Chester Nimitz's Command

Nimitz's strategic decision making proved daring and bold from the beginning of the war. His thrust into the Solomon Islands, invasion of Guadalcanal, and naval battle in the Coral Sea against superior forces halted Japan's seemingly unstoppable chain of victories after Pearl Harbor and the Philippines. He was not willing to wait for the buildup of American capabilities before engaging the Japanese fleet again and, at great risk, took on the fleet at Midway in June 1942 defeating it decisively. He refused to take

Japanese Admiral Yamamoto's bait prior to the battle of Midway and did not split his forces to chase Japanese forces sent to attack the Aleutians. This meant allowing the Japanese to take American territory, but Nimitz knew the focus had to be on defeating the Japanese navy, particularly the carrier forces. His strategy for the Presidentially approved offensive across the Central Pacific was equally daring and innovative. It would be an island hopping drive over tens of thousands of ocean miles bypassing and isolating some islands and establishing support bases as he closed the shrinking ring around Japan from the east. He knew the fighting would be tougher as the ring closed since the enemy would gain the advantages of shorter distances of support and interior lines (Potter, 1976).

Two new forms of warfare were the foundation of his plan, fast carrier task forces and amphibious assault operations. He chose two aggressive and creative admirals to lead his two fleets, Spruance and Halsey. Each had opposite views as to how their fleets should fight the campaign Nimitz had designed. Halsey was impulsive and aggressive and wanted to chase down the Japanese fleet. Spruance was methodical and careful to protect each fight for the islands and let the Japanese come to him for the fight. Despite the pressure on Nimitz from inside and outside his command to chose one method to follow, he let them each execute the missions in their own way. Spruance and Halsey had their own staffs and were designated as the Fifth Fleet and Third Fleet respectively. The carrier, amphibious, and other naval task forces that made up the fleets, however, were interchangeable in that they moved between the two fleet commands. Some of the benefits of having two fleet commanders and their staffs but the same task forces operating beneath their commands were the confusion it caused the Japanese, the ability to have two different operating philosophies to employ, and the ability to have a staff

turnover command to the other fleet and plan the next phase or operation of the campaign while the fighting continued.

The innovator chosen to develop the operational concept, organization, and tactics for the fast carrier task force as well as the team to build it was Admiral Marc A. Mitscher. The innovator chosen to do the same for the amphibious task force was Admiral Richmond Kelly Turner. These two became legendary for the remarkable way they created two powerful strategic forces that were unprecedented in military history. These commanders were examples of the trickle down selection of innovative leaders (Hornfischer, 2016).

Mitscher created Fast Carrier Task Force 58 (when operating with Halsey it was designated Task Force 38) (Herder, 2020). It became the Navy's crown jewel (Herder, 2020) and is still considered so in today's Navy. During the war the Navy in the Pacific went from three to thirty-eight carriers. The US rapidly produced fast carriers and numerous other fast escort carriers, jeep carriers, fast battleships, fast cruisers, fast destroyers and other support ships. These were combined to form the fast carrier task forces beginning with the first, and most famous, Mitscher's Task Force 58. The ship development and production was matched by the rapidly improved naval aircraft models rolling off US assembly lines that included fighter, bomber, torpedo, reconnaissance, and other specialized aircraft. The "Magnificent Mitscher", as he was called (Taylor, 1954), built an invincible team of leaders who developed the structure, doctrine, and tactics for this powerful formation of ships and aircraft. His aviators and ship's captains designed complex deck launching procedures, air formations, attack patterns, and recovery processes.

The squadron aviators who flew the missions also developed anti-aircraft gunnery procedures and even modified the fusing on the munitions (Hornfischer, 2016).One example, previously mentioned, was a fighter attack formation known as the Thach Weave. It was named after John Thach, a Navy fighter pilot, who along with fellow pilots Henry O'Hare (posthumous Medal of Honor recipient for whom the Chicago airport is named) and James Flatley developed this maneuver and other sweeping changes in aerial combat tactics (Ewing, 2004). Japan's greatest air ace, Saburo Sakai, known as the "Angel of Death", praised these innovative maneuvers and said they confounded the Japanese pilots who engaged the US aircraft (Sakai, 1957).

Turner, known as "Terrible Turner" for his hard driving personality, had, arguably, the greatest challenge of all. He had to orchestrate the doctrine, procedures, organization, and tactics for what is regarded as the most complex of military operations, the amphibious assault (Dyer, 1969). After the debacle at Gallipoli in World War I, large scale amphibious assaults against fortified beaches were deemed impossible to carry out (Lacey, 2013). Turner's command had the responsibility of projecting the landing force ashore from the packed holds and well decks of amphibious transports in a manner that had the assault forces coming out of the sea, under fire, in an uninterrupted and continuous fighting mode. It called for conducting detailed reconnaissance of the beaches and removal of obstacles and mines; coordinating and controlling naval gunfire and air support and passing that responsibility to the landing force once established ashore; executing a synchronized ship-to-shore movement with waves of assault forces that landed only a few minutes apart; managing the beach areas with the rapid buildup of supplies and support capabilities rapidly being pushed onto the beaches; transferring

overall command and control of operations and fires ashore in a seamless manner; and defending the highly vulnerable transports while these operations were conducted. Turner's teams developed such organizations as the Underwater Demolition Teams (today's SEALS), the Naval Construction Battalions (today's Seabees), Naval Gunfire Support forces (primarily the older battle ships he commandeered that were too slow to be in the fast carrier forces), Beach Masters to organize and manage the buildup on the beaches, and a collection of landing craft that ranged from specialized boats to armored tractors being driven by a collection of Army, Navy, and Marine NCOs. Turner constantly learned from previous operations and made dramatic changes in the form of new organizations, new equipment, or new procedures to fix problems previously encountered. An example of the this was, as mentioned, the creation of the UDT. He sought Admiral Draper Kauffman to create and train this organization for its highly dangerous and controversial mission (Rottman, 2005).

Operating under Turner's command was the landing force responsible for taking the islands and clearing them of the enemy. This mission fell primarily to the Marines at the start of the war with the Army initially providing follow-on forces after the initial assaults. Eventually the Army trained divisions to participate in the assault phase or conduct their own as the war progressed. The Marines grew to six divisions, four aircraft wings, and numerous specialized units during the war, all serving in the Pacific theater. The Army had twenty-one divisions serving in the Pacific by war's end with more planned to join the final assault on the Japanese main islands. As mentioned, the Marine Corps had been developing the concepts for large scale amphibious operations since the 1920s. The commander of the Marines in the Pacific was General Holland M. "Howlin'

Mad" Smith. He was a major proponent for developing amphibious assault capabilities before the war and led the training and development of tactics and organization for such operations. He oversaw Marine and Army amphibious unit training in the Caribbean in the 1930s (Smith, 1948).

Smith had a team of tough and innovative generals serving in the Pacific. They developed an impressive array of capabilities during the course of the war as they absorbed the lessons learned from each assault landing and adjusted their approach for the next attack. His chief of staff and later division commander on Iwo Jima was general Graves B. Erskine, a brilliant officer who contributed greatly to the development of ground and ship-to-shore tactics (Cooper, 1987).

No two amphibious operations were the same in planning, organization, or execution even as lessons learned were absorbed and applied to the next operations (Rottman, 2004). When the Marines made their initial landing of the war on Guadalcanal in 1942, they had to virtually live off the land. The Navy task force left the area of operations before half the Marines' equipment was brought ashore because the fleet commander, Admiral Ghormely, felt that the naval force was overly exposed to attack . General Alexander A. Vandergrift, commander of the Marine force, had to live off captured Japanese equipment and supplies while beating off several attacks that almost succeeded in driving the Marines from their tentative hold on an airfield and beach area. The Marine aviation unit fought off attacks from Japanese ships and landing forces attacking the Marine lines. As the battle raged, an odd collection of aircraft landed at the airfield. These included Navy planes unable to return to their carriers, Australian planes in need of emergency maintenance, and US Army Air Force planes low on fuel. This

eclectic collection of aircraft became known as the "Cactus Air Force". It was under command of General Roy S. Geiger, who went on to earn four stars and command landing forces including the Tenth Army on Okinawa. They provided close air support for the Marines on the island and helped in preventing Japanese ships from running down "The Slot", as the sea lanes through the narrow Coral Sea were called. One of the squadron leaders in the Cactus Air force was Marine General Gregory "Pappy" Boyington. He commanded the legendary "Black Sheep Squadron". He left the Marines to become one of the Flying Tigers and returned to the Corps to command the famous Black Sheep squadron on Guadalcanal. His leadership was instrumental in attacking enemy ground, air, and ship targets to protect the force on Guadalcanal. He became an ace, was taken prisoner by the Japanese after being shot down, and awarded a Medal of Honor after the war (Wheelan, 2017).

Three years and numerous landings later, the assault on Okinawa looked nothing like the first landing on Guadalcanal because of the evolution of doctrine, tactics, equipment, command and control, logistic support, organization that developed through innovation (Rottman, 2004). The Marines had learned the valuable lessons of clearing the islands quickly even if it meant bypassing and isolating enemy positions, then rapidly establishing operational airfields to gain close air support for cleaning up the island of the enemy, protecting the force from attacks from the sea, and lessening the dependence on naval support in case those forces were forced to leave their stations at sea.

Every component of Nimitz's command was a developing and evolving work in progress throughout the war. There existed in each subordinate command a culture of innovation and adaptation. Top leaders created the culture, selected highly motivated and

creative junior officers to form teams to address challenges, and accepted the risk and failure that came with condoned experimentation.

General Douglas MacArthur's Command

MacArthur was determined to immediately begin an offensive upon his arrival in Australia. This was driven, in part, by his clear obsession with retaking the Philippines. He initiated Operation Cartwheel, the taking of New Guinea and the islands on its western and northwestern sides. This was an ambitious plan so early in the war, much like Nimitz's offensive plans. He planned a series of thirteen amphibious landings and a tough land fight on New Guinea to wrest control of key bases from the Japanese. This was designed to be his stepping stone to retaking the Philippines. MacArthur envisioned commanding a joint command to accomplish his plan; however, joint command of all services' forces was resisted by the services' leadership and would take legislation in the decades after the war to achieve. MacArthur's battle with the US Navy over command of naval forces ended in an agreement by the Navy to support and cooperate with his plan, but not pass command or control of naval forces to him. The initial landings were bloody and difficult but were successful in the end. The US Army troops he received were, in many cases, poorly trained and equipped National Guard units rushed into service to join the Australian forces under MacArthur's command. A near defeat at Buna-Gona in New Guinea as a result of the poor training, lack of equipment, and incompetent leadership caused MacArthur to relieve his Army commander and his Air commander. They were replaced by two truly innovative and brilliant commanders, General Robert L. Eichelberger and General George C. Kenny (Borneman, 2016).

General Eichelberger saved a victory at Buna. He assumed command there, relieving General Forrest Harding, with the direction of MacArthur to "remove all officers who won't fight" and to "take Buna or not come back alive" (Eichelberger, 1950, p 26). He followed his orders by removing many senior officers and giving command to much juniors leaders. In one case he gave command of a battalion to a twenty-six year old captain who demonstrated initiative and innovation in the fighting on Buna. Eichelberger quickly recognized the deficiencies in training in US units in jungle operations, amphibious operations, physical fitness, planning, and small unit tactics. He corrected these and eventually became commander of the US Eighth Army leading it in the invasion of the Philippines and the occupation of Japan. Eichelberger learned and adapted from operation to operation. He was quick to change and reward initiative and innovation by junior leaders (Shortal, 1987).

General Kenny, who became the first commander of the US Air Force's Strategic Air Command (SAC) after the war, was selected by MacArthur over candidates such as General James Doolittle, to relieve his air commander General George Brett. Much like Eichelberger, Kenny immediately relieved a several of the incompetent senior officers in the command and greatly enhanced the performance of MacArthur's air command through the innovative command structures, weapons systems, and tactics he developed. He encouraged initiatives from junior officers such as a young major's, Major Paul Gunn, modifications of weapons systems on bombers. By the end of the war, he was in command of the Far East Air Forces (FEAF) (Kenny, 1987).

MacArthur insisted on having his own intelligence organization with responsibilities normally given to more centralized intelligence organizations. With the

intelligence officers he brought with him from the Philippines, he formed what became known as the Central Bureau (Drea, 1992). On December 7, 1941 the US Army was unable to decrypt a single Japanese Army message. By February 1944, the Central Bureau was deciphering twenty thousand per month (Drea, 1992). Interestingly, Nimitz had his own US Navy intelligence organization that he created, called HYPO, doing the same. HYPO deciphered the message revealing Admiral Yamamoto's travel itinerary to visit units around Rabaul. This intelligence facilitated the intercept operation launched from Guadalcanal that shot down his plane (Smith, 2000). Each command developed its own complete intelligence organization. This was an innovative approach that was driven by the lack of a trusted centralized intelligence network that leaders like General William Donovan worked to create during and after the war.

One major criticism of US forces coming out of World War II, particularly in the Pacific theater, was the difficulty in conducting joint operations. Each service wanted to operate independently or assume command of all other forces for operations. No joint doctrine or joint command structure really existed before the war. After the war, this caused President Harry Truman to push for the 1947 National Security Act that formalized the Joint Chiefs of Staff and led to the 1983 Goldwater-Nichols Act that created a joint command structure for US forces. MacArthur was ahead of his time in his ability to see the synergistic power of integrating service capabilities. It may have been the clear need for a balance of ground, air, and naval capabilities for his campaigns in New Guinea and the Philippines that made him more aware of the value of integrated forces. His constant effort to get unity of command under him can be, and most often is, attributed to his drive for power and fame. However, he demonstrated the same

appreciation for other services' capabilities as well during the Korean War with his masterful strategic landing at Inchon (Borneman, 2016).

MacArthur's understanding of, and appreciation for, the value of joint operations and command was born out of his exceptional operational competence. It should not be dismissed as a result of his ego. His competence and innovation was demonstrated during World War I, the post-war administration of Japan, and the Korean War. His brilliance is often overshadowed by his flamboyance and sometimes inexplicable mistakes such as the lack of defense in the Philippines and underestimation of the Chinese forces in the Korean War (Borneman, 2016).

General Joseph Stillwell's Command

The China-Burma-India (CBI) theater initially developed in a piecemeal fashion with a patchwork of capabilities added by the US to meet unusual requirements as they developed. Unlike the other Pacific theaters, the CBI's innovation challenges had the added requirement of using minimal forces and materiel to accomplish assigned missions. Roosevelt approved a lend lease program for China prior to the Pearl Harbor attack. After the attack he approved the assignment of General Joseph W. "Vinegar Joe" Stillwell to be the senior officer in the CBI. Stillwell was regarded as the Army's top corps commander and was initially selected to plan and command the allied forces' invasion of North Africa (Tuchman, 2017). He was designated, by Marshall, as commander of all US forces in the CBI, eventually Deputy commander under British Admiral Louis Mountbatten when the South East Asia Command (SEAC) was established (Swinson, 1971), and advisor to Generalissimo Chiang Kai-shek. The command of operations in China was initially under the Chinese and Burma-India was under British command. The US CBI never being

established as a formal theater of war started the confusion of command that was exacerbated by Stillwell's strong, and often abrasive, personality (Pogue, 1986).

Chiang was fighting the Japanese and, despite an agreed upon pause, the forces of Mao Zedong's Red Army. He tried to hold back some of the Lend-Lease equipment for the fight with Mao that he knew would come after the defeat of the Japanese. He reluctantly gave Stillwell technical command of some Chinese troops; however, the employment of these Chinese forces became a point of conflict between Stillwell and Chiang. This was compounded by General Claire Chennault's siding with Chiang in his competition with Stillwell over Lend-Lease materiel. Marshall admitted that he had given Stillwell one of the most difficult assignments of any theater commander (Pogue, 1986). The situation in the CBI became critical when the Japanese made advances into Burma and threatened India. The Chinese forces defeat in Burma in 1942 caused the US to assign US air and ground units to the theater to try to maintain open logistics lines to Chinese forces and to aid British efforts to defend India (Tuchman, 2017).

General Claire L. Chennault's 1st American Volunteer Group (AVGG, known as the Flying Tigers, began training in Burma and China four months before Pearl Harbor. The unit began aerial attacks just weeks after Pearl Harbor and continued operating for seven more months as civilian mercenaries before being activated into the US military. Stillwell wanted the Flying Tigers under his command. This caused a major rift between him and Chennault that was never resolved. The creation of the Flying Tigers was an innovative concept and aided in keeping Chinese forces in the war; however, the confused command structure allowed the strong personality differences to further complicate theater operations (Kleiner, 2018). Marshall admitted that he put Stillwell in a

difficult position by not establishing the CBI as a formal theater and clarifying Stillwell's command authority to Chiang, the other commanders in the theater, and the British (Pogue, 1986).

Since the commitment of any large ground formations to the CBI was not feasible in the early stages of the war, the US looked to create specialized Army units like the Marine Raiders to engage the enemy. British General Ord Wingate had formed a special unit called the "Chindits" to conduct special missions behind Japanese lines to disrupt their lines of communications and logistics (Slim, 1956).. The US decided to form a similar unit and in 1943 the 5307th Composite Unit (Provisional) was formed under command of General Frank D. Merrill. The unit became known as "Merrill's Marauders". The group was made up of carefully selected volunteers and consisted of three battalions trained and employed by Merrill. They faced grueling long range jungle operations against major Japanese forces fighting five major engagements during the war. They penetrated over seven hundred and fifty miles into hostile enemy terrain. Disease, lack of supplies, and casualties from enemy engagements took their toll on them as only 130 of the original 2,997 were present for duty on the unit's disbandment in 1944. They, along with other Army special operations units formed during the war in MacArthur's command, provided the origins for today's Army Rangers and Special Forces (Ogburn, 1956).

With the Japanese attack into Burma in early 1942, the supply lines to support the Chinese were cut off. To resolve this problem an unprecedented US airlift command was established to fly "The Hump", the route over the Himalayas from India to China. Prior to World War II, the Army Air Corps did not have an airlift command. In 1942 no air units

were trained to move large amounts of cargo and no airfields existed in the CBI to hold a significant number of aircraft for such a mission. Originally, the Tenth Air Force was given the mission but had no experience in planning and conducting airlift operations. General William H. "Willie the Whip" Turner was instrumental in forming the Army Air Corps Air Transport Command (ATC) and was assigned to command the India-China Division of the ATC to run the "Hump" operations His innovations and training resulted in 650,000 tons of materiel to be delivered to China under difficult and dangerous circumstances. He became the foremost Air Force expert in air transportation and commanded the Berlin Airlift operations in occupied Germany in 1948-1949 (Turner, 1985).

Stillwell was recalled by Marshall in 1944. His hostile relationship with Chiang and with the British had become too great an issue and Marshall did not want his service in the CBI damage his career (Pogue, 1986). He returned to the Pacific as commander of the US Army Tenth Corps as it prepared for the invasion of Japan (Marshall, 2006).

General Curtis LeMay's Command

Four months after the attack on Pearl Harbor, General James H. "Jimmie" Doolittle received General Arnold's approval to lead a raid conducted by sixteen B-25 medium bombers launched from the carrier USS *Hornet*, commanded at the time by Marc Mitscher, to strike targets in Japan. It was a high risk operation for the volunteer crews who trained for the mission but never took off from a carrier deck until the actual launch of the raid (Doolittle, 1991). Throughout the war in the Pacific following the Doolittle raid, the Army Air Corps sought to gain bases from which to conduct strategic bombing missions over Japan. The continuous development of longer range, higher altitude, and

higher bomb load planes was a priority as well. Even when bases became available as Nimitz and MacArthur drew closer to the Japanese main islands and bombers could close the range, bases for shorter range fighters to accompany and protect the bombers was an issue. Initial bombing operations did not produce the effects desired and casualty rates for bomber crews where high (Kozak, 2009).

In August of 1944, Arnold transferred General Curtis E. "Bombs Away" LeMay from the European theater to the CBI theater to command the strategic bombing operations against Japan. The operations were intended to bring Japan to its knees and cause surrender through massive firebombing of its cities and mining of its harbors and inland waterways. LeMay felt that the tactics and techniques used in the European theater would not work in the Pacific theater and the operational losses of crews and aircraft due to the extensive and effective Japanese daylight air defenses were unacceptable. He also understood the need to deal with the continuous mechanical issues with the B-29. He did not feel that the high altitude precision bombing his predecessors employed was effective due to the constant weather conditions over Japan with its continuous clouds and winds. He ordered low-altitude nighttime incendiary attacks on Japanese cities and military targets. He also modified the bomb loads and gun turrets on the B-29s to reduce weight in order to increase bomb loads and gain greater fuel efficiency (Kozak, 2009). Although Arnold originally envisioned three strategic bombing commands in the Pacific, he consolidated the bombing efforts under LeMay who shifted operations to the Marianas when bombing from the China proved impracticable due to distance and security issues.

LeMay's changes to tactics, techniques, and aircraft were innovative and effective in terms of increased destruction to Japanese military and civilian infrastructure. The

heavy loss of civilian lives resulting from his bombing campaign was controversial but was supported by Presidents Roosevelt and Truman based on the anticipated casualties resulting from the planned invasion of Japan's main islands. The hope was that Japan would surrender under the devastating bombing campaign, but it would take two atomic bombs to convince them to eventually unconditionally surrender (Kozak, 2009).

General Paul W. Tibbett was a known as a superior bomber pilot and was selected by General Arnold, based on Jimmie Doolittle's recommendation, to transfer from his command in Europe to help develop the B-29 Superfortress. As the Manhattan Project progressed in the development of the atomic bomb, Tibbets was selected to train and lead the unit, the 509th Composite Group, that would drop the bomb. He carefully selected and trained his crews and developed the tactics for flying the missions. This was not a simple task. One problem, for example, was the need for the B-29 that dropped the bomb to be at least eight miles away before it detonated or the shock wave would destroy the plane. Tibbets had to design the maneuver and timing to meet this challenge. On August 6, 1945 he flew his B-29, the *Enola Gay*, over Hiroshima, Japan and dropped the first of the atomic bombs codenamed "Little Boy". The second atomic bomb, called "Fat Man", was dropped on Nagasaki three days later (Lardas, 2019). The bombing campaign designed by Arnold and LeMay ultimately achieved its goal of unconditional surrender with highly destructive results in Japanese military and civilian facilities destroyed and high casualties.

Findings from the Research

The findings of this study revealed common patterns and leadership practices regarding the generation, development, and implementation of innovations in the Pacific

commands. Over forty leaders were identified in this study that were directly involved in developing successful innovations throughout the course of the Pacific war. These were men who were senior officers, junior officers, and civilians and who each contributed to the creation of a culture of innovation in the Pacific theater commands. Part of this study consisted of a comparative examination of their personalities, background, styles and practices of leadership, and personal characteristics.

Leader Personalities

The comparisons of personalities coincided with the findings of other studies found in the literature review in that there were no consistent personality traits among the innovative leaders examined (Bel, 2010) (Horth, 2014) (Spahr, 2015). Some of these leaders were outgoing, like Nimitz, and even flamboyant, like Boyington. Some were quiet and reserved, like Mitscher. Some were abrasive, like Smith, and moody, like Kelly Turner. Some sought glory and recognition, like MacArthur, while others deliberately avoided the spotlight, like Spruance. As mentioned in Chapter Two, studies conducted after World War II to find measures of personality to predict or identify leaders of the future failed to produce consistent predictors of leadership potential based on the personalities of the war leaders studied (Haslam, et al., 2011). The research of the Pacific theater leadership for this study indicates that specific personality types have no particular influence on developing organizational innovation.

Leaders' Career Paths

Most of the leaders had experienced some form of failure in their careers but had overcome them. Nimitz ran a ship aground as a junior officer (Potter, 1976). Macarthur had the monumental failure in his lack of defense for the impending attack on the

Philippines (Perry, 2014). Many were seen as "mavericks", like Mitchell, or unorthodox in their approach to leadership and operations, like Carlson (Gilbert, 2006). They all, however, tended to have an exceptional level of professional competence that was recognized by their superiors at the time and later by military historians and experts.

Each of the successful leaders examined in this study had developed a reputation for exceptional ability that transcended any flaws in their personality or behavior. Even if the recognition did not come at the time they served, it was later acknowledged, such as in the case of Billy Mitchell. Often, the flaws or normally unacceptable behavior were forgiven. Spruance's drinking and Tibbett's' insubordination were examples of personal flaws or behavior that were overlooked because of their immense talents.

Leadership Styles, Practices, and Behaviors

Some of the leaders studied were calm leaders, but some were harsh and explosive in their manner of giving directions. "Howlin Mad" Smith and "Terrible" Turner earned those nicknames Virtually all were intolerant of incompetence and tended toward immediate replacement of those they felt were not up to their assignment. Despite this, they were tolerant of honest mistakes, accepting of failure if not the result of incompetence or stubborn adherence to old practices, and trusting of subordinates who exhibited a willingness to innovate and learn. They tended to personally select subordinates, without regard for age or rank, for important positions and for projects such as those requiring development of innovative approaches for dealing with challenges the command faced. Paul Tibbett's, for example, was a twenty-nine year old junior officer when selected to put together the organization and capability to deploy the atomic bomb. In turn these selected subordinate leaders were allowed to build their own teams. The

selected leaders were open to new ideas from any source and were oriented toward a process of testing and evaluating ideas and drawing lessons learned from past experiences.

Teaming

Teaming was an important practice for the Pacific commanders and they built teams that they managed to ingrain with a sense of being elite or special. Planning and process were consistently a key part of their leadership approach within their teams. They tended to be systematic and strategic in their thinking and execution versus being transactional. Innovations were developed through processes. Although hand-picked leaders were assigned to build select teams to fully develop ideas and innovations, they rapidly disseminated positive results throughout the command for implementation. They encouraged competing ideas and were accepting of different or competing ways of operating within the command. Most accepted challenges to their own decisions without negative repercussions falling on those who questioned decisions or offered opposing views. Although some of the leaders researched were not particularly liked, all were highly respected.

This case study validated the importance of teaming to innovation described in the literature review (Edmondson, 2013). It also validated that innovation thrives when a diverse group of people come together to develop new possibilities that otherwise could not have been envisioned by each of them working alone (Edmondson, 2013). Doolittle, Tibbett, Thach, Merrill, Kauffman, and the other innovators examined in the research for this study immediately assembled teams to tackle the daunting missions given them that had no previous experience or doctrinal base to draw on.

Personal Characteristics and Attributes of Leaders

All the leaders studied were regarded as superior professionals in their fields. All were bold, courageous, and aggressive. They had a strategic or future orientation and a unique way of "seeing" things others did not. In many ways they were visionaries. Nimitz immediately saw the failure of the Japanese attack on Pearl harbor to destroy the critical infrastructure necessary to this naval base's operations while the other senior leaders around him were only focused on the ship destruction along Battleship Row. Nimitz was a surface officer spending his career on ships like destroyers, cruisers, and battleships, yet, he commanded a naval force built around carriers and aircraft. After the war, he was regarded as the father of the US Navy's nuclear submarine force. This reflected his ability to see things in a strategic and visionary manner and not become a prisoner of his past or his prejudices.

Immediately after arriving in Australia from Corregidor, MacArthur started talking to the leadership in Washington and Canberra about planning for an offensive before he even had forces assigned to him. His appreciation of the synergy that could be created by effectively combining service capabilities into joint forces under one command was prescient. He saw the path to retake the Philippines while others were worried about defending Australia. His vision for a new, reconstructed Japan was unprecedented.

Vandergrift believed he could hold Guadalcanal while others were preparing to evacuate his forces from the island. He knew that Guadalcanal could not become another Gallipoli or else the Marine Corps' extensive efforts to prove large scale amphibious assaults were feasible. After Guadalcanal, he became the Commandant of the Marine Corps and first Marine four star general. He supported the expansion of the Marine forces

and capabilities in the Pacific during the war and built the post-war Corps that led to the Marines gaining equal status as a separate service (Smith, 1969).

Each of the leaders were creative yet disciplined; passionate about their command and mission; accepting of risk, uncertainty, and failure; collaborative in their decision making; active in seeking new ideas; willing to test and experiment; and straight forward in their communications.

Leadership Roles

In examining the way innovation developed into a discernible process, described later in this chapter, in the Pacific commands, the importance of certain roles filled by leaders became evident. From top leaders the need existed to fend off naysayers and resisters to change. Leahy, Marshall, King, and Arnold served the Pacific commanders well in this role. The commanders they selected to lead in the Pacific theater needed to weed out those within the units resistant to change and to appoint trusted innovators who could effect change and build successful teams. Nimitz, MacArthur, Stillwell, Spruance, Halsey, Mitscher, Eichelberger, Smith, Lemay, Kelly Turner, William Turner, Kenny, and other commanders filled this role exceptionally well.

This set the culture of acceptance for innovation and allowed the Thachs, Kauffmans, Johnsons, Carlsons, Merrills, and others to form their teams, test and experiment, implement, gather lessons learned, and disseminate the successful changes throughout the commands. Team members formed to develop innovative solutions to challenges and problems were chosen for their expertise and enthusiasm. They tended to be volunteers who thought of themselves as special or elite and were committed to their mission. This is all in line with the studies researched in the literature review that found

that successful innovative organization had a culture and environment throughout the organization created, promoted, and supported by the entire leadership structure beginning at the top (Schein, 2017; Coyle, 2018; Daher, 2016; Naqshbandi et al., 2014).

One thing that consistently stood out regarding the culture in the innovative organizations was the sense of being elite. The squadrons that flew off the carrier decks, the Marines who assaulted the beaches, the special units like the Raiders, UDT teams, or Marauders, the bomber crews, the ships' crews fighting off Kamikaze planes, etc., all had a self belief in their organizations as unique and exclusive "clubs" that were performing missions unmatched by other units.

The Importance of Context and Contingency

Contingency theories explain a process as an interaction between an individual and the features of the environment in which he or she operates (Haslam et al., 2011). Environmental influences have significant impact on leader competencies (Northouse, 2019). Given the highly unusual and extraordinary environment faced by commanders in the Pacific, just possessing exceptional leadership competencies was not enough to create a successful innovative organization that met the unprecedented challenges of this theater of operations. Leaders were put into command positions or were tasked to lead innovation efforts who could read their fluid and changing environment and creatively operate within its dynamic nature. At the start of the war, the Japanese had a tremendous advantage as a result of the building of a modernized military that recognized the changes in the forms of warfare. Yet, they never adjusted during the conflict resulting in the US forces' ability to wrest the advantage from them. They were rigid in their command structure and, other than a few adjustments such as the use of Kamikaze pilots, they never

changed or adapted. Only a few of their military leaders saw the need for change and adaptability, like Admiral Yamamoto, but the rigidity of the traditional military leaders in Tokyo prevented the kind of openness innovation present in the US commands (Rottman, 2005). The decisions by the US Joint Chiefs of Staff in the first year of the war to assign creative commanders who, in turn, brought into their commands like minded junior commanders, made the difference. The Joint Chiefs did not micro-manage. They put in place exceptional leaders such as Nimitz, MacArthur, Lemay, and Stillwell and trusted their judgment. The same could be said of Presidents Roosevelt and Truman who were innovators in their own right and selected or approved of the leaders to command the forces in the Pacific. These remarkable chosen leaders brought, not only professional competence to their commands, but also the ability to adapt, adjust, and innovate in a dynamic environment.

Consistent Successful Leadership Characteristics

As described, the leaders examined for this study had differing personalities and styles of leadership. They did have, however, several consistent characteristics. They built their own teams; were open to change and innovation; learned from past experiences; supported testing and experimentation; diffused and disseminated innovations throughout their commands; rewarded innovators; relied on planning and process; embraced new technologies and improved their application; and accepted failure unless it was due to incompetence. The basis for all these characteristics was built on trust. Once the trust in subordinate leaders was established through demonstrated performance or personal connection, senior leaders delegated a great deal of authority and responsibility. The chain of command from the Joint Chiefs down became a chain of

trust once selected commanders were in place. One example is the Navy chain that went from King (joint staff) to Nimitiz (theater commander), to Halsey and Spruance (fleet commanders), to Mitscher and Turner (task force commanders), to Smith and Geiger (landing force commanders), and on down to the tactical unit commanders.

The Innovation Process

Contrary to the conclusions of several prominent military historians researching innovation (Rosen,1991; Murray & Millett, 1996), there was a discernible general process in developing key innovations in the Pacific commands. The leaders examined in this study created, drove, and oversaw innovation processes. Leaders such as Turner, Mitscher, Eichelberger, Spruance, LeMay, Kenny, and H. Smith, were tireless self-driven to find innovative ways to defeat the enemy and care for their troops. They provided clear direction; created alignment with innovation teams and the rest of the organization; removed barriers and fended off outside resistance from military service traditionalists; provided resources; and gave freedom of movement for innovators and teams. The processes consisted of designating a lead innovator, allowing him to build his team, gathering ideas, testing and experimenting, drawing lesson from experiences, adjusting and adapting based on observations, diffusing of successful innovations throughout the organization, and continuously reassessing and adjusting..

Changing Organizational Culture and Countering Resistance to Change

Change can be threatening and is most often resisted by some or all members of an organization. In order to change the culture of commands in the Pacific, resisters had to be removed and a culture of acceptance to change, willingness to innovate, and courage to take bold risks had to be developed. Simultaneously, cultures had to be changed in

existing units and created in new units established by expansion, new technologies, and new functions required their construction or reconstruction. To add to the challenge, new and established organizations were often amalgamated into single commands. An example of this was the joining of the Army and Marine Corps units fighting under single commands that caused culture clashes that were temporarily overcome during the war but had repercussions that carried over after the war (Smith, 1948). The organizations that were changed or created to be more innovative in their operations were given a strong sense of purpose and looser structure. Their operations were decentralized They developed more adaptability, flexibility, and agility in the conduct of their operations. and were more imaginative in their use of both old and new technology.

The View of War as a Complex Adaptive System by the Senior Leaders

In Carl von Clausewitz's brilliant work describing the nature of war, *On War*, he emphasizes that war is nonlinear (Rapoport, 1968). It is, in his description, a complex adaptive system with the complex whole more than a sum of its parts. Whereas the Japanese took a rigid linear approach to warfare in the Pacific with central control and rigid adherence to established methods of operation, US commanders saw the complexity and the need to adapt. The US leadership constructed a multifaceted chain of command, moved along multiple axes toward defeating Japan, leveraged innovation when traditional means were deemed inappropriate or obsolete, and reconstructed a different Japan. This difference could be seen in Nimitz's creation of two very different fleet commands operating over his naval task forces. This confounded the Japanese in trying to determine the methods or operating procedures for US fleet commands (Hornfischer,

2016). They looked for a single doctrine where none existed. This was alien to their culture and thinking.

It is the purpose of this study to glean lessons from the World War II Pacific commands' leadership practices that encouraged and developed a remarkable number of innovative solutions to the unprecedented challenges they faced. These lessons can still provide valuable aids for current military leaders attempting to create more innovative organizations in order to meet the complex challenges they face.

The Power of an Organizing Theme

Each major command had an organizing theme that focused the innovation processes that the leaders established. For Nimitz's command it was naval power projection based around carrier task forces and amphibious assault forces. For MacArthur it was the ability to create a synergistic joint force of integrated capabilities from each of the services. For Stillwell it was the creation of a minimal selection and collection of disparate forces to meet the demands in the theater. For LeMay it was the creation of an overpowering bomber force capable of defeating a nation on its own. This idea of a central organizing theme has implications for those trying to create an innovative organization in today's military and business worlds that will be explored in Chapter Five.

Summary

In this chapter the extraordinary environment that the leaders in the Pacific commands faced was described. It played a significant role in influencing the need for innovation. Rarely before did a set of circumstances present the challenges confronting the leaders in this theater. Exceptional men were chosen to lead the Pacific commands

and they in turn chose exceptional subordinates to lead in innovating successful solutions to the challenges. A general process of developing innovative ideas into successful actions appeared to be the norm based on the study findings. Innovative organizations were created through changing cultures, building teams, learning from operations, testing and experimenting, and disseminating successful innovations throughout the commands. The atmosphere in the commands that encouraged innovation cascaded down the chains of command. The openness to new ideas coming from multiple sources in and out of the commands led to the adoption of numerous successful innovations. Certain common characteristics that the Pacific leaders possessed created the culture of innovation that existed throughout the commands. The two most interesting of these were the ability of these leaders to think and act strategically and the ability to see warfare differently than their traditionally oriented peers. Innovators were rewarded by their commanders. Throughout this study the highest military rank or grade achieved is used to identify innovative leaders even though they may have been junior officers at the time they served in the Pacific theater. Virtually all went on to reach general or flag officer grades.

There were a number of insights gathered from this study that reflect the common characteristics of successful leaders despite differences in personalities and leadership styles:

- the importance and emphasis placed on teaming;
- the consistency in applying a process to developing innovations;
- the roles of leaders at different levels of command in the process;
- the importance of understanding the influence of context and contingency;

- the need to change or create the right organizational culture in order to develop and accept innovative solutions;
- the leader understanding of warfare as a complex adaptive system; and
- the power of an organizing theme.

In the next chapter the conclusions that can be drawn from the insights and findings described are evaluated in terms of their application to leaders and organizations facing the challenges presented in today's world. As will be discussed in Chapter Five, the leadership practices that led to the victory in the Pacific through innovation can still be relevant and the lessons drawn from examining the leaders and events of that period in our history can offer valuable insights in how to create innovative organizations.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

The aim of this study was to gain insights into how the military leadership of a successful set of innovative organizations transformed themselves in time of war to meet the complex challenges they faced and to apply those insights to the current military efforts to transform into innovative organizations. Although this study focused on military organizations, the findings, insights, recommendations, and conclusions are applicable to all organizations seeking to transform into innovative organizations desiring to meet complex challenges presented in their operational environment through innovative solutions..

This chapter describes what the study revealed about innovation in the Pacific theater during World War II; what current military leaders can learn from this study; what modern military leaders can learn about innovation from the World War II Pacific theater commands; how modern military leaders can use the lessons learned from the Pacific commands' experiences; what leaders in the private sector can learn from this study; and what is recommended for future research.

What This Study Revealed About Innovation in the Pacific Theater

There were several key insights gained from the conduct of this study. They are divided into two categories: insights into innovative leadership and insights into creating an innovative organization.

Insights into Innovative Leadership

Leadership Characteristics

The forty-two leaders examined in this study had a variety of differing leadership styles, personalities, and traits. However, they did have similar characteristics that were

consistent with studies on innovation leadership researched in the literature review (Spar, 2015; Bel, 2010; Alsolami et al.,2016). Among those characteristics were their ability to draw insightful observations that others did not see; their constant collaboration, their direct and straight forward approaches, and their giving trusted subordinates great operational freedom. They were also willing to accept risk, uncertainty, and failure.

Leadership Practices

The leadership practices of those leaders in the Pacific commands that were examined were also consistent with the studies reviewed that focused on practices (Horth & Bucher, 2014; Agbor, 2008; Senge, 2006; Edmonson, 2019). They positioned leaders in their organizations who were capable of leading and managing change. The development, adoption, and dissemination of innovations were conducted systematically and by process. The Pacific commanders created directional alignment within their commands, removed barriers to innovation, established teams and processes to develop innovative ideas, and set clear goals and strategies for organizational change. The changes were dramatic. The evolution of the commands from battle to battle was significant as the leadership learned from their experiences, adopted the rapidly advancing technology, and experimented with new ideas and operational concepts. This could be readily seen in the development of the fast carrier task forces and the amphibious assault forces.

Insights into Organizing for Innovation

Teaming

The importance and value of teaming was stressed in several of the research sources examined in the literature review (Senge, 2006; Edmonson, 2019). Scolars

interested in teaming suggest that it was a consistent approach used throughout the Pacific commands to develop innovative solutions to the challenges they faced. Team leaders and members were carefully and personally selected by senior commanders and the teams were structured and organized in a deliberate manner. Marine raiders, Navy underwater demolition teams, Navy aircraft carrier squadrons, Army air corps bomber wings, and Navajo code talkers are just a few examples of innovative concepts that were fully developed by the formation of teams designed to bring ideas into operational reality.

Creating Learning Organizations

The literature review produced several studies that discussed the importance of creating a learning organization that can effectively absorb lessons learned, quickly adapt to changing environments, and creatively provide innovative approaches to challenges (Marquardt, 2011; Hsiao & Chang, 2011). Consistent with this important component of an innovative organization, the successful innovative approaches developed by the Pacific commands were based on continuous examination of past experiences, application of new technologies and ideas, and adoption of the results from experimentation. Admirals Kelly Turner's amphibious assault and Marc Mitscher's fast attack carrier task forces fought very different successive battles based on the changes in tactics, application of newly developed technology, and analysis of past engagements.

Changing Organizational Culture and Climate

The organizational culture must support innovation and change or it will fail. This was a clear finding in many of the studies examined in the literature review (Cameron & Quinn; 2011; Burke, 2014; Schein, 2017; Hogan & Coote, 2014; Daher, 2016). Changing organizational culture, climate, and behavior was a consistent element in the successful

Pacific commands that transitioned to innovative organizations. It usually began with replacing reluctant or incompetent leadership and manning teams with more innovative members. This was followed by planning and direction for the diffusion of the innovative practices throughout the organization. This can be seen in Eichelberger's transformation of the US Army units after the battle of Buna.

Establishing an Innovation Process or Model

Some of the non-military studies examined in the literature review proposed innovation processes and models or strongly recommended development of them as more study was conducted and new insights gained (Alsolami et al., 2016; Keeley et al., 2013; Stevenson, 2012; Rogers, 2003). Oddly, military historical studies reviewed on innovation discounted the presence of processes in innovative military organizations (Rosen, 1991; Murray & Millett, 1996). The Pacific commands did establish processes for developing innovations. Some were more structured than others: however, they did have the same basic steps or components. Admiral Spruance had a reputation as a detailed planner and process developer. His counterpart fleet commander, Admiral Halsey, operated with far less detailed planning and formal processes; however, he did follow a basic process pattern for adopting innovative approaches.

Measuring Success

Although there were not a great deal of sources in the literature review that dealt with measuring success and performance, those that did emphasized the importance to any innovation process of learning and feedback. Through strategic "fit", the leadership's relationship to stakeholders and the environment, the organization is better enabled to change and adapt (Carmeli et al., 2010). This was consistent with the constant evaluation

of past performance and experience that was characteristic of the innovative Pacific commanders who had a deep understanding of their environment and a close relationship with their stakeholders, internal and external. Kelly Turner constantly reassessed past operations in order to focus innovation efforts on performance deficiencies or gaps in capability.

What Can Current Military Leaders Learn from This Study?

In 2018 the Secretary of Defense directed the military services to develop innovative approaches to deal with the changing complex threats that had emerged, the development of new technologies, and the growing global missions given to the US armed forces. The services have since charged off in transformation efforts that have varied greatly. Each of the four services have created special innovation organizations within the service to capture and develop new ideas; however, there is no consistency or sharing mechanism that allows for greater synergy and joint development. Not unlike the private sector, they have found that there is little in the way of guidance on how to create innovative organizations or innovation development models.

The Pacific theater in World war II provides a rich source of study for gaining insights into how to create an innovative organization even in this modern world three quarters of a century removed from that era. The environment, leadership, organization for innovation, and other factors still have applicability today. What follows is a discussion of the things that can be learned from that military experience and how to use it or implement the lessons and ideas gleaned from it.

What Can Modern Military Leaders Learn About Innovation from the Pacific Theater in World War II?

The first lesson that can be drawn from the Pacific commands is about leaders and leading. The innovation leaders chosen by senior commanders were personally selected by those senior commanders and had established reputations for insightful out-of-the box and creative thinking. They came to their commands with new ideas or ways to organize their teams to create new ideas. Evans Carlson, for example, spent a great deal of time with Mao's forces in China and came away with radically different ideas about tactics and leadership based on his experiences with the Chinese guerilla fighters. Despite the controversy over his ideas, he was assigned to develop the Marine raider capability and command one of the raider battalions. They were bold experimenters who were allowed to set their own course and build their own teams. Frank Merrill was given free rein to select the members for, and organize and train, his "marauders" The most successful were detailed planners and process developers. Curtis LeMay became renowned for his detailed use of statistics and analytics for measuring success in his bombing campaigns. One of his staff officers was Robert McNamara, later Secretary of Defense during the Vietnam War, who brought this approach to a very different war with far less success. Not much regard was given to seniority in rank in their selection. Study of their characteristics, selection, and approaches to innovation can offer insights to current military leaders in what kind of leadership to seek or develop in order to build an innovative organization.

The leaders examined in the study had a great appreciation for their environment. The understanding of the context and contingency that made up their environment were

constantly assessed and drove their decision making. They understood the enemy better than the enemy understood them and they grasped the new forms of warfare they were practicing better than their counterparts or their foes. The Army dominant Japanese military had millions of soldiers at the surrender date who had not engaged the enemy during the course of the war. Yet, their naval forces had been devastated by then. Unlike the US, the Japanese, despite their naval tradition, failed to fully shift their resources toward maritime capabilities required to match the US in the Pacific.

The successful Pacific commanders valued planning and strategic design. Yet, they remained flexible in their execution. Strategy and future projections guided their planning and actions. They were open to ideas and innovations from any source and each had a process to focus the innovations being developed. Their processes included stringent leader and team member selection; constant input from experimenting, gaming, and lessons learned analysis; altering organizational cultures to break down resistance and promote diffusion of innovations; and assessment of performance and mission success. Marine general Clayton Vogel immediately saw the value in Philip Johnston's proposal to use Navajos as radio operators and developed a detailed program to test and develop the concept using a handpicked team for the process.

A great number of lessons can be drawn from these observations that are useful to modern military commanders in how they prepare, structure, and man their organizations in order to transform into an innovative unit or service.

How Can Modern Military Leaders Use These Lessons?

The insights and implications drawn from this study can provide valuable direction for leadership and organization for modern military commanders. Applications for these lessons learned are categorized under leadership uses, organizational uses, and process uses.

Leadership Applications

The lessons drawn regarding leadership can be used by the modern military to influence leader selection, leader development, leader assignment, and leader evaluation. The modern military is fortunate to have an extensive recruiting system, professional military education structure, and detailed processes for evaluating and assigning personnel.

The military recruits based on established basic standards that measure intelligence, academic achievement, behavior, and physical condition. Officers are recruited from the ranks of proven enlisted leaders or from the military academies and college campuses where those standards are more stringently applied. Using the characteristics identified in the literature review and validated in this study, a set of additional standards could be applied to seek out those potential recruits who have demonstrated the innovation characteristics identified for priority recruitment. Incentives could be provided such as funded additional education, guaranteed choice of occupational specialty, or bonus payments for those that have demonstrated these desired characteristics.

Professional military education (PME) is a continuous process in the modern military. Schooling ranges from entry to career to mid to top level. Part of the curriculum

at each level involves progressive leader development. Implications from this study indicate that the lessons learned from the World War II Pacific theater commands can translate into added courses that help develop the characteristics of identified innovative leaders. These types of courses could include such things as systems thinking, creating innovative organizations, analytical decision making, assessing environments and contexts, developing teams, and strategy-innovation linkages. A program of experimentation and gaming could be applied to reinforce the courses and to evaluate leadership ability.

Command assignments are currently decided within the military services based on past performance and proven experience. Usually a board is convened to recommend selectees and assignments. For certain positions within each service that may require a greater emphasis on creating or disseminating innovative approaches, an added criteria for selection that should be considered that would evaluate the demonstration of the characteristics of innovation leadership. From the study it was apparent that those chosen to command or to lead innovation efforts were readily known to senior commanders and had built a reputation for creative thinking.

Besides command positions, other assignments that deal with innovation development and implementation should be based on a selection criteria that emphasize the leadership characteristics described in the study. This should also apply to certain staff positions that are involved in innovation development, planning for implementation, and innovation dissemination.

Leader evaluations in each of the services are done through periodic reports that are designed to score and describe the performance and certain characteristics of those

being reported upon. There could be added parts of these reports that address the innovation characteristics consistent with innovative leaders. The reports can also include any demonstrated innovative performance observed by the senior reporting commanders.

Organizational Applications

Innovation was not scattershot in the Pacific commands. It had direction and fulfilled specific goals and objectives. It was based on a strategy. The innovations developed by Kelly Turner and Marc Mitscher were driven by Nimitz's strategy of island hopping across the Central Pacific. LeMay's efforts were driven by Arnold's strategy for developing a new air service. Kinney's and Eichelberger's efforts were based on MacArthur's strategy of creating a joint air-ground-naval team under one command. In order to create an effective innovation organization, military organization should have an established clear strategy first. That strategy should have a vision describing a future organization achieved through accomplishing specific goals that provide guidance and direction for innovation teams designed to fully develop innovations. Without a clear strategy, innovation is directionless. The strategy-innovation link was critical to success in the Pacific and virtually all innovation efforts were tied to command strategic goals. Strategy provided the organizing theme for all innovation efforts. Nimitz had a strategy as did MacArthur. Both were presented to President Roosevelt and were approved by him. Like all successful strategies these had:

- a clear vision statement that describes a future organization to be achieved in a given time period;
- a set of organizational goals that, if achieved, cause the vision to become a reality;

- a set of action plans from each of the components of the organization with objectives, identified resources required, and time lines that if collectively accomplished would meet the goals and vision;
- a monitoring process to measure progress on the status of the strategy; and
- a connection to day-to-day operations that may impact the strategy and cause change in its direction.

During the pre-war years a great deal of emphasis was put on experimentation and wargaming to test theories and innovative ideas. This carried over to the war period in the Pacific theater. For today's military commands, schools, and doctrine centers it would be valuable to establish a robust gaming, testing, exercising, and experimentation set of programs tied to innovation development. A military program of testing can include:

- unit field exercises;
- computer assisted gaming;
- commander and staff evaluations; and
- graded problem-solving exercises for leader training programs.

The majority of successfully developed and fielded innovations in the Pacific commands were the result of the formation of teams that either took ideas from outside the organizations or formed the ideas to meet specific challenges then turned them into productive solutions. Army Air Corps general William Turner had been working on airlift logistic support concepts and organizations before assignment to the CBI theater. He fully developed that capability under the challenges there. From that experience he would lead the Berlin Airlift and the Air Force 's first airlift command. Teaming was an efficient, flexible, and focused way for the Pacific commanders to develop innovative

solutions. Leaders like William Turner, Marc Mitscher, Kelly Turner, Curtis LeMay, George Kenny, and Robert Eichelberger optimized talent and expertise and were responsive to their commanders' demands. In examining the teams, several aspects of successful team creation stood out and have application for how the military should create and organize successful teams. These are:

- the teams should not be buried under bureaucratic layers of command structure;
- the selection of team leaders and members should be carefully and personally done by commanders with thought-out criteria used;
- the orientation, socialization, and motivation should be done in a manner to create a sense of importance for the teams' task;
- the teams should be given minimal but clear direction by senior commanders;
- the teams' progress should be monitored and adjusted when necessary;
- the teams' membership should include diverse and opposing views;
- the teams should have a direct feedback loop for all ideas tested;
- the teams should have direct access to senior commanders; and
- team members should be rewarded and recognized for superior performance.

Innovation was best done in the Pacific commands through process. In some cases the process was more formal but the general procedural approaches had a basic process design. For modern military organizations, the components of the processes used in the Pacific can serve as a guide for creating a process for innovation. The components of the processes examined in the study were;

- team creation to take on the task;

- detailed orientation and analysis to define the problem, operating environment, and mission;
- removal of barriers or resistance to adopting innovative solutions;
- establishment of an open means to generate or collect innovative ideas;
- establishment of a testing and experimentation capability with a feedback and monitoring capability;
- capturing of lessons learned; and
- dissemination and diffusion of innovations through-out the commands.

My research revealed the importance placed by the most successful innovative commanders on their staffs to implement approved innovations. MacArthur, Nimitz, Spruance, Halsey, LeMay, and the other commanders had a very close relationship with their staffs. Their chiefs of staff were personally selected by them as were other staff members. The staffs of these commanders were well read into the innovation efforts and were key to breaking down resistance to change, helping to change the organizational culture, and disseminating the innovative solutions. The World War II commanders tended to put greater reliance on their relationships with their staffs than is the trend in today's military.

Today we see greater emphasis on commander-to-commander relationships and the creation of small elite groups specially chosen to be close to the commander that operate separate from the staffs. This has become dysfunctional in that staffs feel out of the loop and have less direct contact with their commanders. In Iraq and Afghanistan commanders turned over frequently unlike World War II. Commanders tended to keep a small cadre of close advisors separate from their staffs. This has resulted on inconsistent

operational direction and incoherent, or non-existent, strategies. The lessons from the Pacific commands on how MacArthur, Nimitz, LeMay, Spruance, Turner, and the others built their staffs and connected to them can provide an excellent model for today's commanders fighting are longest wars. Based on the study research, these staffs were key to implementation of innovative solutions primarily because they were part of the process and had a close and constant relationship with their commanders. The recommendations on commander-staff relationships and on staff involvement for today's commanders are to:

- involve the staff directly in the establishment of innovation programs;
- use the staffs to monitor progress;
- use the staffs to disseminate implementation of innovations;
- involve the staff in evaluating innovation recommendations; and
- look to staff members to become innovation team leaders or members where appropriate.

Changing an organizational culture is difficult. This is especially true for military organizations where tradition is strong, senior leaders are often resistant to change, and bureaucratic institutions are hard to shift course. Yet, this is necessary to accomplish a transformation to an organization open to innovative approaches to challenges it faces. From the study findings, several lessons on how to implement the changes and redirect the culture can be learned. These are:

- identify and remove the resisters quickly;

- involve the entire organization in the transformation, even those not directly involved, through continuous communications from the top and the provision of information on the progress of innovation programs; and
- solicit feedback from the entire organization and monitor the command climate during the transformation.

How Can the Leaders from the Private Sector Learn from this Study?

Innovative private sector organizations are changing the way we do things through their different approaches to doing business. Amazon and EBay have changed the way we shop. Uber and Lyft have changed the way we travel. Netflix has changed the way we watch movies. These organizations have been successful at developing innovative approaches to common functions we all engage in. For these few successful innovative organizations, there are many more that have tried and failed or are considering embarking on risky path of innovative change.

Although the private sector differs from the military in many respects, there are similarities and many of the lessons from this study can apply to private sector organizations wanting to become more innovative in their approaches and practices. Private sector organizations are increasingly investing in leader development and their Human Resources departments are establishing more detailed recruiting criteria and testing to determine potential leadership ability. The lessons from this study regarding leadership characteristics and roles can be useful in these efforts.

Private sector organizations, like military organizations, are relying more on teaming to tackle issues, problems, and challenges requiring innovative solutions. Using

the insights gained from this study to help in understanding how to create effective innovation teams can also be of value to non-military organizations.

Developing strategies and strategic designs to guide operations is relevant to both the military and private sector. The strategy-innovation linkage is applicable to each sector and the findings of this study can be used by both. The same applies to the issues involved in changing organizational culture, using staffs effectively, and adopting an innovation process.

Private sector organizations do not have large professional education institutions like the military. This makes innovative leader development more of a challenge especially for smaller organizations that do not have the resources to establish robust leader development programs and facilities. Nor can most private sector organizations afford elaborate rotational assignments that broaden leader experiences as in the military. Testing, gaming, and experimentations limitations compared to the military is another significant difference between them.

Future Research

Future research on innovation and how best to create an innovative military organization can be conducted within the military education system, the research and development organizations within the Department of Defense (DOD), the doctrine centers, and in studies groups that each service maintains. The military is fortunate to have so many possible places to conduct further research and studies. Also, courses on developing innovative organizations can be established in military schools to develop leaders who understand how innovative organizations are formed, led, and produce innovative solutions.

Currently, each service and DOD command have taken the mandate to become more innovative and charged off in their own organizational direction. There could be a far greater synergy gained from a more cooperative approach if the efforts are directed and driven from the DOD level. At least an overarching structure for further study could provide for information and idea sharing recognizing that each service and command may have some different needs.

Future research efforts by the military should not be limited to the military context for study. The other government agencies' and the private sector's efforts should be connected as well. As this study indicated, during World War II there was a close relationship by the military with industry and the scientific communities. Technology advancements will most often come from those areas and military application is better accomplished if a cooperative approach is adopted.

Conclusions

In Chapter One, I described the growing trend for organizations, both in the military and private sector, to transform themselves into innovation organizations. The literature review conducted at the start of this study revealed a number of important considerations. Like most trendy claims at transforming or changing in the past, the efforts can be reduced to more of a marketing theme rather than a real transformation, and often is. Many organizations have fallen into the trap of limited commitment to transforming into a true innovative organization because of the fear of risk or the lack of willingness to dedicate the resources required. Most of these have failed. In some cases, those organizations that were willing to accept the risk and commit the resources have found little in the way of guidance on how to do it.

The purpose of this study was to explore the relationship between the practices of military leadership teams and organizational innovation in historic and highly successful innovation military commands, specifically in the World War II Pacific theater of operations, to gain insights into how current and future leadership may influence innovation. As mentioned, the study began by reviewing the current literature on creating innovative organizations. This review revealed several important themes. Most of the research done to date is very recent. Most concluded that more research was required and recommended further research. Those studies that sought to develop or discover models or processes either failed or provided incomplete results, by their own admission. I have, separate from this study, long been fascinated by the US military involvement in the Pacific theater during World War II based on the remarkable leadership at that time, the unusual environmental challenges encountered, and the unprecedented approaches the commanders used to solve the daunting problems they faced. This seemed like an ideal opportunity, through a case study methodology, to gain insights into how those commanders successfully transformed their commands into innovative organizations. Also, to examine how the insights gained could have application for today's military and other organizations seeking to transform into innovative organizations. The question in my mind was, "Could a historic case study provide insights that could help the current efforts to understand how to transform into an innovative organization?"

I found that my past interest and research into the Pacific theater and commands during World War II was useful; however, the goals of this particular study required a different research approach. This led to a different and deeper understanding of certain aspects of those commands and of those commanders. These innovations arose from a set

of leaders whose unique approaches, strategies, and deliberate efforts to change established processes in a challenging and complex environment led to success.

Although we are not at war as were those Pacific commands in 1941-1945, the United States is in a very challenging environment for both the military and the private sector. The rise of sophisticated competitors, the rapid development of advanced technologies and the access to them, and the increasing global demands and interests create a similarly challenging environment in many respects. As in the Pacific in that time, transitioning into innovative organizations requires a certain kind of leadership, strategic thinking and direction, organizational and structural changes, and processes development. These are the key lessons to be drawn from this study. This will not be lost on our competitors who may be able and willing to take the risks and invest the resources to challenge us through innovation.

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Appendix

IRB Approval

Creighton
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Office of the Provost
Research Compliance

DATE:	31-Jan-2020
TO:	Zinni, Anthony
FROM:	Social / Behavioral IRB Board
PROJECT TITLE:	Military Leadership and Organizational Behavior: A Case Study of the Pacific theater in World War II
REFERENCE #:	2000754
SUBMISSION TYPE:	Initial Application
REVIEW TYPE	Exempt
ACTION:	APPROVED
EFFECTIVE DATE:	31-Jan-2020

Thank you for your Initial Application submission materials for this project. The following items were reviewed with this submission:

- Creighton University HS eForm

This project has been determined to be exempt from Federal Policy for Protection of Human Subjects as per 45CFR46.101 (b) 2.

All protocol amendments and changes are to be submitted to the IRB and may not be implemented until approved by the IRB. Please use the modification form when submitting changes.

If you have any questions, please contact the IRB Office at 402-280-2126 or irb@creighton.edu. Please include your project title and number in all correspondence with this committee.

Institutional Review Board
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