UNDERSTANDING MILITARY DOCTRINAL CHANGE DURING PEACETIME

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Submitted in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy
in the Graduate School of Arts and Sciences

COLUMBIA UNIVERSITY

2018

ABSTRACT

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This study examines processes of military doctrinal change during periods of peace. Given the conventional wisdom of hidebound bureaucratic military organizations, why do these organizations innovate doctrinally? Rather than conduct competitive hypothesis testing between two or more theories of military innovation or pursue a heretofore undiscovered monocausal theory, I develop and test a theoretical framework that synthesizes more than one approach to military doctrinal innovation. I use this framework to conduct a structured, focused, case-study comparison of two military organizations - the U.S. Army and the U.S. Marine Corps - from the post-World War II period until 2001. The study yields seven findings. First, the systemic causes of military doctrinal innovation are best described by balance of threat theory. Second, contrary to the existing literature, civilian intervention is not a necessary or sufficient cause of doctrinal innovation. Third, militaries consistently strive to establish a monopoly over warfare in a particular jurisdictional domain. Fourth, the frequency of military doctrinal change is a function of the complexity of the strategic problem that doctrine is designed to solve. Fifth, the complexity of the cases studied supports the argument that monocausal explanations fail to account for the interaction of multiple variables that affect doctrinal innovation. Sixth, military doctrinal innovation during peacetime is not anomalous because military organizations constantly revise their theories of victory as threats change in the external environment. Finally, the existence of doctrinal institutions creates a norm for a reliance on military doctrine.

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ACKNOWLEDGEMENTS

DEDICATION

This study is dedicated to the men and women of the United States military, especially those who made the ultimate sacrifice.

The views expressed in this dissertation are those of the doctoral candidate and, unless cited as an official record, do not reflect the official policy or position of the Department of the Army, the Marine Corps, the Department of Defense, or the U.S. Government.

Introduction

> Like most large organizations, bureaus have a powerful tendency to continue doing today whatever they did yesterday. The main reason for this inertia is that established processes represent an enormous previous investment in time, effort, and money…Years of effort, thousands of decisions (including mistakes), and a wide variety of experiences underlie the behavior patterns a bureau now uses. Moreover, it took a significant investment to get the bureau's many members and clients to accept and become habituated to its behavior patterns.[1]

> …in few spheres of human activity are change and progress so constant and the need for accommodation and adjustment so unremitting as in the military; yet in few spheres, seemingly, are the ruling minds so rigidly resistant to change.[2]

The Puzzle

Organizational theory emphasizes the rigidity of large organizations. The standard logic is as follows: large organizations that are responsible for complex tasks develop rules and procedures to effectively coordinate their members. These procedures harden into established routines that constrain the organization's ability to change. Theorists contend that highly centralized and hierarchical organizations are the least likely to innovate.[3] Members of these organizations will have a lot of ideas for innovation, but the implementation of those ideas will be more difficult. While dramatic organizational change may occur in rare instances, change is typically incremental in the form of minor adjustments to existing programs. When dramatic change does occur, it is usually the result of a sharp decrease in budgets, forcing the organization to innovate to accomplish its assigned missions, or in the aftermath of a major organizational failure.[4] When organizational survival is in jeopardy that might also serve as a crisis that increases the probability of innovation.[5]

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[1] Anthony Downs, *Inside Bureaucracy* (New York: Little, Brown, 1967), p. 195.

[2] John P. Campbell, "Marines, Aviators, and the Battleship Mentality, 1923-33," *Journal of the Royal United Service Institution* 109 (1964): 49-50.

[3] Harvey M. Sapolsky, Benjamin H. Friedman, and Brendan R. Green, eds., *US Military Transformation and Innovation since the Cold War: Creation Without Destruction* (London: Taylor & Francis, 2009), p. 7, discussing James Q. Wilson, "Innovation in Organization: Notes Towards a Theory," in J. O. Thompson, ed., *Approaches to Organizational Design* (Pittsburgh, PA: University of Pittsburgh Press, 1971).

[4] This organizational behavior paradigm is specified by Graham T. Allison and Philip D. Zelikow, *Essence of Decision: Explaining the Cuban Missile Crisis,* 2nd ed. (New York: Longman, 1999), p. 172.

[5] Wilson, 1971, p. 208.

Proponents of this theory of organizational rigidity often point to military organizations as the most hidebound government bureaus. The hierarchical, insular, tradition-based, rule-centric, and functionally specialized nature of military organizations predisposes them to organizational inflexibility.[6] Resistance to change is especially pronounced when soldiers are committed to an existing mission set that is well-supported financially by the political leaders that oversee the organization.[7] Commitment to the organization's sense of purpose may help build cohesion and increase task effectiveness, but it also renders members unwilling to change existing ways of doing business.[8] Militaries develop standard operating procedures to deal with complexity and to organize the efforts of their personnel, but these procedures can be routinized and inflexible. Military customs and traditions can constrain the options of leaders who seek to change the organization. While this is also true of other organizations, customs are particularly important to militaries because they are used to connect the organization to past battlefield victories. Militaries strive to avoid the uncertainty[9] that usually comes with change. When military organizations do change, the adaptations are normally made during the course of war under conditions of extreme duress.[10] Change during peacetime is anomalous. Finally, because the process of institutionalization can be so difficult even if a military organization desires change, military innovation is rare.

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[6] Perhaps the best example of the rigidity of military organizations is provided by Edward L. Katzenback, "The Horse Cavalry in the Twentieth Century," in Robert J. Art and Kenneth N. Waltz, eds., *The Use of Force: Military Power and International Relations*, 3rd ed. (Washington: University Press of America, 1983), pp. 152-171. The author examines the survival of horse cavalry units even after the development of nuclear weapons and the introduction of the combustion engine on the battlefield. The military hierarchy and strong preference for battle-tested systems were major components of a cavalry organizational culture that resisted change.

[7] James Q. Wilson, *Bureaucracy: What Government Agencies Do and Why They Do It* (New York: Basic Books, 1989), p. 222.

[8] Philip Selznick, *Leadership in Administration*: *A Sociological Interpretation* (Berkeley, CA: University of California Press, 1957).

[9] All large organizations seek to reduce uncertainty, but doing so is especially important for military organizations because the consequences of unpreparedness can be catastrophic for the state.

[10] John A. Nagl, *Learning to Eat Soup with a Knife: Counterinsurgency Lessons from Malaya and Vietnam* (Chicago: University of Chicago Press, 2002), p. 9.

While this narrative is compelling, it fails to explain why some military organizations change frequently. A review of the historical evolution of military organizations since the end of World War II suggests that certain military organizations change quite often. From the end of World War II to September 11, 2001, the United States Army changed its doctrine - formal documents sanctioned by the organization that explain how the military plans to fight - five times.[11] Each doctrinal change imposed costs on the Army and involved uncertainty. The most obvious reason for change - war - was not the cause of these changes; only one out of the five doctrinal changes occurred during wartime. Three of the doctrinal changes - pentomic, Active Defense, and AirLand Battle - were fundamental redefinitions of the organization's methods for fighting in war. The other two - counterinsurgency doctrine and Full-Dimensional/Full-Spectrum Operations - were promoted as major changes, but were changes in principle rather than practice.

This study seeks to determine why military organizations innovate doctrinally given the conventional wisdom of hidebound bureaucratic organizations. More specifically, why did the U.S. Army innovate doctrinally so frequently during peacetime from the end of World War II to 2001? What were the sources of doctrinal innovation? Why was innovation pronounced in the three doctrines oriented on conventional warfare, but limited in the doctrines oriented on irregular warfare? I also examine why military organizations change in different ways and at different intensity levels or frequencies when faced with relatively similar threat environments, availability of technology, and estimates of the geography of future battlefields. To do this, I study doctrinal innovation in the U.S. Marine Corps during the same time period and I compare the results to the Army cases.

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[11] 1950s - pentomic doctrine; 1960s - counterinsurgency doctrine; 1976 - Active Defense doctrine; 1982/1986 AirLand Battle Doctrine; 1993/2001 Full-Dimensional and Full-Spectrum Operations.

Relevance to Political Science

Military doctrine is relevant to the study of political science in eight ways.

First, a military organization's wartime performance is critical for the accomplishment of a state's foreign policy objectives. Doctrine directs a military's effort in training and in wartime and is therefore critical to military effectiveness. Doctrine serves this purpose by affording the organization an opportunity to articulate its vision of warfare.[12] Military leaders use this vision of warfare to determine priorities, to direct efforts, and to provide guidance to leaders and soldiers on principles, techniques, tactics, and procedures that are aligned with that vision.[13] As President George Washington noted in his eighth annual message to the Congress in 1797: "However pacific the general policy of a nation may be, it ought never to be without a stock of military knowledge for emergencies…"[14] Doctrine is that knowledge.

Second, military doctrines and organizational structures are important inputs that combine with military tactics to form a state's force employment. Force employment is integral to a state's military capability. The common assumption that states employ military power optimally obscures variance in military capability which is a function of doctrine, tactics, and other non-material factors.

Third, states can use military doctrine to reassure allies and deter adversaries. Formal military doctrine is almost always accessible to a wide audience that includes people that are outside of the military organization. Long-standing doctrines are hard to conceal. Today, doctrine is unclassified and available online. Some military organizations unveil new doctrines with the

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[12] ADP 1-01 *Doctrine Primer* (Washington, DC: Headquarters, Department of the Army, 2014), pp. 1-3. The ADP combines operational effectiveness and a vision of warfare into two separate functions of doctrine. I combine them into one here.

[13] Barry R. Posen, "Foreword: Military Doctrine and the Management of Uncertainty," *The Journal of Strategic Studies* 39, no. 2 (2016): 160. I disaggregate (and add to) Posen's four tasks of doctrine in this section.

[14] As cited in Virgil Ney, *Evolution of the US Army Field Manual: Valley Forge to Vietnam* (Fort Belvoir, VA: Combat Operations Research Group, 1966), p. 18.

assistance of public affairs offices and branding packages. Barry Posen argues that doctrine "sends diplomatic messages."[15] A military doctrine that prioritizes defensive over offensive operations can reassure an ally that a state is committed to a policy to defend it. A doctrine that signals a military's capability can also deter an adversary.[16]

Fourth, military doctrine informs domestic audiences. Given that military doctrine is an expression of military means as an instrument of a state's power, doctrine can serve as confirmation of a military's subordination to civilian directives. It can also demonstrate that the military means are aligned with a state's strategic objectives. According to Posen, doctrine "reassures society that the military is focused on those tasks that civilians have specified, that it is not a foreign policy or domestic menace."[17] Given that the people and the resources necessary to field a military come from the population, doctrine informs that population of the values, priorities, and missions of the military organization.

Fifth, doctrine can be a response to national strategy or a means to influence that strategy. When a state changes its strategy (or its strategic objectives), a military organization might change its doctrine. A doctrinal change is only necessary if the determination is made that the instrument of military power which serves as the *means* of the strategy must change to achieve the new objectives. Kevin Sheehan refers to this conception of doctrine as the "loyal bureaucrat view of doctrine."[18] It is also possible that a military organization uses its doctrine to influence national strategy. Sheehan notes that a military "might 'use' formal operational doctrine as a means to 'signal' to political authorities that military means are inadequate to protect political ends - and

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[15] Posen, 2016, p. 160.

[16] However, doctrine on its own cannot reveal a state's intent. Inferring capability by reading doctrine is very difficult.

[17] Posen, 2016, p. 160.

[18] Kevin Sheehan, *Preparing for an Imaginary War? Examining Peacetime Functions and Changes of Army Doctrine* (Ph.D. diss. Columbia University, 1988), p. 22.

political ends should probably be changed."[19] Grand strategies cannot be made in isolation from the means available. Militaries can use their doctrine as a tool to inform policymakers of their capabilities and limitations.

Sixth, military doctrine is a mechanism for managing organizational change. Political leaders can use doctrine as a tool to change a military after defeat in war or in the context of major grand strategic challenges. Doctrine can be "a key weapon at the disposal of leadership to steer their organisation through an era of uncertainty and sustained change."[20]

Seventh, just as in politics, the friction that exists between military actors plays out in the doctrine development process, and at its simplest, military doctrine is a result of a competition between "who gets what, when, and how."[21] Doctrine is "an institutional choice between competitive ideas."[22] Competition for limited resources amongst military organizations that are subordinate to the same state is similar to competition between branches of the federal government or between local, state, and federal entities. Competition over technologies or the development of the most effective combat doctrine between military organizations of different states is an element of international relations that affects power, decisions related to war and peace, and relations between states. Doctrine reflects both the power arrangement within a military organization and the final compromise of the relevant actors.

Finally, military doctrine is a justification for future budgets. Given the finite nature of resources, military organizations must compete with other governmental agencies for their share

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[19] Sheehan, 1988, p. 21.
[20] Harald Høiback, "What Is Doctrine?" *Journal of Strategic Studies* 34, no. 6 (2011): 894, quoting Markus Mäder, *In Pursuit of Conceptual Excellence, The Evolution of British Military-Strategic Doctrine in the Post-Cold War Era, 1989-2002* (Bern, Switzerland: Peter Lang Publishing, 2004), p. 293.
[21] Harold Lasswell, *Politics: Who Gets What, When, How* (New York: Whittlesey House, 1936).
[22] Paul H. Herbert, "Deciding What Has to Be Done - General DePuy and the 1976 Edition of FM 100-5," *Leavenworth Papers*, Number 16, Combat Studies Institute, U.S. Army Command and General Staff College, 1988, p. 107.

of the budget. Militaries can use doctrine as a justification for the budgets and procurement programs that they desire. Budget allocation is an inherently political process. According to Sheehan, military organizations are often caught in a budget dilemma - though domestic societies may recognize the importance of a given military doctrine for the state's security and/or ability to execute foreign policy objectives, it is very difficult for the military organization to demonstrate that increased budgets are linked to the organization's ability to do that.[23] To deal with this dilemma, militaries can use doctrine as a justification for the resources that they need. Doctrine informs domestic audiences and legislators about the resources that the military needs.

For the military organization itself, doctrine provides a common frame of reference and a potential language. A common framework is essential for cooperation on the battlefield.[24] Jack Snyder notes, "One of the functions of doctrine is to provide rules of thumb for simplifying complex operational calculations."[25] This function of doctrine also integrates an organization's cultural perspective. A common culture "enables units to self-synchronize both within the unit and between units."[26] Doctrine can "facilitate tacit conventions in the heat of battle by prearranging salience and distinguishing relevant precedents."[27]

Another important function of doctrine for a military organization is the role that it plays in imparting a sense of purpose to members of the military. This sense of purpose is harnessed by military leaders who also use doctrine to increase unit cohesion.[28] Doctrine often determines the desired character traits of members of the military organization.[29] Often these character traits are

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[23] Sheehan, 1988, p. 17. Sheehan calls this perspective on doctrine the "debater's advantage view."

[24] Posen, 2016, p. 160.

[25] Jack Snyder, *The Ideology of the Offensive: Military Decision Making and the Disasters of 1914* (Ithaca, NY: Cornell University Press, 1984), p. 29.

[26] ADP 1-01 *Doctrine Primer*, p. 1-4.

[27] Høiback, 2011, p. 890.

[28] Ibid.

[29] ADP 1-01 *Doctrine Primer*, p. 1-5. U.S. Army doctrine stresses "initiative, creativity, adaptability, and ethical action."

explicitly specified in doctrine. Posen views doctrine as a "source of cohesion" that "creates a fictive certainty about an inherently uncertain activity."[30] Doctrine is also a tool of education because it articulates the critical knowledge that members of the military organization must know. According to Harald Hoiback, "a doctrine, used as a tool of education, can…present particular cases that the military students…can use to reach their own conclusions."[31] Military organizations use doctrine to design the curricula for the basic training of new soldiers and military schools at all levels.

Understanding the nature, frequency, and intensity of military doctrinal change is important for the state for two reasons. First, *too little* change risks failure to adapt to changing conditions, failure to optimize for purpose, and increased risk of defeat in war. Too little change aligns with the prevailing narrative in the literature on organizational rigidity and it is this dynamic that is considered to be the riskiest for the state. Second, *too much* change risks damaging organizational efficiency, coherence, and readiness and wasting scarce resources.[32] Too much change is anomalous according to the existing literature. I argue that too much change is at least as problematic for a state's security and prospects in future war as too little change.

Understanding military doctrinal change is also important because it lends insight on the state's pursuit of military capability - a component of its national power. While the political science literature on the causes and consequences of war is extensive, international relations

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[30] Posen, 2016, p. 160.

[31] Høiback, 2011, p. 889.

[32] This quote, attributed to the Roman warrior, Petronius Arbiter, sums up the perils of too much change: "We trained hard, but it seemed that every time we were beginning to form up into teams, we would be reorganized. I was to learn later in life that we tend to meet any new situation by reorganizing, and a wonderful method it can be for creating the illusion of progress, while only producing confusion, inefficiency, and demoralization." The only verified reference of this quote is Charlton Ogburn, "Merrill's Marauders," *Harper's Magazine*, January 1957. This quote is in Andrew J. Bacevich, *The Pentomic Era: The U.S. Army Between Korea and Vietnam* (Washington: National Defense University Press, 1986), pp. 156-157. Bacevich attributes it to an "old Roman warrior."

scholars have long ignored issues related to the employment of military forces.[33] Nonmaterial factors such as leadership, morale, doctrine, and tactics are rarely studied because in most theories, states are assumed to employ military power optimally. The effects of variance in the characteristics of these nonmaterial factors is rarely studied. I seek to partially address that gap by exploring military doctrine - a component of force employment that focuses on the body of knowledge within militaries that explains the way they fight.

State of the Literature on Military Doctrine

The political science literature on military doctrine is sparse. The lack of attention to the topic is surprising considering the importance that international relations scholars place on the causes of war and war outcomes. It is also curious given the importance attached to doctrine by military practitioners. Military organizations operate in a competitive environment where the consequences of failure can include the collapse of the state. Doctrine is the best formal articulation of how a military organization will fight in war. The lack of scholarship on the topic is surprising given its implications.

The political science literature on doctrine that does exist posits numerous sources of doctrinal change. They include changes in: technology,[34] the geography of projected future battlefields,[35] the nature of the suspected enemy threat and the balance of power of the international

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[33] Stephen Biddle, *Military Power: Explaining Victory and Defeat in Modern Battle* (Princeton, NJ: Princeton University Press, 2004) is the most well-known exception. The author (p. 18) laments the absence of scholarly attention to the nonmaterial factors that affect military power.

[34] John Stone, "The British Army and the Tank," in Theo Farrell and Terry Terriff, eds. *The Sources of Military Change: Culture, Politics, Technology* (Boulder, CO: Lynne Rienner Publishers, 2002), pp. 187-204.

[35] Robert A. Doughty, "The Evolution of US Army Tactical Doctrine, 1946-76," *Leavenworth Papers,* Number 1, Combat Studies Institute, U.S. Army Command and General Staff College, 1979.

system;[36] the nature of the civil-military relationship;[37] organizational culture;[38] concerns related to organizational survival;[39] competition between branches of a particular military service;[40] competition between services;[41] and the influence of military leaders (junior, mid-grade, or senior).[42] The impetus for change can come from outside the military in the form of civilian intervention or inside the military through action by military leaders. Civilian intervention might be the result of military defeat, impending crisis, technological change, and/or a shift in the enemy threat or the balance of power in the international system. Change initiated from within the military organization can be the result of military defeat, competition within the organization, competition between services (most often as a result of the fight for budgets) or anticipation of a changing enemy threat or balance of power shift. Innovation is often mediated by culture but

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[36] Barry R. Posen, *The Sources of Military Doctrine: France, Britain, and Germany Between the World Wars* (Ithaca, NY: Cornell University Press, 1984).

[37] Deborah D. Avant, *The Institutional Sources of Military Doctrine: Hegemons in Peripheral Wars* (Ph.D. diss. University of California, San Diego, 1991); Avant, "The Institutional Sources of Military Doctrine: Hegemons in Peripheral Wars," *International Studies Quarterly* 37, no. 4 (1993): 409–30; Avant, *Political Institutions and Military Change: Lessons from Peripheral Wars* (Ithaca, NY: Cornell University Press, 1994).

[38] Austin Long, "Doctrine of Eternal Recurrence: The U.S. Military and Counterinsurgency Doctrine, 1960-1970 and 2003-2006," *RAND Counterinsurgency Study - Paper 6*, 2008; Long, *The Soul of Armies: Counterinsurgency Doctrine and Military Culture in the US and UK* (Ithaca, NY: Cornell University Press, 2016); Long, *First War Syndrome: Military Culture, Professionalization, and Counterinsurgency Doctrine* (Ph.D. diss. MIT, 2010); Elizabeth Kier, "Culture and Military Doctrine," *International Security* 19, no. 4 (1995): 65–93; Kier, *Imagining War: French and British Military Doctrine Between the Wars* (Princeton, NJ: Princeton University Press, 1997); Paula Holmes-Eber, *Culture in Conflict: Irregular Warfare, Culture Policy, and the Marine Corps* (Redwood City, CA: Stanford University Press, 2014); Carl H. Builder, *The Masks of War: American Military Styles in Strategy and Analysis: A RAND Corporation Research Study* (Baltimore: Johns Hopkins University Press, 1989); Joyce P. DiMarco, *Service Culture Effects on Joint Operations: The Masks of War Unveiled* (Master's Thesis, United States Army Command and General Staff College, 2004); Theo Farrell, "World Culture and the Irish Army, 1922-1942," in Farrell and Terriff, 2002, pp. 69-90; Emily O. Goldman, "The Spread of Western Military Models to Ottoman Turkey and Meiji Japan," in Farrell and Terriff, 2002, pp. 41-68; Adamsky, *The Culture of Military Innovation: The Impact of Cultural Factors on the Revolution in Military Affairs in Russia, the US, and Israel* (Palo Alto, CA: Stanford University Press, 2010).

[39] Frank Marutollo, *Organizational Behavior in the Marine Corps: Three Interpretations* (Westport, CT: Praeger Publishers, 1990).

[40] Stephen P. Rosen, *Winning the Next War: Innovation and the Modern Military* (Ithaca, NY: Cornell University Press, 1991).

[41] Sapolsky et al., 2009.

[42] Keith B. Bickel, *Mars Learning: The Marine Corps Development of Small Wars Doctrine, 1915-1940* (Boulder, CO: Westview Press, 2001); Posen, 1984 - the military maverick concept; Rosen, 1991.

sometimes cultural change is cited as the cause of military innovation.[43] Given the preponderance of sources of military doctrine, it is not clear if doctrine is a result of rational calculations of the threat, the internal priorities and interests of the military organization, or the influence of ideas, identities, and culture.

While the purported causes of doctrinal change are numerous, many scholars treat doctrine synonymously with a state's strategy, and this is problematic for many of the causal claims that these scholars make. Imprecise articulation of doctrine as a dependent variable causes political scientists to see evidence of a change to a state's doctrine in places where it does not exist. This leads to inaccurate claims of causality, the exaggeration of doctrine's importance, and the misidentification of strategy/policy change for doctrinal change. I do not mean to suggest that military doctrine is orthogonal to strategy; the two are highly interrelated. As a formal explanation of how a military organization fights, doctrine consists of the tactics and operations that the organization intends on employing. Strategy is the bridge between the tactics and operations employed by the military and the state's policies. Military doctrine can be a tool used to execute a strategy, but it is rarely intended to be the strategy itself. The March 1958 edition of the Army's professional journal, *Military Review*, provides a quote which illustrates the difference: "Strategy relates to the attainment of objectives and doctrine relates to the employment of means."[44]

Most political science scholars pay no attention to the formal manifestations of doctrine that are published by military organizations themselves. It is rare for scholars to explore the formal doctrinal manuals of the militaries they study. There is a tendency to underestimate or dismiss

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[43] Farrell and Terriff, 2002, pp. 7-10. According to the authors, military leaders can try to change an organization's culture to make innovation easier. Sometimes, an exogenous shock can change an organization's culture which can lead to innovation. Finally, militaries may emulate other militaries when they share common cultural norms.

[44] Willard G. Wyman, "The United States Army: Its Doctrine and Influence on US Military Strategy," *Military Review* XXXVII, no. 12, (March 1958): 3.

entirely the importance of manuals and military educational curricula. Those who suggest that military doctrinal manuals are merely boilerplate statements that are devoid of meaning, seriously underestimate the degree to which military organizations rely on those manuals. For a military organization, doctrine provides a common frame of reference and a professional language, it enhances operational effectiveness, it is a source of cohesion, it is a mechanism for managing change, it is the basis for military training and education, and it is often a reflection of intra- and inter-service compromise.[45] Doctrine is critically important. That said, some doctrinal innovations are more substantial than others. In the analysis that follows, I explore the superficial doctrinal innovations made by the Army with respect to irregular warfare.

The literature on doctrinal change can be organized into three camps. One camp claims that during periods of high threat, civilian intervention is necessary to compel the military to change its doctrine.[46] Civilian intervention can be the result of military defeat, impending crisis, technological change, and/or a shift in the enemy threat or the balance of power in the international system. Civilian elites are most effective at forcing doctrinal change based on *realpolitik* considerations which supersede a military's own organizational interests (and its general tendency to avoid change in order to reduce uncertainty). *This argument is insufficient for explaining doctrinal innovation in the U.S. Army.*

A second camp claims that the source of doctrinal change is not civilian intervention but competition between different factions within the military organization. This dynamic is known as intraservice rivalry. Doctrinal change occurs when military leaders develop a new theory of

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[45] This characterization applies to U.S. military organizations. In some, non-U.S. military organizations, doctrine is much less relevant.
[46] Posen, 1984.

victory[47] for war and leverage mid-level officers in the organization (usually through promotion) to institute innovations that support that theory.[48] *Intraservice rivalry does not explain doctrinal innovation in the U.S. Army.[49]*

The third camp argues that variation in the interests of military organizations subordinate to the same state (i.e. services) is the source of doctrinal change. This dynamic is known as interservice rivalry. Competition between services for resources, standing, and prestige leads to innovation.[50] *Interservice rivalry sometimes played a role in U.S. Army doctrinal innovation, but this explanation is insufficient on its own.*

I close this section by briefly addressing three studies - two dated and one recent - on military doctrine. The first, written by Kevin Sheehan in 1988, argues that technological development in the form of new weaponry is the best explanation for Army doctrinal change.[51] This argument does not hold up in my study. In fact, in one case - the Marine Corps' vertical envelopment doctrine in the 1940s - the doctrine was instituted *before* the technology existed. In 2002, Charlie Miller also studied Army doctrine, and argued that while a balance of power approach best explains doctrinal change in the first half of the Cold War, Army leaders used doctrinal change to insulate their organization from the uncertainty that stems from changing

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[47] Rosen, 1991, p. 20, defines theory of victory as "an explanation of what the next war will look like and how officers must fight if it is to be won."

[48] See also Suzanne C. Nielsen, *Preparing for War: The Dynamics of Peacetime Military Reform* (Ph.D. diss. Harvard University, 2003). Nielsen expands the focus to military reform - changes to doctrine, training, policies, organizations, equipment, and leader development programs. Nielsen agrees with Rosen that external developments have an indeterminate effect on military change. She focuses her analysis on how reform in military organizations occurs.

[49] Rosen dismisses doctrinal innovation. Instead he focuses on the creation of new combat arms.

[50] Harvey M. Sapolsky, "On the Theory of Military Innovation," *Breakthroughs* 9, no. 1 (2000): 35–39; Samuel P. Huntington, "Interservice Competition and the Political Roles of the Armed Services," *The American Political Science Review* 55, no. 1 (March, 1961): 40-52; Owen Cote, Jr., *The Politics of Innovative Military Doctrine: The United States Navy and Fleet Ballistic Missiles* (Ph.D. diss. MIT, 1996); Sapolsky, *The Polaris System Development: Bureaucratic and Programmatic Success in Government* (Cambridge, MA: Harvard University Press, 1972).

[51] Sheehan, 1988.

defense policies.[52] While both authors study a few of the same cases that I do, their study lacks external validity because they do not expand their analysis beyond one military organization - the U.S. Army. Also, neither author takes their analysis beyond the end of the Cold War.

The most recent book on military doctrine by Benjamin Jensen, published in the midst of my own study of the topic, argues that military innovation comes from incubators - "new forums or subunits free from the normal push and pull of the bureaucratic hierarchy" - and advocacy networks - "loose coalitions of defense and civilian officials championing new reform initiatives."[53] According to Jensen, incubators and advocacy networks cause doctrinal change. Jensen and I seek to solve the same puzzle (what are the causal mechanisms for doctrinal change in modern military bureaucracies?), our definition of military doctrine is similar, and we both examine formal, doctrinal manuals for evidence of doctrinal change. However, we use different methods and we draw fundamentally different conclusions. Jensen confines his study to one military organization - the U.S. Army - whereas I test hypotheses on the U.S. Army and the U.S. Marine Corps. Since the Marine cases are understudied, I make a contribution not only to the theoretical underpinnings of doctrinal change but also to our understanding of the Marine Corps as an institution. Though Jensen and I both employ a qualitative approach, Jensen does not establish up-front the types of evidence that would confirm or deny the propositions that he tests.

Jensen provides a novel theory of *how* doctrinal change occurs, but he tells us little about *why* military organizations innovate in the first place. He argues that doctrinal innovation is endogenous; it is triggered when "military professionals seek to overcome new operational

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[52] Charlie Miller, *Serving Two Masters: Doctrinal Evolution in the U.S. Army* (Ph.D. diss. Columbia University, 2002).

[53] Benjamin Jensen, *Forging the Sword: Doctrinal Change in the US Army* (Stanford, CA: Stanford University Press, 2016), p. 17 and p. 19, respectively.

challenges."[54] However, it is not clear why these new challenges do not stem from the very exogenous shocks that he dismisses. I argue that the source of these operational challenges is the true cause of the innovation. Like other scholars who have studied military innovation, Jensen seeks a monocausal explanation for doctrinal change, and this limits the utility of his theory. Though Jensen promotes the causal effect of incubators and networks, he states at the end of his study that it is "impossible to reject the argument that threats to the organization's core mission…incentivize reluctant officers to develop new doctrine."[55] I find that when a military organization perceives a threat to its core mission, it is likely to innovate doctrinally. Incubators and networks might help explain how doctrinal change occurs internal to a military organization, but they do not explain how threats to organizational survival can lead to innovation. Finally, while Jensen finds no influence of technology on doctrinal change, had he expanded his analysis to the 1940s and 1950s he would have been forced to deal with the major effect that nuclear weapons had on the U.S. Army.[56]

A New Theoretical Framework

I argue that the search for a monocausal explanation for doctrinal change has led scholars to focus on unique instances of innovation that enable the isolation of one of the above factors (while theoretically holding the others constant) to enable the confirmation of a causal claim. As has been the case in the broader literature on innovation for years, "Factors found to be important for innovation in one study are found to be considerably less important, not important at all, or

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[54] Jensen, p. 15.

[55] Ibid., p. 146.

[56] No evidence of technological change causing doctrinal change is also surprising given the acquisitions of the "Big 5" - the Abrams main battle tank, the Bradley fighting vehicle, the Apache attack helicopter, the Black Hawk utility helicopter, and the Patriot air defense missile system - in the 1970s and 1980s. Most view these acquisitions as huge factors in the development of the Army's preeminence in ground combat exemplified in the 1991 Persian Gulf war. For a detailed account of the Big 5, see David C. Trybula, "'Big Five' Lessons for Today and Tomorrow," accessed online at http://www.benning.army.mil/Library/content/NS P-4889.pdf.

even inversely important in another study."[57] None of the arguments above is sufficient on its own for explaining doctrinal change in the U.S. Army over the time period of interest. Rather, I argue that the effect of one independent variable on doctrinal change often depends on the value of another variable. Monocausal theories on doctrine fail to account for this interaction effect.

Rather than conduct competitive hypothesis testing between two or more of the above theories of military innovation or pursue a heretofore undiscovered monocausal theory, I argue that it is more fruitful to consider doctrinal innovation from multiple perspectives or levels of analysis. I seek to develop and test a theoretical framework that synthesizes more than one approach to military doctrinal innovation.

Drawing from the camps discussed above, I divide the literature on military innovation into three perspectives: *the balance of power approach* (states change their military doctrine in response to changes in the distribution of power in the system and due to other environmental factors such as the development of a new military technology), *the organizational approach* (competition between rivals within a military organization leads to military doctrinal change), and *the interservice approach* (competition between military organizations subordinate to the same state leads to military doctrinal change).[58] Rather than viewing these perspectives as competing, I argue that they can be complementary when viewed as different levels of analysis. The balance of power approach operates at the systemic level; the organizational approach operates at the level

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[57] George W. Downs, Jr. and Lawrence B. Mohr, "Conceptual Issues in the Study of Innovation," *Administrative Science Quarterly* 21, no. 4. (Dec., 1976): 700. The authors note, "Of 38 propositions bearing directly on the act of innovation cited by Rogers and Shoemaker (1971: 350-376), 34 were supported in some studies and found to receive no support in others." See, Everett M. Rogers and F. Floyd Shoemaker, *Communication of Innovation: A Cross-Cultural Approach* (New York: The Free Press, 1971). This quote is also cited in Liam S. Collins, *Military Innovation in War: The Criticality of the Senior Military Leaders* (Ph.D. diss. Princeton University, 2014), p. 23.

[58] The balance of power perspective treats the military organization as a unitary actor; this is the systemic level of analysis. The organizational perspective views a military organization as a bureaucracy with diverse interests. The interservice bargaining perspective focuses on competition between services subordinate to the same state.

of the military organization; and the interservice approach shifts the analyst's focus to interaction between military organizations.

The balance of power approach is useful because it sheds light on *why* a military innovates doctrinally. The organizational approach illuminates the answer to a slightly different question: given the decision to innovate doctrinally, what explains the nature or character of the doctrinal changes that were adopted (the *why* and the *how*)? The interservice approach can provide insight on both sets of questions.[59]

The analytical framework that I developed to assess doctrinal change proceeds as follows: *Theory of Victory:* All military organizations have a theory of victory - a proposed explanation for how the organization will fight in the next war based on what it thinks warfare will look like.[60] I argue that a theory of victory consists of two components - assumptions about the nature of war and a vision of warfare. The vision of warfare consists of the mechanisms and methods that the organization plans to use in war.

Shift: When militaries perceive a shift in the balance of threat, they will examine how that shift affects their theory of victory. When that theory is fundamentally redefined, the organization will initiate processes of doctrinal change. Environmental shocks such as the development of a major military technology, the collapse/rise of great power(s), or a major change in the capability/intentions of an adversary should cause doctrinal innovation.

Role of Civilians: Contra Posen, civilian intervention is not necessary for innovation. When military and civilian preferences are aligned, I do not expect civilian intervention. Civilian

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[59] I credit Terry Terriff, "U.S. Ideas and Military Change in NATO, 1989-1994," in Ferrell and Terriff, 2002, p 91, for helping me realize that the question of *why* a state changes its doctrine can be viewed in two parts: (1) why innovate? and (2) why innovate in the manner chosen? For example, states don't innovate doctrinally because of organizational culture, but when they decide to innovate doctrinally, organizational culture mediates the nature/character of the doctrinal change itself.
[60] Rosen, 1991, p. 20.

intervention to compel (or prevent) doctrinal change is unnecessary because both sets of actors already prefer the same outcome.

When civilian elites favor doctrinal change but military elites do not, I expect to see evidence of military doctrinal change in anticipation of civilian intervention as a way of warding off civilian influence and preserving the military's first-mover advantage. Preferences should initially not be aligned; the military organization should recognize this and take action; and the result should be a modified doctrine. Rather than a major doctrinal innovation, I expect to see evolutionary or cosmetic changes that are promoted by the military organization as major changes. The evidence must show that civilian elites wanted change, military elites did not, and military elites acted prior to civilian intervention to satisfy the interests of civilians through minor doctrinal change which is promoted as major innovation. Here, military elites use formal doctrine as a tool to minimize civilian interference.

I contend that the last possibility - military elites prefer doctrinal innovation but civilian elites are against it - is most rare because militaries are not inclined to innovate doctrinally in ways that would be harmful to a state's national security interests. Civilian resistance to doctrinal change during peacetime is not expected unless the military's preferences for change are clearly insubordinate to national interests. Doctrinal change is costly, so military organizations have little incentive to promote innovation in the face of civilian resistance. If militaries favor change and civilians are against it, I expect that military organizations would avoid doctrinal innovation.[61]

Character of the new doctrine: When a military organization decides to innovate doctrinally, I expect that the character of the innovation might be affected by three factors: organizational

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[61] Finding an example of military doctrinal innovation in the face of civilian resistance is difficult. Civilian control over the budget gives civilian elites the upper-hand.

culture, competition between actors inside the organization (intraservice), and competition between services (interservice).

When a military organization changes doctrine in response to a shift in the international security environment, I expect the organization's culture to affect the character of the new doctrine. Given the rigidity of organizational culture, it is rare for culture to be the source of military doctrinal change. Instead, culture acts as an intervening variable between the international security environment (the source) and doctrinal innovation (the outcome).[62]

When an environmental shift causes a military organization to review its theory of victory, competition between branches might affect the new theory of victory and the character of the doctrinal innovation that follows. Stephen Rosen is the most notable scholar to study how intraservice competition affects innovation, but he dismisses formal doctrine and fails to realize that innovation can occur without the development of a new combat arm or branch.[63]

When an environmental shift affects a military organization's budget or causes a new mission area to emerge, interservice competition might affect the character of the innovation. Services will compete for scarce resources to either maintain their current position or to establish jurisdiction in the new mission area. Competition between services subordinate to the same state can act as an intervening variable between the environmental shock and a new doctrine. When two or more services are deadlocked in response to an environmental shock, I expect to see civilian intervention into the doctrinal process. The purpose of this intervention is not to compel doctrinal change; it is to resolve friction between the two services. In the absence of acute interservice competition, military organizations will anticipate civilian intervention and take action to render it

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[62] A major change to an organization's culture could cause doctrinal innovation, but cultural shifts are rare for military organizations.
[63] Rosen, 1991.

unnecessary. When acute interservice competition is present and deadlock results, military organizations will have no choice but to allow (and respond to) civilian intervention.

Method and Case Selection

The study of military doctrine lends itself best to a qualitative research design. I conduct a structured, focused comparison of two military organizations - the U.S. Army and the U.S. Marine Corps - from the post-World War II period until 2001. The dependent variable is military doctrine and the independent variable is the balance of threat in the international system. Intervening variables that explain the character of doctrine are organizational culture, intraservice and interservice competition, and organizational interests related to survival.[64]

I privilege formal products - official field manuals, educational curricula, and correspondence written by military leaders responsible for making doctrine - over informal elements such as journal articles written by junior officers.[65] I focus my analysis on doctrine as it is published in the military organization's doctrinal manuals - it's *formal* doctrine. Given the proliferation of official field manuals that focus on a multitude of different functions within a military organization, I focus instead on a military's *keystone* doctrine. Most military organizations publish one central doctrinal manual which summarizes their approach to warfare in terms that apply to the entire force. In most western militaries, all other field manuals are required to be aligned with this central, keystone manual.

This formal conception of doctrine contrasts with other scholars who argue that doctrine can also be informal. Keith Bickel's articulation of doctrine incorporates informal elements such

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[64] I don't claim that balance of power factors are the *only* possible cause of doctrinal change but I approach the case studies in this dissertation from the balance of power perspective because I think it is the most fruitful level of analysis for understanding the causes of doctrinal innovation.

[65] I argue that formal doctrine in the United States began with the Army's publication of the 1905 *Field Service Regulation*. Jensen, 2016, p. 5, agrees but contends that doctrine did not focus on "the employment of forces that operate above the level of tactics" until 1941. I disagree.

as professional journal articles, field orders, and the personal letters of soldiers.[66] Bickel contends that the spread of ideas between members of the officer corps, though unsanctioned by formal institutions, is an integral component of understanding an organization's military doctrine. While I don't dispute the idea that unofficial correspondence between members of the military is an integral component of understanding a military organization's intellectual foundation, I contend that the inclusion of these unofficial elements blurs the line between (approved) doctrine and intellectual debate.

I divide my analysis of U.S. Army doctrine into a chapter on doctrine for conventional operations and a chapter on doctrine for irregular warfare to achieve variance on the dependent variable. Doctrinal innovations for conventional warfare were the 1950s pentomic doctrine, the 1976 Active Defense doctrine, and the 1982/1986 AirLand Battle doctrine. I compare these doctrines with the absence of doctrinal innovation for low-intensity conflict in Vietnam and during the 1990s. In the analysis of the Marine Corps, I examine the 1940s and 1950s vertical envelopment doctrine and the 1989 maneuver warfare doctrine. I study these cases because they allow me to assess whether or not the Marine Corps innovated doctrinally in ways similar to the Army when exposed to the same stimuli. Applying the theoretical framework to the Marine Corps also serves the purpose of determining whether the conclusions are relevant to other organizations besides the U.S. Army.

The origin of the concept of military doctrine in America can be traced back to Baron Friedrich Wilhelm von Steuben (1730-1794), Inspector General of the United States Army at Valley Forge. Von Steuben was a Prussian officer who joined George Washington in 1778 and developed a method of drill instruction that eventually grew into the U.S. military's first formal

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[66] Bickel, 2001.

manual called *Regulations for the Order and Discipline of the Troops of the United States*. Von Steuben's manual, colloquially known as the "Blue Book," was signed into law by Congress on March 1779.[67] The establishment of *doctrine* as a distinct military concept is credited to the French who used the term as early as 1903 to refer to explanations for how to win future wars and as a way of infusing the French military with the will necessary to do so.[68]

The word *doctrine* first appeared in the lexicon of the U.S. military in 1912 in an editorial in the Army's *Infantry Journal* where it was defined as "a means to some national conception of war."[69] Doctrine first appeared in the Marine Corps lexicon in the services' professional journal, the *Marine Corps Gazette* in 1916. In 1961, Army General William E. DePuy who would later command the U.S. Army's first organization dedicated purely to writing doctrine (Training and Doctrine Command, TRADOC) wrote a definition of doctrine that is worth quoting at length:

> Service doctrine is the whole process by which a fighting service is built up around a combatant function…in its broadest sense, [doctrine] is everything the services have been, are today, and plan to be. The development and evolution of doctrine and its inculcation, mostly in the minds and hearts of the officer corps, are the life thread and the pulse of the fighting services…doctrine is institutional in character. Doctrine and the institutions which it nourishes, and in turn, upon which it feeds, are exactly coextensive. There is no doctrine outside the institutional walls - nor can the institution creep outside the doctrine which is its rationale…Because the services are solemn and venerable institutions they have acquired a wide range of traditions and values, and a long history of legendary exploits, victories and successes. These too are part of doctrine although they are seldom seen or fully understood until in some epic moment they become incandescent in action as at Carentan, in the battle of Midway, on Iwo Jima, or in MIG Alley.[70]

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[67] As cited by Harald Høiback, *Understanding Military Doctrine: A Multidisciplinary Approach* (London: Routledge, 2013), p. 28. A copy of the manual is available here: https://archive.org/details/2575061R.nlm.nih.gov. Scholars use the spelling "Steuben" whereas the actual Blue Book uses the spelling "Stuben." I use the former.

[68] Høiback, 2013, p. 37.

[69] Bickel, 2001, p. 2.

[70] Richard M. Swain, "Selected Papers of General William E. DePuy: First Commander, U.S. Army Training and Doctrine Command." *Combat Studies Institute*, U.S. Army Command and General Staff College, 1973, p. 36. Swain reprints DePuy's article, "Unification: How Much More?" *Army* 11, no. 9 (April 1961): 30-38.

In today's U.S. Army, there is general consensus that doctrine is "the way [the Army] fights"[71] or "the body of thought on how Army forces operate as an integral part of a joint force."[72] Today, the Marine Corps definition of doctrine is very similar to the Army's, centering on guidelines for the way the Marine Corps fights. According to the Marine doctrinal manual on Warfighting, doctrine "establishes a particular way of thinking about war and a way of fighting…it establishes the way we practice our profession."[73] The *Department of Defense Dictionary of Military Terms* defines doctrine as the "fundamental principles by which the military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgment in application."[74] While military organizations treat doctrine as a body of knowledge developed from lessons learned in previous wars, sometimes doctrine can be an engine of organizational change based either on the organization's assessment of future threats or guidance from civilian leaders to institute a specific method of fighting.[75]

Brief Description of the Findings

The analysis in this study generated seven, major findings. I briefly describe each, below. A more detailed explanation for each can be found in the study's final chapter.

First, the systemic causes of military doctrinal innovation are better described by balance of threat than balance of power theory. Applied to military innovation, balance of threat theory

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[71] This is the definition used by the Army Capabilities Integration Center (ARCIC), the organization responsible for overseeing the development, evaluation, and integration of concepts for the Army.

[72] This is the definition used by the Army's Training and Doctrine Command (TRADOC).

[73] See Marine Corps Doctrinal Publication 1, *Warfighting*, pp. 55-56.

[74] *Department of Defense Dictionary of Military Terms*, Joint Publication 1-02, 15 February 2016, p. 71. Accessed online at: http://www.dtic.mil/doctrine/new_pubs/jp1_02.pdf. This is also the U.S. military's joint definition (found in JP 1-02). *Joint doctrine* is "fundamental principles that guide the employment of United States military forces in coordinated action toward a common objective and may include terms, tactics, techniques, and procedures (CJCSI 5120.02C)." The current U.S. Army definition of doctrine combines the Department of Defense and joint definitions into one.

[75] See Janine Davidson, *Lifting the Fog of Peace: How Americans Learned to Fight Modern War* (Ann Arbor, MI: University of Michigan Press, 2011). For example, Kennedy's directive to the U.S. Army to develop a counterinsurgency doctrine is an example of this type of civilian involvement. This doctrine was meant to be an "engine of change" in the organization.

argues that militaries will develop doctrine in response to shifts in the threat. The military organization evaluates the intensity and probability of the threat by examining a potential adversary's aggregate power, proximity, offensive capability, and offensive intentions. Militaries treat the most menacing threat to the state, rather than the most likely threat, as the top priority in the doctrine development process.

Second, civilian intervention is not a necessary or sufficient cause of doctrinal innovation. In most of the innovations analyzed in this study, civilian intervention played little role in causing the innovation. When militaries sense civilian intervention to compel change, they will act in anticipation of that intervention. This is most likely when there is civilian preference for a doctrinal innovation for irregular warfare - a type of warfare that military organizations see as being at odds with their organizational purpose.

Third, military organizations constantly strive to establish a monopoly over warfare in a particular jurisdictional domain. The most common domains are land, sea, and air. Establishing dominance over a domain is integral to the organization's survival, as long as it can be shown that the possibility for future combat in that domain exists. Military organizations will go to great lengths to establish a monopoly over a domain, and they will consistently reinforce the relevance of that domain in future warfare.

Fourth, the frequency of military doctrinal change is a function of the complexity of the strategic problem that a doctrine is designed to solve. Insoluble strategic problems can lead to frequent doctrinal changes as a military organization attempts to develop new methods of fighting. When strategic problems are insuperable, we should expect to see repeated iterations of doctrinal innovation. The military organization will perceive innovation as necessary to ensure

organizational survival, but the insolubility of the strategic problem will render military solutions to it impracticable.

Fifth, the complexity of the cases studied supports the argument that monocausal explanations of military doctrinal innovation are insufficient because they fail to account for the interaction effect that occurs between independent variables. Of the seven doctrines studied across two services, no single, independent variable stands out as the most causative factor for innovation. This is why future studies of military doctrine (or military innovation more broadly), should be conducted through the lens of a levels of analysis approach.

Sixth, military doctrinal innovation during peacetime is *not* anomalous because military organizations constantly revise their theories of victory as threats change in the external environment. Counterintuitively, military organizations are uncomfortable with periods of peace because their leaders are forced to make assumptions about the character of future war, but are not afforded an opportunity to confirm or deny those assumptions in war.

Finally, the existence of a doctrinal institution with purview over doctrine creation, publication, and distribution, will increase the volume of doctrine that a service produces and it will create a norm for a reliance on formal doctrine. While obvious, this point is important because it sheds light on why the Army has a longer tradition of formal doctrine than the Marine Corps. More importantly, it illuminates the fact that the Army has consistently strived to reinvent itself doctrinally since the establishment of TRADOC in 1973.

Roadmap

This study is organized into a literature review chapter, a research design chapter, three chapters focused on the case studies, and a conclusion. The literature review is divided into two sections. In the first section, I assess the political science and security studies literature on military

doctrine to derive a definition of doctrine. In the second section, I assess the literature on the sources of military doctrinal change. I define military doctrine as *how a military organization plans to fight in combat*. More specifically, doctrine is the *formal collection of documents sanctioned by the military organization that military forces use to guide their actions in combat*.

In the research design chapter, based on the limitations of the existing monocausal explanations for doctrinal innovation, I develop and define a new framework for assessing innovation using a levels of analysis approach. Once I define the framework, I discuss the measurable indicators that would confirm or deny the relevant independent and/or intervening variables at each level of analysis. I close the chapter with a brief discussion of the rationale for conducting a comparative case study analysis and I address the primary bodies of evidence that I use to understand the causes and character of doctrinal change.

Chapter three is focused on an analysis of doctrinal innovation for conventional warfare by the U.S. Army from World War II to 2001. I conduct a case study analysis of three instances of doctrinal change - the 1950's pentomic doctrine, the 1976 Active Defense doctrine, and the 1982/1986 AirLand Battle doctrine. All three cases are doctrines that focus on conventional warfare.[76] Using the theoretical framework outlined in the research design chapter and a structured, focused case study approach, I analyze the sources of each doctrine.

Chapter four also focuses on the U.S. Army, but the analysis centers on the absence of doctrinal innovation with respect to irregular warfare. Irregular warfare refers to a certain type of fighting defined by combat between a state military organization and non-state armed groups[77]

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[76] The use of the label "conventional" to refer to firepower-intensive, state-centric, and industrialized type of warfare is unfortunate because of the connotation of the term. "Conventional" suggests that this type of warfare is standard, typical, and most common. While warfare of this type might be the dominant convention during certain historical periods, most wars throughout history have actually been smaller scale civil wars (or intra-state wars).

[77] This military organization might be the government's own military or another state's military that is intervening in the conflict at the government's request - for example, the U.S. in South Vietnam, or the U.S. in Iraq after the formation of the post-Saddam Iraq government.

involving competition for legitimacy and influence over a civilian population.[78] First, I examine

the absence of doctrinal innovation with respect to counterinsurgency operations prior to, during,

and after the Vietnam War. Second, I analyze the factors leading to two, incremental doctrines

developed by the Army in the 1990s - Full-Dimensional Operations and Full-Spectrum Operations.

In chapter five, I use the same theoretical framework and structured, focused case study

approach to analyze doctrinal innovations by the Marine Corps. Rather than conducting an

analysis of the Marine Corps over the entire period from the end of World War II to 2001, I focus

on two doctrinal innovations - the vertical envelopment doctrine of the 1940s and 1950s and the

maneuver warfare doctrine of the 1980s. Studying both doctrines allows me to assess whether or

not the Marine Corps changed in ways similar to the Army when exposed to similar external

stimuli.

In the conclusion, I summarize the major findings on doctrinal innovation from the case

studies. I compare doctrine for conventional warfare to doctrine for irregular warfare. I discuss

the implications of the findings for the literature on military doctrine, and I consider ramifications

for the state and the military organizations themselves.

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[78] The U.S. Department of Defense defines irregular warfare as "a violent struggle among state and non-state actors for legitimacy and influence over relevant population(s)." (DOD Dictionary, October 2015)

Chapter 1: Understanding Military Doctrine and Doctrinal Innovation

The purpose of this chapter is to critically assess the literature on military doctrine. This chapter is divided into two sections. First, *what is military doctrine? Why do military organizations develop doctrine?* Here I draw from the literature on international relations and security studies. Second, *what is innovation and why do organizations innovate? Why do military organizations innovate? What are the causes of doctrinal change?* In this section I draw from the literature on organizations (theory and innovation), military innovation, and bureaucratic politics.

1.1. What is Military Doctrine?

Militaries have used the term "doctrine" for over one-hundred years, but the concept is ill-defined in the political science literature. This is important because how one defines doctrine has important implications for the theories and causal arguments that one makes. Though doctrine appears frequently in modern day literature on military organizations, the concept is often ambiguous or vague. Existing scholarship on military doctrine tends to be highly applied and atheoretical. Scholars are still grappling with key terms and the very questions that should guide research on the topic.[1] The purpose of this section of the literature review is to develop the definition of military doctrine that I use in the remainder of the study.

1.1.1. Defining Doctrine in the Political Science Literature

Political science interest in doctrine can be traced to literature in the 1970s and 1980s that focused on the destabilizing effects of offensive military doctrines which were often cited as a primary cause of World War I.[2] Theories of international relations focused on the increased

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[1] Harald Høiback, "The Anatomy of Doctrine and Ways to Keep It Fit," *Journal of Strategic Studies* 39, no. 2 (2016): 186. Høiback suggests that the study of doctrine is in Thomas Kuhn's "pre-paradigm period of speculation."

[2] See, e.g., Robert Jervis, "Cooperation Under the Security Dilemma," *World Politics* 30, no.2 (January 1978): 167-214; Jack Snyder, *The Ideology of the Offensive: Military Decision Making and the Disasters of 1914* (Ithaca, NY: Cornell University Press, 1984); Stephen Van Evera, "The Cult of the Offensive and the Origins of the First World War," *International Security* 9, no. 1 (1984): 58–107; Sean M. Lynn-Jones, Steven E. Miller, and Van Evera, eds., *Military Strategy and the Origins of the First World War* (Princeton: Princeton University Press, 1991).

potential for conflict when the offense is strong relative to the defense.[3] A second wave of scholars

focused not on the effects of a particular type of doctrine but the causes.[4] Though often undefined,

military doctrine was commonly viewed as the aggregation of a state's military power, its

preference for a certain type of military operation, and a prescription for how a state would use its

military in war. An *offensive* doctrine not only meant that the military valued (and in some cases,

glorified) attacking over defending but it also meant that the state's grand strategy and its policies

were offensive in nature. In some cases, evidence for an offensive doctrine was even found in the

sentiments of members of society.[5] Aggressive statements by senior military officers, strategies

devised by civilians that included offensive strategic aims, technologies that made offensive

operations easier, and the glorification of offensive military postures were often seen as evidence

of offensive military doctrine.

Many scholars treat doctrine synonymously with a state's strategy, and this creates a host

of problems for the causal arguments that these scholars make. Imprecise articulation of military

doctrine as a dependent variable causes political scientists to see evidence of military doctrine (or

a change to a state's military doctrine) in places where it does not exist. This can lead to inaccurate

claims of causality, the exaggeration of doctrine's importance, and the identification of a doctrinal

change that was actually a change to a state's strategy and/or policy. Depictions of doctrine as

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[3] In addition to the sources listed in the previous footnote, see George H. Quester, *Offense and Defense in the International System* (New York: John Wiley & Sons, 1977); Herbert Butterfield, *History and Human Relations* (London: Collins, 1950), pp. 19-20; John Herz, "Idealist Internationalism and the Security Dilemma," *World Politics* 2, no. 2 (January 1950): 157-180; Jack S. Levy, "The Offensive/Defensive Balance of Military Technology: A Theoretical and Historical Analysis," *International Studies Quarterly* 28, no. 2 (June 1984): 220-222.

[4] Barry R. Posen, *The Sources of Military Doctrine: France, Britain, and Germany Between the World Wars* (Ithaca, NY: Cornell University Press, 1984); Snyder, 1984; Stephen P. Rosen, *Winning the Next War: Innovation and the Modern Military* (Ithaca, NY: Cornell University Press, 1991); Kimberly Marten Zisk, *Engaging the Enemy: Organization Theory and Soviet Military Innovation, 1955-1991* (Princeton, NJ: Princeton University Press, 1993); Elizabeth Kier, "Culture and Military Doctrine," *International Security* 19, no. 4 (1995): 65–93; Kier, *Imagining War: French and British Military Doctrine Between the Wars* (Princeton, NJ: Princeton University Press, 1997).

[5] Van Evera, 1984, p. 59. The author notes that the German military inculcated German society with a belief in the superiority of the offense.

offensive, *defensive*, or *deterrent* are overly simplified conceptions which obscure the nuances found in the content of doctrine.

Scholars pay no attention to formal articulations of doctrine by military organizations themselves. Scholars dismiss formal military doctrine (such as field manuals) for three reasons. First, they claim that changes to formal doctrine are unimportant if those changes don't also bring changes to the central functions of military organizations,[6] but they make this claim without examining whether or not that is the case. Second, implicit in the literature is the idea that the doctrine that a military organization publishes is disconnected from the actual operations it conducts in war. If this is the case, it is not clear why military organizations assume the high costs of developing and publishing doctrine. This cost is a function of time, resources, organizational energy, and the difficulty of achieving consensus. If doctrine is disconnected, it is also not clear why military organizations would use doctrine to train and educate soldiers and officers to the extent that they do. Finally, there is the claim that not all militaries have a doctrinal tradition.[7] Though this is true, particularly in the case of non-western militaries, the states most examined - Russia, Britain, and France - do have long doctrinal histories.[8]

Political science interest in the causes of military doctrine can be traced to Barry Posen's 1984 book, *The Sources of Military Doctrine: France, Britain, and Germany Between the World Wars*. According to Posen, military doctrine serves two purposes: it is an articulation of priorities and a prescription for a military's structure and employment.[9] Prioritization is important because it synchronizes the efforts of different types of military forces (typically land, sea, and air) that are

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[6] Rosen, 1991, p. 8.

[7] Theo Farrell and Terry Terriff, "The Sources of Military Change," in Farrell and Terriff, eds. *The Sources of Military Change: Culture, Politics, Technology* (Boulder, CO: Lynne Rienner Publishers, 2002), p. 4.

[8] In fact, American military doctrine has its roots in Chinese, Greek, Roman, and French military doctrine.

[9] In more recent work, Posen defines doctrine as "a set of institutionalized principles about how to fight." See Barry R. Posen, "Foreword: Military Doctrine and the Management of Uncertainty," *Journal of Strategic Studies* 39, no. 2 (2016): 159.

subordinate to the same state. Prioritization and prescription of structure and employment are important because threats can be numerous and resources are almost always scarce. Posen's definition is helpful because the author seeks to explain how doctrine differs from strategy. Military doctrine is a "subcomponent of grand strategy that deals explicitly with military *means* (emphasis added)."[10] For Posen, doctrine focuses on "*What* means shall be employed?" and "*How* shall they be employed[11]," whereas grand strategy is "a state's theory about how it can best 'cause' security for itself."[12] Doctrine determines the organizational structure of the military and it explains how the military will fight.

Posen claims that doctrine "includes the preferred mode of a group of services, a single service, or a subservice for fighting wars."[13] The inclusion of *preference* in the definition is an acknowledgement that military doctrine is also the result of organizational interests.[14] These interests may or may not be aligned with those of civilian leaders responsible for the state's strategy and policy. Posen's definition also recognizes the multi-service nature of most modern militaries. Militaries are not monolithic organizations. Not only do militaries consist of more than one service (each with their own doctrine), but there are also subgroups within each of those services.[15] Posen astutely recognizes the existence of more than one service in military organizations, but he does

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[10] Posen, 1984, p. 13.

[11] Ibid.

[12] Ibid. Posen draws his definition of strategy from Edward M. Earle, ed., *Makers of Modern Strategy* (Princeton: Princeton University Press, 1974), p. viii.

[13] Posen, 1984, p. 14.

[14] Austin Long, *First War Syndrome: Military Culture, Professionalization, and Counterinsurgency Doctrine* (Ph.D. diss. MIT, 2010), p. 43. Long makes the point that the incorporation of preference into doctrine allows for the possibility that organizational culture plays a role in doctrinal content.

[15] For example, the U.S. has four military services - Army, Navy, Air Force, and Marines. The Army is subdivided into numerous combat, combat support, and combat service support branches that have different functions and interests. The Navy is subdivided into carrier pilots from the attack or fighter communities, surface ship commanders, submariners, and antisubmarine warfare pilots. The other services are similarly subdivided into components that align with their various requirements.

not explore whether or not this feature might be a source of military doctrine. He also ignores the existence of multiple bureaucratic agencies with different interests within one particular service.

While Posen's definition of military doctrine remains the most established in the field, its expansiveness lacks the clarity needed for any study that establishes doctrine as the dependent variable (the outcome of interest). In Posen's case study analysis, evidence of doctrine is found in a military organization's force posture, hierarchical organizational structure, and the strength and disposition of units in war. Curiously, in his case studies of France, Britain, and Germany, Posen does not cite any of the doctrinal manuals written and used by the military organizations of those three countries during the interwar period. Posen also doesn't recognize the link between doctrine and knowledge that is taught in military schools. He doesn't examine any military curricula to determine whether the doctrines that he cites were actually aligned with the knowledge taught to military officers in each country's war colleges. Posen's analysis is centrally focused on two potential causes of military doctrine - grand strategy and policy - with limited attention to evidence of the military doctrine itself. Complicating this further, evidence of doctrine in Posen's analysis often appears in grand strategy, making it difficult to determine whether the outcome of interest is distinct from its causes.

Perhaps recognizing the limits of such an expansive conception of doctrine, Posen later subdivided military doctrine into two types: political-military doctrine and operational-tactical doctrine. In an unpublished paper in 1999, Posen wrote, "By operational and tactical doctrine I mean the way the French army and air force planned to fight fights, battles and campaigns. This should be distinguished from a higher order concept that goes by many different names: national

military strategy, strategic doctrine, political-military doctrine, or 'military doctrine.'"[16] In Long's assessment of the origin of counterinsurgency doctrine, the author uses Posen's conception of operational-tactical doctrine.[17] The definition of doctrine that I employ in this study is similar.

Though it is often not cited by scholars studying military doctrine, it is important to discuss Jack Snyder's conception of doctrine in his 1984 book, *The Ideology of the Offensive: Military Decision Making and the Disasters of 1914*. Snyder defines military doctrine as a "set of beliefs about the nature of war and the keys to success on the battlefield."[18] These beliefs help the military strategist simplify the complex task of planning for war. According to Snyder, military doctrine is not only a simplifying tool for military institutions but it also provides a "simple, coherent, standardized structure...for strategic thought."[19] Doctrine helps the military develop standard operating procedures and it serves as the basis for the design of military organizational structures. Unlike Posen, Snyder recognizes that military leaders use military school curricula and field manuals to articulate and teach doctrine to soldiers.

Because Snyder views simplification as doctrine's raison d'être, he focuses on how processes of simplification introduce biases into strategic analysis. These "military biases" include: the disproportionate influence of formative experiences in past wars and early training, a tendency to overestimate war's likelihood, a strong emphasis on standardization, doctrinal

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[16] See Barry Posen, "Still Strange Defeat? France 1940," unpublished paper, 1999. I do not have access to this paper but it was cited by Daniel Carter, *Innovation, Wargaming, and Armored Warfare* (M.S. thesis, MIT, 2005), p. 11.

[17] Long, 2010; Long, *The Soul of Armies: Counterinsurgency Doctrine and Military Culture in the US and UK* (Ithaca, NY: Cornell University Press, 2016); Long, "Doctrine of Eternal Recurrence: The U.S. Military and Counterinsurgency Doctrine, 1960-1970 and 2003-2006," *RAND Counterinsurgency Study - Paper 6*, 2008.

[18] Snyder, 1984, p. 27. See also, Van Evera, 1984. Van Evera doesn't define doctrine but his conception of it appears to match Snyder's. Both authors argue that offensive doctrines help explain the outbreak of World War I. For critiques, see Marc Trachtenberg, "The Meaning of Mobilization in 1914," *International Security* 15, no. 3 (Winter, 1991): 120-150; Scott D. Sagan, "1914 Revisited: Allies, Offense, and Instability," *International Security* 11, no. 2 (Fall, 1986): 151-175.

[19] Snyder, 1984, p. 27.

dogmatism,[20] and the pursuit of well-structured solutions even if those solutions are more difficult to implement.[21] These biases have two primary effects on doctrine. First, they affect the nature and content of the doctrine. Here Snyder is most interested in whether biases influence doctrines that favor the offense or the defense. Second, they shape the rigidity of doctrine - "Discrepant information is either ignored or incorporated into the belief system in a way that minimizes the need to change the system's structure."[22] Since military doctrines are *belief systems* in Snyder's view, they "reflect the need for continuity, ease of recall, and a restricted scope of attention to information."[23]

Snyder's conception of doctrine is helpful because it illustrates the role of belief systems and the biases that affect them. Though he doesn't use the term, the process of doctrinal simplification is really one of bounded rationality.[24] Organizations use simplifying mechanisms to understand and respond to uncertainty. These organizations operate according to routines and standard operating procedures rather than attempting to analyze each specific situation according to cost-benefit analysis, which can prove too difficult and expensive. This *satisficing* leads to myopia, goal displacement (a focus on narrow operational measurements of goals rather than

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[20] According to Snyder, 1984, p. 38, criteria for dogmatism include: "a resistance to changing central beliefs in the face of disconfirming evidence; a narrowness of approach to problems; an insensitivity to the need for different solutions to fit different circumstances; and a reliance on deductions from theory rather than inferences from evidence." The author cites Milton Rokeach, *The Open and Closed Mind* (New York: Basic, 1960).

[21] Ibid., pp. 26-30.

[22] Ibid., p. 27. On cognitive simplification, see Robert Jervis, *Perception and Misperception in International Politics* (Princeton: Princeton University Press, 1976).

[23] Ibid.

[24] Most track the origin of bounded rationality to Herbert A. Simon, *Models of Man: Social and Rational-Mathematical Essays on Rational Human Behavior in a Social Setting* (New York: Wiley, 1957). In political science, the term is used in the literature on *institutions* - see Robert Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy* (Princeton, NJ: Princeton University, 1984) - *individual-level theories on the causes of war* - see Jack S. Levy, "The Causes of War and the Conditions of Peace," *Annual Review of Political Science* 1, no. 1 (1998): 139–65, for a short literature review - and the *nuclear weapons debate* between Kenneth Waltz and Scott Sagan - see Scott D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons: An Enduring Debate* (New York: W. W. Norton & Company, Inc., 1995).

attention to broader situations and effects), and the processing of information through particular filters.

The complexity of warfare clearly requires bounded rationality. However, the extent to which biases are relevant depends on the accuracy of Snyder's claim that doctrine's primary purpose is that of simplification. During the period that Snyder focuses on - the pre-World War I years - military doctrines were more "simple, narrow, [and] deductive" than they are today. In France, a country that Snyder includes in his analysis, doctrine was not a recognized concept until 1903.[25] Though he doesn't focus on a U.S. case, the word *doctrine* didn't even appear in the lexicon of the U.S. military until 1912 where it was defined as "a means to some national conception of war" in the Army's Infantry Journal.[26] Prior to 1905, military doctrine was prescriptive, focused on regimented drills and regulations that could be taught easily to inexperienced troops. The doctrinal field manuals that did exist were often not sanctioned by the state's War Department. Manuals equated peacetime drill with combat drill; they were one and the same. The idea of doctrine as a simplifying device is still relevant today (and, as such, so are the corresponding biases that Snyder discusses), but simplification is no longer doctrine's defining characteristic.

While Snyder is careful to distinguish between strategy and doctrine from a definitional perspective, he occasionally combines the terms into one - "strategic doctrine."[27] It is not clear how strategic doctrine relates to or is distinct from doctrine at other levels of war. If we define

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[25] Virgil Ney, *Evolution of the US Army Field Manual: Valley Forge to Vietnam* (Fort Belvoir, VA: Combat Operations Research Group, 1966), p. 37.

[26] Keith B. Bickel, *Mars Learning: The Marine Corps Development of Small Wars Doctrine, 1915-1940* (Boulder, CO: Westview Press, 2001), p. 2.

[27] Snyder, 1984, p. 9. Strategic doctrine is used to refer to strategies for the employment of nuclear weapons. For example, Halperin et al. discuss strategic airpower as the primary strategic doctrine of the U.S. Air Force. See Morton H. Halperin, Priscilla A. Clapp, and Arnold Kanter, *Bureaucratic Politics and Foreign Policy*, 2nd ed. (Washington: Brookings Institution Press, 2006), p. 30.

strategy as the relationship between *ends* (strategic objectives), *ways* (the instruments of national power), and *means* (the resources available to pursue those objectives), one can argue that military doctrines are one component of an assortment of instruments of national power available for employment by the state.[28] Snyder focuses more on a high-level doctrine which comprises the totality of a state's military power.[29] The danger in doing so is the tendency to misuse doctrine as an analog for grand strategy or as a way of describing a military's operational orientation.[30]

In her influential book on Soviet innovation, Zisk[31] focuses on doctrinal innovation, a process she defines as "a major change in how military planners conceptualize and prepare for future war" and a "reconceptualization of what sorts of military tasks need to be performed in wartime, or major alterations in how existing tasks are performed."[32] Zisk does not define doctrine, but her description of doctrinal innovation suggests that she views doctrine as the list of tasks that a military organization will perform during war. For Zisk, doctrine is an expression of "military thinking and planning on questions such as whether war will be nuclear or conventional, whether nuclear war will be total or limited, and whether initial preparations for war must be offensive or defensive."[33] Zisk clarifies in a footnote that she views doctrine as "grand strategy" as opposed to "service missions."[34] This explains her focus on Soviet responses to the U.S. strategy of Flexible Response in the 1960s and the Schlesinger Doctrine in 1974.[35] Zisk makes a powerful contribution

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[28] Other instruments of national power are diplomatic and economic. The military instrument can be further subdivided into functions for land (Army), sea (Navy), and air (Air Force).

[29] Posen, 2016, p. 159, uses the phrase "high-level doctrine" to refer to "all of a state's military power."

[30] Kevin Sheehan, *Preparing for an Imaginary War? Examining Peacetime Functions and Changes of Army Doctrine* (Ph.D. diss. Columbia University, 1988), p. 7.

[31] When her book was published in 1993, the author was named Kimberly Marten Zisk. The author now goes by the name Kimberly Joy Marten.

[32] Zisk, 1993, p. 4.

[33] Ibid.

[34] Ibid., p. 199.

[35] The author also focuses on the Soviet response to the American Army's AirLand Battle doctrine and NATO's Follow-on Forces Attack doctrine in the 1980s. These align better with the definition of doctrine that I employ in this dissertation.

to the literature on military innovation, but the work is limited because of the absence of a definition for doctrine and the treatment of doctrine as synonymous with strategy.

We see the same challenge in Kier's work on the effect of military culture on doctrine.[36] Kier does not define doctrine but treats it similarly to those who view doctrine as a high-level concept that is closely associated with strategy. The dependent variable in her analysis is alignment between military and civilians on a particular doctrine but her conception of that doctrine is broad and undefined. In a critique of Kier's work, Porch astutely points out that by confusing strategy with doctrine, Kier exaggerates the effect of military doctrine on the 1940 fall of France.[37] According to Porch, "Kier repeatedly contrasts the 'offensive' German doctrine against the 'defensive' Allied procedures; however, doctrine per se is neither offensive nor defensive."[38] The mobile warfare doctrine that Germany developed in the 1920s was conceived for *defensive* purposes; it was Hitler who employed mobile warfare as an element of an *offensive* strategy. A military can use the same doctrine for both offensive and defensive purposes.[39]

In another important work on military doctrine, Avant carefully distinguishes between tactics, doctrine, and strategy. Avant writes, "doctrine falls between the technical details of tactics and the broad outline of grand strategy. Whereas tactics deal with issues about how battles are fought, doctrine encompasses the broader set of issues about how one wages war, including ideas about how to best fight the enemy and assumptions about what part of the enemy is most

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[36] Kier, 1995, 1997.

[37] Douglas Porch, "Military 'Culture' and the Fall of France in 1940: A Review Essay," *International Security* 24, no. 4 (2000): 165.

[38] Ibid., p. 168.

[39] In political science, poorly specifying the dependent variable by confusing doctrine with strategy can lead to inaccurate causal claims. In the world of policy, confusing the two concepts can affect relations between states. The Germans thought that the U.S. Army's AirLand battle doctrine was so aggressive that it could trigger war. See White Paper 1983, "The Security of the Federal Republic of Germany," Federal Ministry of Defense, 1983, p. 160, cited in Walter E. Kretchik, *U.S. Army Doctrine: From the American Revolution to the War on Terror* (Lawrence, Kansas: University Press of Kansas, 2011), p. 210.

important."[40] A successful doctrine, according to Avant, is one that is well integrated with national security goals as reflected in a state's grand strategy. Avant's definition is the first to include specific mention of an adversary. This is helpful because it is an explicit acknowledgement of war as a competitive arena. However, specificity with regard to an enemy threat is rarely seen in doctrinal field manuals.

Rosen examines twenty-one military innovations that occurred in the first half of the twentieth century.[41] Though at least fourteen of those innovations involved major changes to a military organization's doctrine, Rosen does not provide a definition of doctrine. Rosen's definition of major military innovation - "a change in one of the primary combat arms of a service in the way it fights or alternatively, as the creation of a new combat arm" - suggests that the author is primarily interested in changes to military doctrine ("the way [the military organization] fights") and organizational structure ("the creation of a new combat arm").[42] Though he doesn't define doctrine, Rosen makes it clear that changes to a military organization's formal doctrine that don't come with corresponding changes to the "essential workings" of the organization do not qualify as a major innovation.[43] Rosen cites Sheehan,[44] who examined three U.S. Army doctrinal shifts from 1945-1980, as proof that doctrine can change without corresponding change to "the central combat function of the army" which he defines as the fighting of a conventional war against the Soviets in Europe. This is an astute point, but it doesn't excuse Rosen's lack of attention to any formal military doctrine in the vast array of cases that he examines. If a western military,

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[40] Deborah D. Avant, "The Institutional Sources of Military Doctrine: Hegemons in Peripheral Wars," *International Studies Quarterly* 37, no. 4 (1993): 409–30. See also, Avant, *The Institutional Sources of Military Doctrine: Hegemons in Peripheral Wars* (Ph.D. diss. University of California, San Diego, 1991), and Avant, *Political Institutions and Military Change: Lessons from Peripheral Wars* (Ithaca, NY: Cornell University Press, 1994).
[41] Rosen, 1991.
[42] Ibid., p. 7.
[43] Ibid., p. 8.
[44] Sheehan, 1988.

especially the U.S. military, makes a major change to the way it fights (or creates an entirely new combat arm), one would expect to see evidence of this in formal military doctrine.

In summary, political scientists tend to conflate doctrine with strategy. Imprecise specification of doctrine as the dependent variable reduces the explanatory power of theories that seek to explain the origins of doctrine. Over-simplification of military doctrine with the use of blanket phrases like *offensive* and *defensive* is useful when one seeks to understand the effect of doctrine on a state's foreign policy, but less useful when one makes causal claims on the sources of those doctrines.

1.1.2. My Definition of Doctrine

The seminal author in the field of military doctrine, Barry Posen, eventually recognized some of the limitations that come with the oversimplification of doctrine and articulated a conception of doctrine that he labeled operational-tactical doctrine. Operational-tactical doctrine is an articulation of how a military plans to fight.[45] For the remainder of this study, I employ a definition of doctrine that aligns with Posen.[46] I define doctrine as *how a military organization plans to fight in combat*.[47] More specifically, doctrine is the *formal collection of documents sanctioned by the military organization that military forces use to guide their actions in combat*.[48] It's important to note that in choosing an operational-tactical approach to doctrine, I am not

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[45] Posen, unpublished paper, 1999. Posen was the first to use this term and I think it is effective because it helps us avoid conflating doctrine with strategy.

[46] This definition is also used by Høiback, Long, Jensen, and Bickel, among others. See Posen, 1999 (unpublished); Høiback, 2011, 2013, 2016; Long, 2008, 2010, 2016; Bickel, 2001; Benjamin Jensen, *Forging the Sword: Doctrinal Change in the US Army* (Stanford, CA: Stanford University Press, 2016). Jensen (p. 5) refers to this as "service-level formal doctrine."

[47] Høiback defines military doctrine as "institutionalised beliefs about what works in war and military operations." See Høiback, 2016, p. 187. See also, Harald Høiback, "What Is Doctrine?" Journal of Strategic Studies 34, no. 6 (2011): 879–900; Høiback, *Understanding Military Doctrine: A Multidisciplinary Approach* (London: Routledge, 2013).

[48] Note that my definition of doctrine differs from the colloquial use of the term outside of military circles. Military doctrine is distinct from grand strategic doctrine (i.e. the Nixon doctrine).

suggesting that doctrine is divorced from strategy. Rather, doctrine describes the employment of military means to achieve strategic objectives.

1.2. Why do Military Organizations Innovate Doctrinally?

In this section, I draw from the literature on organizations (theory and innovation), military innovation, and bureaucratic politics to assess theories of doctrinal change. First, I briefly categorize the literature on military doctrine to clarify the general area where I seek to make a contribution. Second, I draw from the literature on organizations to derive a general definition of innovation. I briefly explain why organizational theory predicts that military organizations should be highly resistant to change. Third, I use that general definition to articulate a definition of military innovation. Here I discuss the element of that definition - doctrinal change - that I focus on throughout this study. Fourth, I review existing theories on innovation that purport to explain why military organizations innovate doctrinally.

1.2.1. Categorizing the Literature on Military Doctrine

Existing literature on military doctrine can be separated into four categories. In the first category, scholars focus on the effect of military doctrine on a state's foreign policy, performance during war, and/or outcomes in war.[49] While not the central focus of this study, in my analysis of the sources of doctrine, discussing the effect of doctrine is inevitable.

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[49] See, e.g., Stephen Biddle, *Military Power: Explaining Victory and Defeat in Modern Battle* (Princeton, NJ: Princeton University Press, 2004); Robert Pape, *Bombing to Win: Airpower and Coercion in War* (Ithaca, NY: Cornell University Press, 1998); Thomas Schelling, *Arms and Influence* (New Haven: Yale University Press, 1966); Hew Strachan and Sibylle Scheipers (eds), *The Changing Character of War* (Oxford: Oxford University Press, 2012); Michael E. Brown, Owen R. Coté Jr, Sean M. Lynn-Jones and Steven A. Miller (eds), *Do Democracies Win Their Wars?* (Cambridge, MA: MIT Press, 2011); Dan Reiter and Allan C. Stam, *Democracies at War* (Princeton, NJ; Princeton University Press, 2002); James S. Corum, *Roots of Blitzkrieg: Hans von Seeckt and German Military Reform* (Lawrence: University Press of Kansas, 1992). While some of these scholars don't mention military doctrine per se, they all focus on the effect of how a military fights on a state's foreign policy, performance during war, and/or war outcomes.

Second, scholars study the process of doctrine formulation, adoption, and implementation. Political science literature in this area is scant.[50] Though the process of doctrine formulation doesn't necessarily explain the causes of a particular doctrine, it can provide insight on dynamics that affect doctrinal change. For example, Jensen argues that military innovation comes from incubators - "new forums or subunits free from the normal push and pull of the bureaucratic hierarchy" - and advocacy networks - "loose coalitions of defense and civilian officials championing new reform initiatives."[51] While the existence of incubators and advocacy networks doesn't necessarily explain *why* a military innovation occurs, they do help explain *how* it occurs. Understanding the latter can help shed light on the former.

Third, scholars focus on the ability of military organizations engaged in war to adapt existing technologies, techniques, and/or tactics to improve their performance.[52] These scholars usually take a bottom-up approach to military change, focusing on instances in which soldiers at the small-unit level adapted in combat. I do not focus on bottom-up innovation (now referred to as adaptation in war) in this study.

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[50] Exceptions include: Michael J. Meese, "Institutionalizing Maneuver Warfare: The Process of Organizational Change," in Richard D. Hooker, ed., *Maneuver Warfare: An Anthology* (Novato, CA: Presidio Press, 1993), pp. 193–216; Jensen, 2016; Jan Angstrom and J.J. Widen, "Religion or Reason? Exploring Alternative Ways to Measure the Quality of Doctrine," *Journal of Strategic Studies* 39, no. 2 (2016): 198–212; Rosen, 1991. I contend that Rosen, 1991, is a theory that explains *how* militaries innovate rather than *why* militaries innovate.

[51] Jensen, 2016, p. 17 and p. 19, respectively.

[52] See, e.g., Theo Farrell, "Improving in War: Military Adaptation and the British in Helmand Province, Afghanistan, 2006–2009," *Journal of Strategic Studies* 33, no. 4 (2010): 567–94; Adam Grissom, "The Future of Military Innovation Studies," *Journal of Strategic Studies* 29, no. 5 (2006): 905–34; Ben Barry, "Adapting in War," *Survival* 54, no. 6 (2012): 171–82; Kristen A. Harkness and Michael Hunzeker, "Military Maladaptation: Counterinsurgency and the Politics of Failure," *Journal of Strategic Studies* 38, no. 6 (2015): 777–800; Nina A. Kollars, "War's Horizon: Soldier-Led Adaptation in Iraq and Vietnam," *Journal of Strategic Studies* 38, no. 4 (2015): 529–53; Nina A. Kollars, Richard R. Muller, and Andrew Santora, "Learning to Fight and Fighting to Learn: Practitioners and the Role of Unit Publications in VIII Fighter Command 1943–1944," *Journal of Strategic Studies*, August (2016): 1–24; Torunn Laugen Haaland, "The Limits to Learning in Military Operations: Bottom-up Adaptation in the Norwegian Army in Northern Afghanistan, 2007–2012," *Journal of Strategic Studies* 39, no. 7 (2016); John B. Richardson, "Real Leadership and the US Army: Overcoming a Failure of Imagination to Conduct Adaptive Work," *The Letort Papers*, Strategic Studies Institute, U.S. Army War College, 2011; Philipp Rotmann, David Tohn, and Jaron Wharton, "Learning Under Fire: Progress and Dissent in the US Military," *Survival* 51, no. 4 (2009): 31–48; Max Visser, "Organizational Learning Capability and Battlefield Performance: The British Army in World War II," *International Journal of Organizational Analysis* 24, no. 4 (August 31, 2016): 573–90.

Finally, scholars seek to understand why a state adopted a particular military doctrine - or more simply the sources of a new military doctrine. The most common approach is to study the contents of a specific military doctrine to determine the causes that led to its adoption.[53] This is where we find the most significant unresolved debate in the literature: is military doctrine the result of rational calculations of the threat, the internal priorities and interests of the military organization, or the influence of ideas, identities, and culture? This study aligns best with this category and I seek to help resolve this debate.

1.2.2. What is Innovation?

In the fields of political science and organizational theory, definitions of innovation are wide-ranging and often disputed.[54] The concept is nebulous and attempts to define it are fraught with difficulties. A lengthy exposition on the definition of innovation is outside the scope of this study. Instead, I adopt James Q. Wilson's well-respected definition: "innovation is not any new program or technology, but only those that involve the performance of new tasks or a significant alteration in the way in which the tasks are performed."[55] Small changes which only affect peripheral tasks (rather than core tasks) are not innovations.[56] While criteria can be developed to

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[53] See, e.g., Posen, 1984; Rosen, 1991; Zisk, 1993; Kier, 1997; Dima Adamsky, *The Culture of Military Innovation: The Impact of Cultural Factors on the Revolution in Military Affairs in Russia, the US, and Israel* (Palo Alto, CA: Stanford University Press, 2010); Graham T. Allison and Philip D. Zelikow. *Essence of Decision: Explaining the Cuban Missile Crisis,* 2nd ed. (New York: Longman, 1999); Avant, 1994; Andrew J. Bacevich, *The Pentomic Era: The U.S. Army Between Korea and Vietnam* (Washington: National Defense University Press, 1986); Bickel, 2001; Janine Davidson, *Lifting the Fog of Peace: How Americans Learned to Fight Modern War* (Ann Arbor, MI: University of Michigan Press, 2011); Mary R. Habeck, S*torm of Steel: The Development of Armor Doctrine in Germany and the Soviet Union, 1919–1939* (Ithaca, NY: Cornell University Press, 2003); Robert M. Citino, *The Path to Blitzkrieg: Doctrine and Training in the German Army, 1920 –1939* (Boulder, CO: Lynne Rienner, 1999); Alistair Iain Johnston, *Cultural Realism: Strategic Culture and Grand Strategy in Chinese History* (Princeton, NJ: Princeton University Press, 1995).

[54] James Q. Wilson, *Bureaucracy: What Government Agencies Do and Why They Do It* (New York: Basic Books, 1989), p. xix. Wilson notes that scholars have still not developed a comprehensive theory of bureaucratic and organizational behavior. Most existing theories explain elements of bureaucracy but not bureaucratic behavior itself. This continues to be the case in the bureaucratic and organizational literature.

[55] Ibid., p. 222.

[56] Wilson, 1989, p. 225, argues that JFK's emphasis on counterinsurgency led the U.S. Army to give the mission to its Special Forces. These forces were "treated as a peripheral (and trivial) activity in the army as a whole." Hence, according to Wilson's definition, the Army did not innovate here.

classify an innovation as *fundamental*, Wilson points out that there is always a degree of subjectivity in the endeavor. According to Wilson, *innovation* is a fundamental change to an organization's *task structure* (the grand sum of all its tasks) and its *incentive system* (the grand sum of all the rewards given to its members).[57] The literature on innovation posits a diverse array of characteristics of innovation - elements such as cost, compatibility, and effectiveness - but it is beyond the scope of this study to elaborate on these attributes.[58]

Military organizations are usually large. Large organizations that are subdivided into numerous branches and offices and responsible for a vast array of tasks are expected to experience a high probability of *proposed* innovations, but a low probability of *adopted* innovations.[59] When military organizations do change, the adaptations are most often made during the course of war under conditions of extreme duress.[60] The organizational literature suggests that when organizations are distressed, the probability for innovation increases.[61] When distressed, the incentives for accurate problem identification increase and the organization directs more of its energy towards problem solving. Military organizations may experience distress during combat if they suffer heavy casualties or fail to complete their assigned mission(s). Distress in peacetime

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[57] James Q. Wilson, "Innovation in Organization: Notes Towards a Theory," in J. O. Thompson, ed., *Approaches to Organizational Design* (Pittsburgh, PA: University of Pittsburgh Press, 1971), pp. 198-199. Wilson also uncovers an element of innovation that many scholars who focus on military innovation ignore - for a change to be an innovation, it must incur a cost on the organization.

[58] For a comprehensive list of characteristics of innovation, see Kevin P. Kearns, "Innovations in Local Government: A Sociocognitive Network Approach," *Knowledge and Policy* 5, no. 2 (1992): 45-67. See also Liam S. Collins, *Military Innovation in War: The Criticality of the Senior Military Leaders* (Ph.D. diss. Princeton University, 2014), pp. 24-27.

[59] Wilson, 1971, p. 201. Large organizations are diverse - they have a complex task structure and incentive system which makes it more difficult for executives to exercise influence over the organization's members, thereby reducing the probability that innovations will be adopted.

[60] John A. Nagl, *Learning to Eat Soup with a Knife: Counterinsurgency Lessons from Malaya and Vietnam* (Chicago: University of Chicago Press, 2002), p. 9.

[61] See, e.g., Kenneth E. Knight, "A Descriptive Model of the Intra-Firm Innovation Process," *The Journal of Business* 40, no. 4 (Oct 1967): 484-485; Richard M. Cyert and James G. March, *A Behavioral Theory of the Firm* (Cambridge: Blackwell Business, 1992), p. 188; Michael L. Tushman and Charles A. O'Reilly III, *Winning Through Innovation: A Practical Guide to Leading Organizational Change and Renewal* (Boston: Harvard Business School Press, 2002), pp. 221-222.

might be a function of budget reductions, loss of preferred mission set to another service, competition between actors within an organization for resources or preferential treatment, and/or increased stress caused by the adoption of new technologies.

Collins distinguishes distress (the perception that an organization is falling short of its mission) from failure (organizational extinction due to the nonperformance of a mission).[62] When a military fails in war, its survival might be in jeopardy. Though Posen argues that this can lead to innovation,[63] defeat does not appear to be a necessary condition because there are numerous examples of military innovation after operational success.[64] The prevailing logic suggests that military organizational change during peacetime is anomalous and only occurs when civilian officials intervene and compel change.[65]

Organizations will embrace changes most readily when those changes are aligned with existing methods and techniques used by the organization to complete its mission. Organizations are biased towards existing ways of doing business - what Wilson calls "task definitions."[66] Innovations that require fundamental shifts in task definitions should be bitterly opposed by members of the organization.[67]

1.2.3. What is Military Innovation?

We can use Wilson's definition of *innovation* to develop a general definition of *military innovation*. Military innovation occurs when a military organization develops a new program or

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[62] Collins, 2014, p. 34.
[63] Posen, 1984, pp. 57-59.
[64] For examples, see Rosen, 1991.
[65] Posen, 1984.
[66] Wilson, 1989, p. 222.
[67] For example, in the U.S. Army of the 1930s, advocates of the tank argued for a separate tank corps for years but the infantry pushed back, arguing that tanks were merely infantry support weapons whose mission was to "assist in the progression of infantry by overcoming or neutralizing resistances or breaking down obstacles that check the infantry advance." See *Field Service Regulations* (United States Army, Washington, DC: Government Printing Office, 1923), p. 13.

technology that requires the performance of new tasks or a fundamental change to the way existing tasks are performed. Rosen defines military innovation as "a change in one of the primary combat arms of a service in the way it fights or alternatively, as the creation of a new combat unit."[68] Rosen's definition accords with Wilson's and is useful because it recognizes that militaries are heterogeneous collections of services. At its core, a military's central task is to fight and win in war. For a new program or technology to be an innovation, it must alter how the *organization fights or intends to fight*. Therefore, military innovations are fundamental changes to doctrine, tactics, and/or organizational structure. Though a major technological change is often considered an innovation, I argue that it is not unless the technology in question fundamentally changes the military's tactics, doctrine, and/or organizational structure. As Wilson points out, when an organization willingly incorporates a new technology into existing task definitions, this is not an innovation.[69]

In this study, I am primarily interested in military innovations that take the form of major doctrinal changes. I do not ignore technological change, but I focus on it only to the extent that it is a variable that causes (or correlates with) doctrinal change. I am not focused on organizational structural change[70] per se, but I am interested in whether or not doctrinal change is an effect of organizational change or a driver of organizational change. A major change to the organization's structure - the hierarchical arrangement of personnel in the organization that determines how authority, roles, and responsibilities are assigned, controlled, and coordinated - is an innovation if the reorganization alters how the organization fights.

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[68] Rosen, 1991, p. 7.

[69] Wilson, 1989, p. 222. Wilson notes, "Armies did not resist substituting trucks for horse-drawn carts." He also notes that the "bias toward maintaining existing task definitions often leads bureaucracies to adopt new technologies without understanding their significance."

[70] An expansion or contraction in the organization's size is not an innovation unless it changes the organization's methods of fighting in war.

A doctrinal change is an innovation if it redefines the organization's method(s) of fighting in war. I concur with Zisk who defines doctrinal innovation "as a major change in how military planners conceptualize and prepare for future war…a reconceptualization of what sorts of military tasks need to be performed in wartime, or major alterations in how existing tasks are performed."[71] Alterations to a military's formal doctrine - its officially sanctioned manuals - are not innovations if the organization itself does not change in the way the new doctrine specifies.[72] Military organizations might have an incentive to exaggerate the magnitude of a doctrinal change in order to demonstrate the organization's continued relevance or to signal that the organization is aligned with a new national strategy.

1.2.4. Why do Military Organizations Innovate Doctrinally?

In the literature on military innovation, there are a wide array of theories that purport to explain why militaries innovate. Much of this scholarship is work by military historians who focus on major changes to the nature of warfare which are referred to as revolutions in military affairs (RMA). The RMA literature focuses on fundamental shifts in the nature and conduct of war and is usually centered on major technological innovation, the mechanization of war, and, recently, the effect of information technology on war.[73] In recent years, some scholars have focused on military transformation efforts in the U.S. military since the end of the Cold War - many of which are rooted in technological change.[74] Though I am interested in the potential for new technologies to

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[71] Zisk, 1993, p. 4. Similarly, Jensen, 2016, pp. 9-10, defines doctrinal change "as a formal shift in how military professionals articulate the critical tasks required to achieve the ends of national strategy."

[72] Rosen, 1991, p. 8, notes, "Changes in the formal doctrine of the military organization that leave the essential workings of that organization unaltered do not count as innovation…"

[73] See, e.g., Colin S. Gray, *Strategy for Chaos: Revolutions in Military Affairs and the Evidence of History* (London: Frank Case, 2002); Max Boot, *War Made New: Technology, Warfare, and the Course of History, 1500-Today* (New York: Penguin, 2006); Michael O'Hanlon, *Technological Change and the Future of Warfare* (Washington, DC: Brookings Institution Press, 2000); MacGregor Knox and Williamson Murray, *The Dynamics of Military Revolution, 1300-2050*, 2nd ed. (Cambridge: Cambridge University Press, 2001); Farrell and Terriff, 2002. For a more expansive list, see Jensen, 2016, p. 159.

[74] See, e.g., Harvey M. Sapolsky, Benjamin H. Friedman, and Brendan R. Green, eds., *US Military Transformation and Innovation since the Cold War: Creation Without Destruction* (London: Taylor & Francis,

influence how a military fights - its doctrine - the RMA literature is limited in its utility for my purposes because it is primarily descriptive and focused on understanding major shifts in warfare across more than one state over time.

The political science literature posits a number of theories - most tested on non-U.S. cases during the interwar period - that seek to explain military innovation. Military innovation is often undefined, but most scholars focus on technological change and/or doctrinal change. Very few scholars examine organizational structural change.[75] Scholarship that focuses on doctrinal change often suffers from one or more of the definitional challenges with respect to doctrine that I discussed in the first half of this literature review. Using an unclear, unspecified, or problematic definition of doctrine reduces the credibility of causal claims that purport to explain doctrinal innovation. Finally, some scholars fail to recognize that doctrinal innovation during war might differ fundamentally from innovation during periods of peace.

I argue that the most significant limitation in existing scholarship on military innovation is the tendency to pursue a monocausal explanation for innovation. In 1971, Downs and Mohr wrote, "Factors found to be important for innovation in one study are found to be considerably less important, not important at all, or even inversely important in another study."[76] Unfortunately, this statement applies to the current state of research on military doctrinal innovation.

2009); Dima Adamsky and Kjell I. Bjerga, eds. *Contemporary Military Innovation: Between Anticipation and Adaptation* (London: Routledge, 2012). Sapolsky et al., 2009, p. 5, define the RMA as "the set of technologies that enhances the ability of a military to locate a relatively greater set of targets and destroy them with precision."

[75] Sheehan, 1988, is an exception. The author examines the pentomic division construct of the U.S. Army in the 1950s. The author treats this as evidence of doctrinal change but I argue that it is evidence of doctrinal and organizational change.

[76] George W. Downs, Jr. and Lawrence B. Mohr, "Conceptual Issues in the Study of Innovation," *Administrative Science Quarterly* 21, no. 4. (Dec., 1976): 700. The authors note, "Of 38 propositions bearing directly on the act of innovation cited by Rogers and Shoemaker (1971: 350-376), 34 were supported in some studies and found to receive no support in others." See, Everett M. Rogers and F. Floyd Shoemaker, *Communication of Innovation: A Cross-Cultural Approach* (New York: The Free Press, 1971). This quote is also cited in Collins, 2014, p. 23.

The search for a monocausal explanation for innovation has led scholars to focus on unique instances of military innovation that enable the isolation of one factor to allow for the confirmation of a causal claim. This approach is problematic if the independent variable in question interacts with another variable to produce the outcome. The lack of consensus on the factor(s) that cause innovation is evident in Grissom's literature review on the subject. He identifies four different theories of military innovation: civil-military relations, interservice politics, intraservice politics, and organizational culture.[77] Sapolsky, Green, and Friedman narrow these down to three standard political science theories on military innovation: civilian intervention, competition between rivals within a military organization (intraservice politics), and rivalry between military services subordinate to the same state (interservice politics).[78] In his thorough assessment of military innovation, Collins adds two additional sets of theories that explain innovation: the principal-agent model and the bottom-up explanation.[79]

Rather than conduct competitive hypothesis testing between two or more of the above theories of military innovation or pursue a heretofore undiscovered monocausal theory, I argue that it is more fruitful to consider military innovation from multiple perspectives.[80] I seek to

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[77] Grissom, 2006, p. 908.

[78] Sapolsky et al., 2009, p. 7.

[79] Collins, 2014, p. 47. The first scholar to propose a bottom-up analysis of innovation was Eliot A. Cohen, "Change and Transformation in Military Affairs," *Journal of Strategic Studies* 27, no. 3 (2004): 395-407. Grissom, 2006, reinforced the need for this approach. The first bottom-up theory was developed by Theo Farrell, "Improving in War: Military Adaptation and the British in Helmand Province, Afghanistan, 2006–2009," *Journal of Strategic Studies* 33, no. 4 (2010): 567–94. In recent years, most scholarship on military innovation has focused on bottom-up adaptation.

[80] Andrew M. Moravcsik, "Disciplining Trade Finance: The OECD Export Credit Arrangement," *International Organization* 43 (Winter 1989): 173-205. In his analysis of international cooperation, Moravcsik discusses the advantages of using more than one theory to explain an outcome. See also, John Duffield, *Power Rules: The Evolution of NATO's Conventional Force Posture* (Stanford: Stanford University Press, 1995) and Terriff, "U.S. Ideas and Military Change in NATO, 1989-1994," in Ferrell and Terriff, 2002, pp. 91-116. Duffield and Terriff employ a levels-of-analysis approach to understand the evolution of NATO's force posture.

develop and test a theory that synthesizes more than one approach.[81] I will do so from the perspective of a levels-of-analysis approach.[82] Rather than viewing the levels as competing explanations for doctrinal innovation, I contend that they can be complementary. I maintain that a levels-of-analysis approach is necessary to provide a satisfactory explanation for military doctrinal change.

Below I divide the literature on military innovation into three perspectives: the balance of power approach, the organizational approach, and the interservice approach.[83] These perspectives may also be viewed as different levels-of-analysis in the quest to understand military innovation. The balance of power approach operates at the systemic level; the organizational approach operates at the military organization; and the interservice approach shifts the analyst's focus to interaction *between* services within the military organization. The balance of power approach is useful because it sheds light on *why* a military innovates doctrinally. The organizational approach illuminates the answer to a slightly different question: given the decision to innovate doctrinally, what explains the nature of the doctrinal changes that were adopted (the *why* and the *how*)? The interservice approach can provide insight on both sets of questions.[84]

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[81] For an example of a scholar who attempts to synthesize two approaches - neorealism and culturalism - into a theory that explains military change, see Terriff, 2002, pp. 91-116. As summarized by Terriff and Ferrell (p. 273), "neorealism provides the *trigger* for NATO change, while culturalism explains the *character* of NATO change."

[82] Kenneth N. Waltz, *Man, the State, and War: A Theoretical Analysis* (New York: Columbia University Press, 1959); J. David Singer, "The Level-of-Analysis Problem in International Relations," *World Politics* 14, no. 1 (October 1961): 77-92; Jack S. Levy and William R. Thompson, *Causes of War* (New Jersey: Wiley-Blackwell, 2010). For Levy and Thompson, each of the levels (individual – state – system) is treated as an explanatory/independent/causal variable that explains the outcomes of peace or war. The levels are "sources of causation." I view the levels-of-analysis for military innovation in a similar way.

[83] These approaches can also be thought of as levels of analysis. The balance of power perspective treats the military organization as a unitary actor; this is the international level of analysis. The organizational perspective views a military organization as a bureaucracy with diverse interests. The interservice bargaining perspective focuses on competition between services subordinate to the same state.

[84] I credit Terriff, 2002, p. 91, for helping me realize that the question of *why* a state changes its doctrine can be viewed in two parts: (1) why innovate? and (2) why innovate in the manner chosen?

The Balance of Power Approach

The foundation of the *balance of power approach* is neorealism. States operate in an anarchic system that requires them to maximize their relative power to ensure survival. According to this approach, military doctrine is a function of the international system. States change their military doctrine in response to changes in the distribution of power in the system and due to other environmental factors such as the development of new technology. When a state perceives changes to the nature of the enemy threat or the balance of military capabilities it will innovate militarily.[85] According to Terriff and Farrell, "Neorealism predicts that the need to survive in the competitive international environment will force states to organize for war as efficiently as possible. Military change is a rational response to changing strategic circumstances; states adopt new military practices, and emulate best military practice, in order to keep up with the competition."[86]

The balance of power approach suggests that innovation is a function of the following variables: military technology, the geography of expected future battlefields, changes in the enemy threat, and shifts in the balance of power. Theorists who subscribe to this approach focus on how these variables lead to civilian intervention to compel military change.[87] I argue that balance of power variables can cause doctrinal innovation without civilian intervention; intervention is not a necessary condition for change.

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[85] Terriff, 2002, p. 92. Terriff provides a nice explanation of the balance-of-power approach that he employed in his study of military change in NATO.

[86] Terry Terriff and Theo Farrell, "Military Change in the New Millennium," in Farrell and Terriff, 2002, p. 271. These ideas are drawn from Kenneth N. Waltz, *Theory of International Relations* (Reading, Mass.: Addison-Wesley, 1979), p. 127 and Barry R. Posen, "Nationalism, the Mass Army, and Military Power," *International Security* 18, no. 2 (Fall 1993): 82.

[87] Posen, 1984, is the most common. Posen (p. 239) compared a balance of power approach with an organizational approach and concluded that the latter was a "slightly more powerful tool" for understanding doctrinal change. I argue that the two do not need to be mutually exclusive.

The seminal work that best defines the balance of power perspective of military innovation is that of Barry Posen written in 1984.[88] Posen contends that strategic considerations lead to civilian intervention to compel military change.[89] These considerations include changes in the enemy threat, a shift in the balance of power in the international system, a major technological development, and/or an increase in the prospects for military defeat. Given the natural inclination of large organizations (and, especially large bureaucratic organizations like the military) to avoid and resist change, civilian intervention is necessary to force doctrinal change.[90] During conditions of high threat to the state, Posen's theory expects that civilians will intervene to cause doctrinal change. During periods of low threat, military organizations are free to develop their own doctrines autonomously. During crises, civilian elites are most effective at forcing doctrinal change based on *realpolitik* considerations which supersede a military's own organizational interests (and its general tendency to avoid change in order to reduce uncertainty). Uncertainty avoidance is the primary rationale behind a military organization's unwillingness to innovate since innovations are inherently risky.

Posen tests and confirms his theory by examining doctrinal change during the interwar period in France, the United Kingdom, and Germany. According to Posen, German *blitzkrieg* (lightning war) and the British air defense system were two doctrinal developments that occurred after the international system changed and civilians intervened. These cases are contrasted with the failed French Maginot Line defensive doctrine which was a method of fighting that the French military pursued in the absence of civilian intervention. In order for civilian intervention in

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[88] Posen, 1984.

[89] This applies only to states that have a military that is subordinate to civilian political leaders. Some scholars refer to this school of thought on military innovation as the "civil-military model." See Grissom, 2006, p. 908; Collins, 2014, p. 47.

[90] In addition to Posen, 1984, pp. 54-59, also see Kurt Lang, "Military Organizations," in James G. March, ed., *Handbook on Organizations* (Chicago: Rand McNally & Co., 1965), pp. 856-885.

military doctrinal processes to succeed, the civilians must intervene with the assistance of a "military maverick" who has the necessary military expertise to shepherd the doctrinal change.[91] The author does not provide much insight on the interests, incentives, or capabilities of these mavericks, other than to suggest that mavericks are willing to dissent from their peers to align with civilian interests because they have independent, military judgment.

Posen's theory doesn't explain why a military organization would innovate doctrinally during periods of peace. If military organizations seek to minimize uncertainty, there is little incentive for them to initiate doctrinal change in the absence of a conflict (and thereby the absence of civilian intervention). Furthermore, during periods of peace, decreasing military budgets will restrict a military's ability to conduct the training and war games necessary to vet new ideas.[92] So, even if a military organization wanted to innovate doctrinally during a period of peace it should have trouble doing so "without support and patronage from civilian political leadership."[93]

Posen's theory is compelling but it fails to explain why some military organizations change their doctrine quite frequently without civilian intervention. Given the instances of military doctrinal change in the U.S. military over the course of its history, often during periods of peace, one cannot argue that civilian intervention is a necessary condition for doctrinal change. Though its parsimony is commendable, Posen's theory suffers from a lack of attention to the potential role that rivalries within a military organization or between military services might have on doctrinal change. The mechanisms of change as they relate to the role of the military maverick are not clearly specified. What is a military maverick and how is he/she protected by civilians once he/she pursues ends that are at odds with the military's preferences? Also, some scholars, such as Meese,

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[91] Posen, 1984, p. 57.
[92] Murray and Millet, 1996.
[93] Ian Roxborough, "Organizational Innovation: Lessons from Military Organizations," *Sociological Forum* 15, no. 2 (2000): 372.

argue that civilian leaders are more capable of *stopping* a military innovation than they are at *starting* one.[94]

In her book on military doctrine in the Soviet Union during the post-Stalin period, Zisk acknowledges the potential for military doctrinal innovation in the absence of civilian intervention but this is only the case when "military officers notice that a change in their adversary's doctrine for future war has potential significant ramifications for the conduct of that war…"[95] Zisk calls this type of military doctrinal change *reactive change* because the new doctrine is the result of one military organization reacting to the innovations of another.[96] Zisk's argument aligns with the balance of power approach because it suggests that military doctrinal shifts are a result of increases in the relative power of an adversary.

Zisk recognizes that there are varying degrees in the propensity of military leaders to propose or accept doctrinal innovations. With the case of the Soviet response to the NATO strategy of Flexible Response, Zisk demonstrates that civilian intervention is not a necessary condition for military doctrinal change. When civilian leaders do intervene, Zisk argues that the nature of that intervention can range from hostile to conciliatory. Civilian intervention is most effective when civilians build coalitions with military officers to shepherd their preferred change. The evidence that Zisk presents suggests that coalition building between military and civilian leaders played an important role in the Soviet's response to the Schlesinger Doctrine,[97] Flexible Response,[98] and the NATO Follow-on Forces Attack.[99]

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[94] Michael J. Meese, "Institutionalizing Maneuver Warfare: The Process of Organizational Change," in Richard D. Hooker, ed., *Maneuver Warfare: An Anthology* (Novato, CA: Presidio Press, 1993), pp. 204-205. Also, cited by Collins, 2014, p. 32.

[95] Zisk, 1993, p. 4.

[96] Ibid. Zisk defines reactive innovation as "a major change in thinking about and preparation for future war that occurs because of a change in war thinking or preparation made by a potential opponent."

[97] Zisk, 1993, pp. 97-115.

[98] Ibid., pp. 55-75.

[99] Ibid., pp. 135-156.

Zisk's work is notable because it is the first to examine how the international environment and military organizational interests combine to lead to change. Zisk synthesizes both elements to articulate a comprehensive theory of innovation. Unfortunately, her imprecise characterization of doctrine limits her theory's utility in explaining military doctrinal change. Zisk provides helpful nuance to arguments on civilian intervention but, as discussed in the previous section on defining doctrine, it is not clear that the outcome that she observes is military doctrine. Zisk sees doctrine in "war plans and preparations of military commanders" and she conflates policies and strategies with doctrine. In my view, Zisk provides compelling analysis that when an adversary adopts a new strategy or changes its strategic aims, a state will change its own strategic doctrine.

Avant compares the U.S. Army's inability to adapt to counterinsurgency warfare in Vietnam with successful British adaptability in the Boer War and concludes that the nature of the civil-military relationship affects whether or not military organizations innovate.[100] The structure of civilian institutions affects the principal-agent problem; institutional divisions among civilian leaders reduces the ability of senior civilians to monitor (and intervene in) military organizations.[101] Civilian leaders in the United States had less control over the behavior of Army officers, based mainly on the fact that the President served as the commander in chief but the Congress controlled the Army's budget, and so attempts by President John F. Kennedy to micromanage the Army were ineffective. The British institutional structure enabled more effective civilian intervention. In the case of the Boer War, Avant argues that British military adaptation

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[100] Avant, 1991, 1993, 1994. Some scholars such as Collins, 2014, argue that Avant's work belongs in a category of innovation that looks at the principal-agent problem. Because of Avant's conclusions on civilian intervention, I include her work in the collection of scholarship on innovation as a function of the intervention of civilians.

[101] Avant, 1993, p. 413.

came from the initiative of military leaders because civilian leaders previously rewarded military personnel who responded effectively to new enemy threats.[102]

Avant's work is relevant because it illustrates the effect of different institutional structures on innovation and because it reinforces the argument that civilian intervention is neither necessary nor sufficient for military innovation.[103] Though Avant's institutional approach to military innovation doesn't fit neatly into the balance of power paradigm, I include it here because innovation in her theory is still a function of civilian intervention that occurs as a result of shifts in the international system. Avant's theory is one of wartime innovation, not peacetime innovation.

If civilian intervention to force doctrinal change does occur, the organizational literature on innovation suggests that the civilian proponent of the change will fail to fully appreciate the costs that would be incurred by the military if it adopted the innovation. According to Wilson, "To the proponent the prospective benefits are…direct and easily conceived; the costs are remote, something 'the organization' will deal with."[104] Military personnel will experience the costs of change directly, and if there are perceived benefits, those benefits will be less tangible and remote. Civilian interveners will tend to underestimate organizational resistance to change. Only the head of the military organization has the ability to correctly perceive the costs *and* benefits of the innovation.[105] This suggests that civilian interveners can increase the chances of military organizational change by allying with military leaders. Those military leaders can then ensure that the benefits of the change are well-articulated to members of the organization.

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[102] Avant, 1993, p. 426.
[103] Avant, 1994, p. 5.
[104] Wilson, 1971, p. 208. See also T. Levitt, "Creativity is not Enough," *Harvard Business Review* (May-June 1963), pp. 72-73.
[105] Ibid.

Theories that employ a balance of power approach are valuable because they explain how innovation occurs despite the organizational rigidity predicted by organizational and bureaucratic theorists. Civilian leaders respond to balance-of-power shifts which "trigger a rational updating of strategies in conformance with realpolitik."[106] Civilian intervention in military operations is the result. Intervention can be hostile or conciliatory. Intervention is influenced by the nature of previous civil-military interactions, and the effectiveness of intervention is a function of the state's institutional structure.

However, the balance of power approach suffers from a number of weaknesses. First, it is not clear that the innovations that are studied are doctrinal. Imprecise definitions of military doctrine - the stated outcome of interest - weaken theories that purport to explain doctrinal change. Not a single author explored the formal doctrines of the militaries that they studied. Second, heavy interest in the interwar period leads one to wonder if there is something unique about that particular period of time. The value of studying states during the interwar period is that it affords the researcher the ability to assess the effectiveness of a particular doctrine that was developed in peace and employed in the second world war. Now that we are over seventy years removed from the war, we can see that the period between the two most catastrophic wars in history might not be the most appropriate for understanding the sources of military doctrine during peace. Sapolsky et al. make the cogent point that military innovation during the interwar period was so pronounced because "World War II was essentially a continuation of World War I."[107] Militaries experimented with technologies, organizational structures, and tactics during the first war, and then used the

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[106] Avant, 1993, p. 410; Jensen, 2016, p. 11, also makes this general point.
[107] Sapolsky et al., 2009, pp. 187-188.

interwar period to turn the results of those experiments into true innovations.[108] The interwar period is one of the most innovative periods in history.

Third, and most problematic, this theoretical approach fails to adequately explain the numerous instances of doctrinal change in the U.S. military (and its services) throughout the twentieth century. Civilian intervention to compel doctrinal innovation is the exception not the norm. Besides Avant's examination of the case of counterinsurgency, none of the scholars who subscribe to this approach have tested their theory on any U.S. cases. Given the historical emphasis on civilian supremacy over the military in the United States, one would think that the U.S. would be an easy test of theories that predict civilian intervention as a consequence of change in the international system. However, in the last one-hundred years, the four most significant civilian interventions into the U.S. military were the National Defense Act (NDA) of 1920, the National Security Act of 1947, President Kennedy's directives on counterinsurgency, and the Goldwater-Nichols Act of 1985.[109] Three out of four of these interventions changed the organizational

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[108] According to Sapolsky et al., 2009, p. 188, "experiments with aircraft, tanks, and naval and amphibious warfare in World War I" provided the necessary information for the pursuit of new technologies during the interwar period.

[109] The 1920 National Defense Act established an Army organized into three components - the Regular Army, the Organized Reserves, and the National Guard, and it specified the exact size and force structure of the division, the corps, the army, and the general headquarters reserve (GHQ). The National Security Act of 1947 (superseded by amendments in 1949) established a National Military Establishment led by the Secretary of Defense and including the Joint Chiefs of Staff as the heads of the Departments of the Army, the Navy, and a separate Air Force. The Goldwater-Nichols Act of 1985 empowered the Joint Chiefs of Staff and the military's geographic combatant commanders, weakened the Service Chiefs, and mandated that the military operate jointly.

structure (not the doctrine) of the force.[110] President Kennedy's intervention to compel doctrinal change in the 1960s (which failed) is an anomaly.[111]

Finally, it is not clear why military organizations wouldn't initiate the processes of innovation *in anticipation of* civilian intervention. If military leaders sense an impending shift in the balance of power in the international system, why wouldn't they initiate doctrinal change ahead of civilian intervention in order to maintain their first-mover advantage in shaping that change? In his most recent work, Posen recognizes that militaries can use doctrine to "manage the risk of direct civilian intervention into military affairs."[112] They do this by "develop[ing] doctrine that is responsive to what appears to be the foreign policy preferences of civilians…"[113] In other words, by anticipating the foreign policy preferences of civilians, militaries can modify their doctrine to show civilian leaders that they are operating in accordance with civilian desires. This *anticipation effect* is rarely examined in the literature on doctrinal change.[114]

At its core, the balance of power approach to military innovation hypothesizes: *changes in the balance of power in the international system lead military organizations to innovate*. The mechanisms through which this occurs can be summarized as follows. A balance of power shift in the international system affects a state's relative power. If the shift causes a reduction in relative

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[110] It is perhaps unsurprising that we see civilian intervention in organizational structure but not in doctrinal change. U.S. military organizations require funding and that funding comes through budget appropriations authorized by the U.S. Congress. These appropriations indirectly affect military doctrine by affecting the equipment that military organizations can buy and the technologies they can afford. However, in the case of the U.S. Army, the organization's most expensive facet is personnel. The most direct effect that civilians in Congress and the Executive branch can have on the Army is through organizational structure. As was the case with the NDA when the decision to change the structure of the Army had major implications for national military policy, changes to organizational structure can have more profound effects on military organizations than changes to doctrine

[111] There are other minor instances of civilian intervention to compel doctrinal change in the case of Secretary of Defense McNamara and the Army's new doctrine on airmobile operations. Another potential example of intervention occurs during the more recent Rumsfeld era.

[112] Posen, 2016, p. 168.

[113] Ibid.

[114] Jensen, 2016, p. 15, acknowledges it but he sees doctrinal change as "a function of anticipation" not of impending civilian intervention but of "new ways of war."

power and an increase in the perceived threat to the state, civilian political leaders will intervene in military operations to compel doctrinal change.[115] This intervention is necessary because military organizations avoid change to minimize uncertainty. When civilians intervene, they need to do so with the assistance of a military leader who is empowered to counter the military organization's preference for no change.

The Organizational Approach

Whereas the balance of power approach pays little attention to the influence of factors internal to military organizations, the organizational perspective draws heavily from the literature on bureaucratic politics and organizational theory to understand military innovation. I argue that the balance of power perspective helps explain *why* a military organization innovates; the organizational approach helps us understand *how* the actual innovation occurs (and why alternatives are dismissed). It is for this reason that I view the organizational approach not as a competing explanation for military innovation but as a different level of analysis through which we can understand innovation. This view is at odds with the consensus in the field of military innovation studies which misreads Rosen's seminal work and characterizes it as a direct rebuttal of Posen.[116]

Under the *organizational approach*, military innovation is a function of the varied interests of the organization itself. The organizational behavior model explains how certain characteristics of organizations play an important role in explaining and predicting behavior.[117] While the balance

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[115] If the shift causes an increase in relative power and a decrease in the perceived threat to the state - as was the case for the U.S. at the end of the Cold War - civilian intervention to compel doctrinal innovation is unlikely because such innovation is thought to be unnecessary. However, civilians might intervene to reduce military budgets if the perceived threat to the state continues to diminish.

[116] Posen did not dismiss organizational theory outright; he acknowledged that the balance of power approach provided only a slightly better explanation for innovation. Similarly, Rosen acknowledged that shifts in the international security environment caused the peacetime innovations he studied.

[117] See, e.g., Graham T. Allison, *Essence of Decision* (Boston: Little, Brown, 1971); Morton H. Halperin, *Bureaucratic Politics and Foreign Policy* (Washington, D.C.: Brookings Institution, 1974).

of power approach treats the military as a unitary actor, the organizational approach recognizes that militaries consist of numerous agencies with varied interests. Competition between rivals within the organization can affect the organization's behavior. Military offices "will seek to adopt structures and strategies that promise to confer prestige, increased resources, and secure autonomy."[118] Bureaucratic bargains and routines can affect the nature of military innovation.[119] The two primary sub-categories that align with the organizational perspective are intraservice politics and organizational culture.

The effect of intraservice politics on innovation is most associated with Rosen who argues that military innovation occurs when advocates for change compete with rivals in the organization.[120] Just as in politics, doctrine is a result of a competition between "who gets what, when, and how."[121] Competition for limited resources amongst military organizations that are subordinate to the same state is similar to competition between offices within a branch of government. The intraservice politics approach draws heavily from Allison's bureaucratic politics model in which there is "no unitary actor but rather many actors as players, who focus not on a

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[118] Terriff and Farrell, 2002, p. 271.

[119] Robert Jervis, *Perception and Misperception in International Politics* (Princeton: Princeton University Press, 1976). See the chapter on "Perception and Level of Analysis." Jervis doesn't focus on innovation, but his characterization of the bureaucratic level of analysis for state policy is relevant.

[120] Rosen, 1991. For other examples of the role of intraservice factors on military innovation, see Jon F. Giese, *Military Innovation: Sources of Change for United States Special Operations Forces*, (Monterey, CA: MA thesis, US Naval Postgraduate School, 1999); Susan L. Marquis, *Unconventional Warfare: Rebuilding US Special Operations Forces* (Washington, DC: Brookings, 1997); Vincent Davis, *The Politics of Innovation: Patterns in Navy Cases* (Denver, CO: University of Denver Press, 1967); Gregory A. Engel, "Cruise Missiles and the Tomahawk," in B. Hayes and D. Smith (eds.), *The Politics of Naval Innovation* (Newport, RI: US Naval War College, 1994), pp. 18-22; Rod A. Coffey, *Doctrinal Orphan or Active Partner? A History of US Army Mechanized Infantry Doctrine* (M.A. thesis, US Army Command and General Staff College, 2000); W. Blair Haworth, *The Bradley and How it Got That Way: Technology, Institutions, and the Problem of Mechanized Infantry in the United States Army* (Westport, CT: Greenwood, 1999). For a brief summary of each, see Grissom, 2006, pp. 915-916.

[121] Harold Lasswell, *Politics: Who Gets What, When, How* (New York: Whittlesey House, 1936).

single strategic issue but on many diverse intra-national problems…making government decisions not by rational choice but by the pulling and hauling that is politics."[122]

Examining twenty-one military innovations in peace and in war, Rosen argues that innovation is the product of a process in which senior military leaders develop a new theory of victory[123] in war and they use mid-level officers in the organization to institute innovations that support that theory.[124] Rosen sees the struggle between military officers to determine a theory of victory as an ideological one. Like all political communities, the military must have a source of power. Rosen argues that the source of power is control over who gets promoted.[125] According to Rosen, "The organizational struggle that leads to innovation may thus require the creation of a new promotion pathway to the senior ranks, so that young officers learning and practicing the new way of war can rise to the top, as part of a generational change."[126]

Military leaders who favor change use their rank to assert influence over the organization and to pursue their preferred innovations. These leaders use promotion opportunities to entice mid-level officers to support their innovations. In contrast with Posen, Rosen sees little role for civilians who are outsiders to the military community and don't have the ability to make military mavericks who favor innovation legitimate in the eyes of their peers.

Rosen's work on innovation is viewed as a counter to Posen on two accounts. First, Rosen presents a credible alternative to the civilian-intervention requirement that we see in Posen's

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[122] Graham T. Allison, "Conceptual Models and the Cuban Missile Crisis," *American Political Science Review* 63, no. 3 (September 1969): 707. Allison's model also applies to interservice rivalry.

[123] Rosen, 1991, p. 20, defines *theory of victory* as "an explanation of what the next war will look like and how officers must fight if it is to be won."

[124] See also Suzanne C. Nielsen, *Preparing for War: The Dynamics of Peacetime Military Reform* (Ph.D. diss. Harvard University, 2003). Nielsen expands the focus to military reform - changes to doctrine, training, policies, organizations, equipment, and leader development programs. Nielsen agrees with Rosen that external developments have an indeterminate effect on military change. She focuses her analysis on how reform in military organizations occurs.

[125] Rosen, 1991, p. 20.

[126] Ibid., p. 20.

theory. Civilians are only effective when they intervene to promote a strategy that is already favored by senior military officers. Second, Rosen's theory accounts for the diversity of interests within military organizations rather than treating those organizations as though they are monolithic. Variance in organizational self-interests leads to the ideological struggle over theories of victory which can provide an impetus for innovation. These elements - innovation in the absence of civilian intervention and the role of intraservice rivalries - are Rosen's most significant contributions to the literature on military innovation.

Rosen's work suffers from a number of limitations. First, in order for innovation to occur under Rosen, the military service must develop a new theory of victory, create a new combat arm, and amend existing promotion pathways to incentivize service in the new arm. Two of the three peacetime innovations that he studies - the Navy's transition from the battle fleet to the carrier task force and the Marines transition from small wars to amphibious assault - took over two decades from origination to implementation.[127] The high bar that Rosen sets for a change to be classified as an innovation eliminates doctrinal changes from consideration unless those changes involve the creation of a new branch within the service. I argue that a military service can innovate doctrinally, fundamentally changing how it fights, without creating a new combat arm or service. In the case of the U.S. Army, the pentomic division construct and Active Defense were two major doctrinal changes that fundamentally altered how the organization would fight and neither involved the creation of a new combat arm. As McMaster notes, "Invention is not innovation. Innovation often results from the identification of opportunities to use existing capabilities in new ways."[128]

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[127] I argue that the development of the airmobile concept is not a good example of a peacetime innovation because it was driven almost entirely by actions during war.

[128] Quote is by General H. R. McMaster, commanding general of ARCIC, 2016, in Jensen, 2016, Forward, viii.

Second, Rosen's theory is most powerful in explaining *how* innovation occurs once the innovation process is triggered, but it is much less insightful in explaining *why* innovation occurs in the first place. According to Rosen, new theories of victory constructed by military officers are the result of "perception of change in the structure of the international security environment."[129] This explanation of the cause of innovation appears to align well with Posen's argument and the prediction of most scholars who employ a balance of power approach to military innovation. Innovation was triggered by a shift in the balance of power.[130]

Third, Rosen's case studies focus on innovations that occurred prior to the end of World War II except for one, so it is not clear if his argument is appropriate for explaining innovations in the second half of the twentieth century. Additionally, the majority of Rosen's cases are instances of innovation during war and due to technological change. Fourth, Rosen focuses on doctrinal change but he pays absolutely no attention to formal doctrinal publications.

Finally, Rosen's account tells us nothing about how ideological struggles *between* services - army, navy, air force, and marines - affect the development of theories of victory. For example, in his case study on the Army's development of the airmobile division, Rosen says nothing about the role of the Air Force and the Marine Corps. In fact, a critical element of the story of this innovation relates to those two services. In the post-World War II period, the Army determined that the helicopter's role would be that of supply, reconnaissance, and medical evacuation. Little attention was given to the possibility that aviation could play a significant role in large-scale ground combat. In the emerging atomic age, the emphasis on long-range bombers took center stage, leading the Air Force to minimize the necessity for helicopters. The conflict between the

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[129] Rosen, 1991, p. 57.
[130] That said, Rosen, 1991, p. 57, is clear in noting that innovation was "not the product of a close study of potential enemies."

Army and the Air Force vis-à-vis the helicopter opened the door for the Marine Corps. In the helicopter, the Marines saw a way to evolve their historical amphibious role to one more appropriate for the modern-day battlefield. The Marines developed doctrine and tactics for the helicopter, culminating in the historic first-ever airmobile operation in Korea in September 1951.[131] Rosen's analysis of airmobility suffers from the author's emphasis on a single service.

The second subcategory associated with the organizational perspective of military innovation is one in which scholars emphasize organizational culture as the explanatory variable for military innovation. The only way that culture can be a cause of change is if it changes itself. Employing culture as a variable is difficult due to tautological concerns and the intangible nature of culture.[132] The challenge for scholars who posit culture's independent effect on innovation is to prove that culture - a dynamic typically viewed as highly resistant to change - changed, and that its change led to military innovation. An alternative approach which I argue is more credible is to treat organizational culture as an intermediate (or mediating) variable between an exogenous shock and a military innovation. This approach can provide clarity on why militaries change in the ways that they do when subject to exogenous forces.

Scholars argue that there are three ways in which culture can cause innovation. First, military leaders can try to change a military's culture in order to foster innovation generally or to facilitate a specific innovation. Though Rosen doesn't examine culture's effect on military innovation, the ideological conflict that occurs between military leaders and the branches within a service that they lead to identify a new theory of victory is ideational. This struggle can affect the norms and values of the military organization, generating "new beliefs of identity and appropriate

[131] Robert A. Doughty, "The Evolution of US Army Tactical Doctrine, 1946-76." *Leavenworth Papers,* Number 1, Combat Studies Institute, U.S. Army Command and General Staff College, 1979, p. 4.
[132] Long, 2010, p. 30.

behavior."[133] The work of Richard Lock-Pullan on the U.S. Army's 1982 AirLand Battle doctrine

is often cited as an example of planned cultural change.[134] Lock-Pullan argues that after Vietnam,

Army leaders inculcated a new identity in Army personnel that focused on conventional warfare

in Europe and placed new emphasis on formal doctrine, leading to the AirLand Battle construct.

Long studied how military organizations respond to counterinsurgency and concluded that

organizational culture had a significant effect on the operations and military doctrines of those

organizations.[135]

Second, a cultural change caused by an exogenous shock can spur innovation[136]. Third,

militaries that share certain cultural traits with other militaries innovate by emulating[137] their

practices.[138] The recent emphasis on culture as an independent variable coincides with the 1990s

surge in constructivist approaches to international relations.

Kier dismisses balance of power approaches to military innovation, and instead argues that

doctrine is the result of the interaction between domestic political constraints (beliefs that civilian

policymakers have about the military's role in society) and military organizational culture ("basic

assumptions and values that shape shared understandings, and the forms or practices whereby these

meanings are expressed, affirmed, and communicated").[139] Doctrine is not a response to a

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[133] Posen, 1991, p. 20; Quote from Farrell and Terriff, 2002, p. 8. For an example of planned cultural change in the Marine Corps, see Craig M. Cameron, *American Samurai: Myth, Imagination, and the Conduct of Battle in the First Marine Division, 1941-1951* (Cambridge: Cambridge University Press, 1994).

[134] Richard Lock-Pullan, *US Intervention Policy and Army Innovation: From Vietnam to Iraq* (London: Routledge, 2005). Grissom, 2006, pp. 917-918 cites this work.

[135] Long, 2010, 2016. Long states that culture is an intervening variable but his analysis suggests that it is explanatory.

[136] Peter J. Katzenstein, *Cultural Norms and National Security: Police and Military in Postwar Japan* (Ithaca: Cornell University Press, 1996); Jeffrey Legro, "Culture and Preferences in the International Cooperation Two-step," *American Political Science Review* 90, no. 1 (1996): 122.

[137] See Farrell, 1996, pp. 131-133; Goldman, "The Spread of Western Military Models to Ottoman Turkey and Meiji Japan," in Farrell and Terriff, 2002, pp. 41-68; Farrell, "World Culture and the Irish Army, 1922-1942," in Farrell and Terriff, 2002, pp. 69-90.

[138] Farrell and Terriff, 2002, pp. 7-10. The authors provide a short literature review on the three ways that authors posit culture influences innovation.

[139] Kier, 1995, p. 69.

changing external environment, it is a result of the way in which a military's culture interprets the constraints imposed on it by civilian leaders.

In another analysis of innovation that focuses on the interwar period, Kier argues that the French army's organizational culture was a major factor which led to its adoption of the Maginot Line defensive doctrine in 1939. When French policymakers reduced the required length of conscription (the domestic political constraint), the army adopted a defensive doctrine because of a belief that short-term conscripts could not execute more complex offensive operations. According to Kier, the belief that short-term conscripts "could not handle sophisticated technology or new methods of [offensive] warfare" was the cultural predilection that drove the French army to change its doctrine from offensive to defensive. The problem here, as Porch notes, is that a belief in the inadequacy of conscripts is not necessarily an attribute of organizational culture; it might actually be a fact.[140] Given that short-term conscripts have less training, military schooling, and experience, the contention that they are less capable of offensive operations is plausible so it is not clear why Kier believes that such beliefs are cultural prejudices.

Definitional problems notwithstanding, Kier's biggest contribution is the idea that culture can condition the doctrinal options that a military organization believes it has at its disposal. Rather than limit the mediating effect of culture on doctrine to the domestic political environment as Kier does, I think it is useful to consider how culture might be an intervening variable between the international security environment defined by the balance of power approach and military doctrinal innovation. This might be a fruitful way to assess innovation from two levels of analysis - from the perspective of shifts in the international security environment and from the organization itself.

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[140] Porch, 2000, p. 170.

At its core, the organizational approach to military innovation hypothesizes: *the character of a military innovation is affected by competition between actors inside the military organization and organizational culture.*

The Interservice Approach

The third and final approach that explains military innovation is the interservice approach. Viewing innovation from the perspective of the interservice level of analysis is valuable because it expands the aperture to include interactions between political actors in different organizations. These organizations (referred to as services in the case of the United States) compete with each other for finite resources. Scholars who posit this explanation for innovation argue that competition between services for resources and standing leads to change. The cost of losing to a competitor is higher than the cost of change itself because budgets and standing are perceived as a prerequisite for organizational survival.[141] At its worst, losing to a rival can mean organizational extinction. When organizations suffer defeat or perceive that their survival is in jeopardy, we might see them innovate, particularly if they receive cues from civilians that indicate impending civilian intervention. The interservice approach to military innovation allows the researcher to shift his/her focus from one military organization to the other military services within the state. Differences in interests, capabilities, and jurisdiction may lead services to respond to similar external shocks in different ways.[142]

Associated primarily with Huntington, Sapolsky, and Owen, the interservice perspective argues that competition between military organizations that are subordinate to the same state for

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[141] Harvey Sapolsky, "On the Theory of Military Innovation," *Breakthroughs*, Vol. IX, No. 1 (Spring 2000): 35-39. Also discussed in Sapolsky et al., 2009, p. 8.
[142] Duffield, 1995, p. 18, makes a similar point but it is in regard to intra-alliance differences in NATO.

resources, standing, and prestige leads to innovation.[143] Huntington contested the conventional

wisdom that "interservice competition necessarily undermines the economy, efficiency, and

effective central control in the military establishment."[144] Rather, Huntington argues that the

division of militaries into separate and distinct services has the effect of improving civilian control

of the military and increasing the strength of the individual services. Each service is forced "to

develop the mechanisms and support necessary for survival in the pluralistic world of American

politics."[145] Huntington doesn't say much about military innovation, but by implication his

argument supports the counterintuitive idea that rivalry between services forces services to become

more effective political actors in the pursuit of their organizational interests.

Sapolsky argues that innovation is the result of "competition among organizational rivals

for resources and standing, who overcome the costs of implementing change through their concern

about the greater costs of losing to a competitor."[146] This explanation is important because it

identifies the cost-benefit analyses that effect organizational decisions to innovate or not to

innovate. The cost of losing to a competitor includes loss of budgetary outlays and decrease in

prestige. At its most extreme, the cost of losing to a competitor or failing to maintain relevance

might include organizational extinction. If the military organization is no longer able to justify its

critical role in the national security community, politicians might question that organization's

future relevance.

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[143] Harvey M. Sapolsky, "On the Theory of Military Innovation." *Breakthroughs* 9, no. 1 (2000): 35–39; Samuel P. Huntington, "Interservice Competition and the Political Roles of the Armed Services," *The American Political Science Review* 55, no. 1 (March, 1961): 40-52; Owen Cote, Jr., *The Politics of Innovative Military Doctrine: The United States Navy and Fleet Ballistic Missiles* (Ph.D., diss, MIT, 1996); Sapolsky, *The Polaris System Development: Bureaucratic and Programmatic Success in Government* (Cambridge, MA: Harvard University Press, 1972).

[144] Huntington, 1961, p. 40.

[145] Ibid., p. 44. Huntington's point is logical but he fails to acknowledge that interservice competition can be highly problematic in war when services might need to operate in a joint fashion.

[146] Sapolsky et al., 2009, p. 8. Support for this argument is also provided by Cote, 1996 and Sapolsky, "The Interservice Competition Solution," *Joint Force Quarterly* (Spring 1996).

According to Sapolsky, rivalry between services is the independent variable that leads to military innovation. When a service calculates that a loss in budgets or prestige to another service is costlier than innovation, we expect to see that service innovate.[147] However, in Sapolsky's theory, it is not entirely clear what type of shock must occur for resource scarcity to drive the competition (which then leads to innovation). According to Grissom, "a new mission area may emerge in which none of the services have a dominant advantage, or an old mission may be reopened for competition between the services."[148] If a new mission area emerges, the services might compete for scarce resources to establish jurisdiction within that area. Similarly, if there is dialogue over who has jurisdiction over an older mission, the services might compete.

Cote provides more insight on what must happen for the always-existing competition for scarce resources to trigger innovation. According to Cote, not only can interservice rivalry have an independent explanatory effect on innovation, it can also serve as an intermediary variable for that innovation, linking an external or internal shock to the innovation. Cote draws from Huntington's argument that the existence of more than one service in a military enables more effective civilian control of the military. Since services are independent of each other but theoretically equal in power, interservice rivalry is "more likely [to] result in the resort to external political (i.e. civilian) authority for resolution."[149]

When services are locked in conflict, there is a high likelihood that civilian actors will need to intervene in order to mediate a resolution. The value of this observation is that it connects interservice rivalry to Posen's argument. Posen's theory is not concerned with interservice rivalry, but given the propensity for civilian intervention to result from that rivalry, one can argue that

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[147] For Sapolsky et al., 2009, p. 6, military innovation is a major change to a military organization's doctrine and its organizational structure. My definition is similar.

[148] Grissom, 2006, p. 910.

[149] Cote, 1996, p. 46.

rivalry is the intermediary variable between civilian intervention and innovation. Interservice rivalry can also have a mediating effect on the intraservice factors that Rosen argues lead to innovation. In the context of intraservice debates, innovators "can portray their proposals as doctrinal initiatives which come at the expense of another service rather than their own."[150] When innovators can demonstrate that their preferred change incurs a significant cost on another service, the odds of their innovation being implemented increase.

Another component of the interservice perspective of military innovation focuses on how threats to a military organization's autonomy and by extension, survival, lead to change.[151] According to Downs, organizations cannot survive unless they consistently demonstrate that their "services are worthwhile to some group with influence over sufficient resources to keep it alive." In order to do this, organizations pursue relative autonomy or "a distinctive area of competence, clearly demarcated clientele or membership, and undisputed jurisdiction over a function, service, goal, issue, or cause."[152] Militaries can use doctrine to articulate their comparative advantage within a domain to establish autonomy and ensure the organization's relevance in an ever-changing security environment. Autonomy not only preserves survival, it also enables the organization to justify requests for the resources it needs to carry out functions within a particular jurisdiction. Here doctrine serves as a justification for future budgets. When a military organization receives cues from civilian leaders that its autonomy is in jeopardy, we expect to see that organization innovate doctrinally to carve out a new jurisdiction to ensure its survival.

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[150] Cote, 1996, p. 79.

[151] See, e.g., Marutollo, 1990; Herbert Kaufman, *Time, Change, and Organizations: Natural Selection in a Perilous Environment* (Chatham, N.J.: Chatham House, 1985).

[152] Anthony Downs, *Inside Bureaucracy* (Boston: Little, Brown, 1967), p. 8, quoting P. B. Clark and J.Q. Wilson, "Incentive Systems: A Theory of Organizations," *Administrative Science Quarterly* (1961): 129-166.

The academic work on organizational survival and military innovation is limited because military organizational survival is assumed. It is not clear how a military service might be rendered extinct without a fundamental transformation in the nature of combat. As long as combat occurs in the air, on the sea, and on land, we assume that states will have no incentive to disband their air force, navy, or army. However, the existence of two services capable of operating on land in the U.S. military - the Army and the Marine Corps - increases the likelihood of jurisdictional competition and raises the prospect that one organization might be rendered irrelevant. In fact, the organizational survival of the Marine Corps has been in jeopardy multiple times over its history - a dynamic that Marutollo assesses in his 1990 work on the Corps.[153] The Marines are not the only service that faced survival concerns in the U.S. military; many thought that the Army was irrelevant in the period immediately following the nuclear explosions that ended World War II. Finally, today some argue that the proliferation of drones and other unmanned aerial vehicles threatens the existence of the Air Force in its current configuration.

Finally, culture can also play a role in interservice competition. Halperin et al. discuss a concept known as organizational essence - "the view held by the dominant group within the organization of what its missions and capabilities should be."[154] Organizational essence can be understood as a subcomponent of organizational culture. The authors assert (but do not test) four propositions: (1) members of an organization prefer policies that increase the organization's importance relative to other organizations, (2) organizations work the hardest to gain and retain capabilities that members perceive as the most critical to the organization's essence, and (3)

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[153] Marutollo, 1990. The author examines Marine Corps survival through the lens of three organizational constructs - the Structural Contingency Model, the Resource Dependence Model, and the Population Ecology Model.

[154] Morton H. Halperin, Priscilla A. Clapp, and Arnold Kanter, *Bureaucratic Politics and Foreign Policy* (Brookings Institution Press, 2006), p. 27.

organizations will resist if another bureau attempts to take away capabilities perceived as part of the organization's essence. While an organization's essence is relatively static, the preservation of autonomy in the areas that the organization perceives as essential to its essence can drive rivalry between services.

In summary, the interservice approach to military innovation hypothesizes: *competition between services subordinate to the same state causes and shapes the character of military innovation*.

1.3. Conclusion

The purpose of this literature review was to critically assess existing theories that purport to explain military doctrinal innovation. In its simplest form, doctrine is *how a military organization plans to fight in combat*. Theories of doctrinal change are plentiful but they are limited in three ways. First, imprecise conceptions of military doctrine weaken causal arguments that seek to explain doctrinal change. Second, the emphasis on monocausal explanations for innovation has led scholars to focus on unique instances of military innovation that enable the isolation of one of the many factors that cause change to enable the confirmation of a causal claim. Unfortunately, the generalizability of these theories is limited and it is easy to think of numerous innovations where the particular posited independent variable was absent. Third, military innovation scholars mistakenly treat theories that explain *why* militaries innovate as synonymous with theories that explain *how* militaries innovate once the decision has been made to innovate. In the next chapter, I develop a framework for assessing doctrinal change that accounts for these limitations

Chapter 2. Research Design

In this chapter, I develop a theoretical framework that explains military doctrinal change from the perspective of different levels of analysis. I employ this theoretical framework in the case study analysis that follows. I also provide rationale for my analytical approach - the method, types of evidence, observable indicators, hypotheses, and case selection. Finally, I provide background information on the evidence that I analyze as confirmation of military doctrinal change - formal doctrinal manuals - in the two organizations that I study - the U.S. Army and the U.S. Marine Corps.

2.1. A New Framework for Assessing Military Doctrinal Innovation

The three approaches to military innovation - balance of power, organizational, and interservice - are different levels of analysis in the quest to understand military change. While many scholars pit these perspectives against each other in an attempt to prove the superiority of one over another, I argue that the perspectives answer different questions. A synthesis of the perspectives can serve as an effective framework for assessing organizational behavior and military innovation. In this chapter, I present an approach to assess doctrinal innovation during peacetime that incorporates the insights of the literature discussed above across all three approaches to innovation. After explaining each element of the framework, I discuss the evidence and the measurable indicators that would confirm or deny each. I also develop hypotheses regarding when we should expect to see civilian intervention in the process. The character of the resulting doctrine can be affected by intraservice and/or interservice dynamics in addition to being mediated by the organization's culture. I discuss the types of evidence that would confirm or deny the influence of these factors.

2.1.1. Theory of Victory

A military organization develops and maintains a theory of victory that governs how it plans to fight in the next war based on what it thinks that war will look like.[1] The theory of victory is based on assumptions regarding the nature of the future enemy threat, the state of technology, and the state's future relative power.[2] Theories of victory are not static; they change as leaders' assessment of the future changes. When militaries craft and modify their theory of victory they are especially attuned to the material capabilities of the state and likely adversaries.

The emergence of a new adversary might affect a theory of victory if that adversary threatens the security of the state. Since resources are always finite, I predict that militaries will prioritize the most menacing threats. Resource constraints limit a military's ability to prepare adequately for a wide range of threats. Therefore, I expect that theories of victory (and the corresponding doctrine that supports those theories) will be oriented on the most dangerous threat, characterized by the threat that is most menacing.

A theory of victory consists of two components - assumptions about the nature of war and a vision of warfare. According to Clausewitz, war is "a duel on an extensive scale" and "an act of force to compel our enemy to do our will."[3] We can think of war as "socially sanctioned violence to achieve a political purpose."[4] All militaries make assumptions about the fundamental characteristics of war that are constant over time. Warfare, on the other hand, is "the mechanism,

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[1] Stephen P. Rosen, *Winning the Next War: Innovation and the Modern Military* (Ithaca, NY: Cornell University Press, 1991), p. 19; Benjamin Jensen, *Forging the Sword: Doctrinal Change in the US Army* (Stanford, CA: Stanford University Press, 2016), pp. 16-17; Dima Adamsky, *The Culture of Military Innovation: The Impact of Cultural Factors on the Revolution in Military Affairs in Russia, the US, and Israel* (Palo Alto, CA: Stanford University Press, 2010), p. 21.

[2] According to Jensen, 2016, p. 17, theories are "bundles of assumptions about what constitutes a threat, cause-effect relationships related to strategy development, and logics of appropriateness that define procurement and weapons design."

[3] Carl V. Clausewitz, *On War (Edited and Trans. by Michael Eliot Howard and Peter Paret)* (Princeton, NJ: Princeton University Press, 1989), p. 75.

[4] ADP 1-01 *Doctrine Primer* (Washington, DC: Headquarters, Department of the Army, 2014), p. 1-3.

method, or modality of armed conflict against an enemy…Warfare is how combatants wage war."[5] Unlike war, warfare changes over time based on the effect of technology, politics, and laws and norms, along with a host of other factors. According to the Marines, "While the basic nature of war is constant, the means and methods we use evolve continuously."[6]

A theory of victory includes the assumptions that a military makes about war's enduring characteristics and the vision of how the military will fight in the next war. The former rarely change. The U.S. Army focuses on three enduring characteristics of war: war is a human endeavor, war occurs amidst civilian populations, and war is inherently chaotic.[7] The Marine Corps focuses on: friction, uncertainty, fluidity, danger, and the centrality of the human dimension.[8] Based on the historical roots of American military doctrine and an emphasis on the philosophy of war in American military schools, it is not surprising that both organizations' assumptions about the nature of war draw heavily from Clausewitz.[9]

The element of a military organization's theory of victory that I am most concerned with in this study is the organization's vision of warfare - the "mechanism[s], method[s], or modalit[ies]" that it plans to use in war. The scholars who claim that militaries have theories of victory do not provide any insight on how to deduce an organization's theory at any given time.[10]

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[5] ADP 1-01 *Doctrine Primer* (Washington, DC: Headquarters, Department of the Army, 2014), p. 1-3.

[6] MCDP 1 *Warfighting* (Washington, DC: Headquarters, U.S. Marine Corps, 1997), preface.

[7] ADP 1-01 *Doctrine Primer*, 2014, p. 3-1 and 3-2. These assumptions are also discussed in: ADP 3-0 *Unified Land Operations* (Washington, DC: Headquarters, Department of the Army, 2011); ADRP 3-0 *Operations* (Washington, DC: Headquarters, Department of the Army, 2016); ADP 3-0 *Operations* (Washington, DC: Headquarters, Department of the Army, 2016).

[8] MCDP 1 *Warfighting*, 1997, pp. 5-15.

[9] MCDP 1 cites Clausewitz numerous times.

[10] All of the following scholars discuss theory of victory but none describe how it can be operationalized: Rosen, 1991; Jensen, 2016; Adamsky, 2010; Williamson Murray and Allan R. Millett, eds. *Military Innovation in the Interwar Period* (New York: Cambridge University Press, 1996); Emily Goldman, "Introduction: Military Diffusion and Transformation," in Emily Goldman and Thomas Mahnken, eds., *The Information Revolution in Military Affairs in Asia* (New York: Palgrave Macmillan, 2004), pp. 1-21.

The most recent work - Jensen (2016) - views theories of victory as "action repertoires" or "implied ways to solve problems" but it doesn't tell us where we can find evidence of the concept.[11]

We can determine an organization's existing theory of victory by assessing evidence from four different sources - senior leader testimony to Congress, procurement and weapons design programs, public speeches and official documents produced by the military organization, and the unofficial correspondence of military leaders. Military leaders might use testimony to "convey information to the public about a government's strategic or policy choices and its judgments about them."[12] What an organization buys (or plans to buy) is arguably one of the best ways to ascertain the type of weapons, equipment, and technologies that the organization thinks are most critical to its success in the type of warfare that it envisions it will conduct. Service chiefs, the Chairman of the Joint Chiefs of Staff, and other senior military leaders discuss elements of their vision of warfare in speeches made to military and civilian audiences. These leaders view speeches as opportunities to reinforce the relevance of the organizations they lead, to commend the organization's performance in training or combat, and to emphasize priorities for the organization which are based on leader assessments of the operational environment. However, when analyzing this type of evidence, the researcher should be aware that these military leaders may also view public speeches as opportunities to build or maintain the prestige of their organization, to make the case for primacy over a particular domain of war, and/or to garner public support for organizational interests related to missions or technology.

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[11] Jensen, 2016, p. 17.

[12] Rosa A. Brooks, "Militaries and Political Activity in Democracies," in Suzanne C. Nielsen and Don M. Snider, eds., *American Civil-Military Relations: The Soldier and the State in a New Era* (Baltimore: Johns Hopkins University Press, 2009), p. 218. Brooks refers to this type of testimony as a "public appeal."

2.1.2. What causes innovation?

A shift in the balance of power in the international system should cause military leaders to reexamine their theory of victory. A major technological development should have the same effect. If military elites conclude that their current theory of victory is inadequate based on the effect of the power shift, we expect to see doctrinal innovation. Depending on the nature of the shift, the military might also innovate organizationally, fundamentally changing its structure. Other factors - shifts in the budget, changes in the expected geography of future battlefields, and competition between intraservice rivals - are effects of balance of power shifts. While they might affect the processes of innovation once the organization has decided to innovate, they should not, on their own, cause doctrinal innovation.

Absent a major shift in the balance of power, we do not expect to see doctrinal change. However, there are numerous examples of military doctrinal innovation without a major shift. To account for this, I argue that a more effective way to understand doctrinal innovation is to confirm or deny the occurrence of a shift in the *balance of threat*. In his work on alliance formation, Walt argues that states balance in response to threats.[13] The level of threat is determined by four factors: aggregate power, proximity, offensive capability, and offensive intentions.[14] Aggregate power refers to a potential adversary's total resources. The more resources, the greater the threat. Proximity refers to the geographical distance of the adversary. Nearby states are more threatening. Offensive capability suggests that states with strong offensive capabilities are more threatening. Finally, offensive intentions refer to the degree to which a potential adversary appears aggressive. A threat is a function of capability and intention.

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[13] Stephen M. Walt, *The Origins of Alliance* (New York: Cornell University Press, 1990).
[14] Stephen M. Walt, "Alliance Formation and the Balance of World Power," *International Security* 9, no. 4 (Spring, 1985): 9-13.

When militaries perceive a shift in the balance of threat, they will examine how that shift affects their theory of victory. I expect that they will treat the most menacing threat to the state as the top priority in the doctrine development process. The military organization will evaluate the intensity and probability of the threat by examining a potential adversary's aggregate power, proximity, offensive capability, and offensive intentions. When a threat demands a doctrine that aligns with organizational preferences, I expect that militaries will embrace doctrinal change. When a threat does not align with preferences, I expect organizational resistance to doctrinal change. For example, Krepinevich argues that the Soviet threat after World War II was perceived as the most menacing threat to the American state; this "'worst-case' threat…was also the 'preferred' threat, and it contributed to [the Army's] persistent ignorance of counterinsurgency warfare."[15] In my analysis, I am also sensitive to the possibility that a military organization's threat assessment might be biased by its own preferences for training and/or combat.

I am not arguing that militaries *only* innovate when exposed to shifts in the balance of threat; I avoid these types of monocausal explanations. Rather, I argue that analyzing doctrinal change from this perspective is the most fruitful approach for understanding the causes of that change. Rather than test whether organizational factors instead caused change like so many other scholars, I make the claim that those factors are more likely to affect the nature/character of the new doctrine once the decision to change has been made.

Posen claims that civilian intervention is a necessary precondition for change once there is a balance of power shift. I argue that civilian intervention to compel doctrinal innovation is not a foregone conclusion. First, the preferences of military elites might align with civilian preferences, rendering intervention unnecessary. Civilian intervention is costly in terms of time and potential

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[15] Andrew F. Krepinevich, *The Army and Vietnam* (Baltimore: Johns Hopkins University Press, 1986), p. 5.

damage to the civil-military relationship, so civilian elites will not incur this cost when they don't have to. Here doctrinal change only happens when military leaders determine that their new theory of victory requires innovation to the way the organization fights. If civilian elites support doctrinal change or if they are indifferent to it, I expect to see a major doctrinal innovation.

The degree of elite alignment (consonance between military and civilian elites) on preferences related to doctrine is understudied. Betts finds a high degree of consonance between civilians and military professionals on decisions related to the use of force. Divergence occurs once the decision is made to use force; military professionals are more aggressive than civilians on the amount and type of force necessary.[16]

Second, if the military anticipates civilian intervention in its doctrinal processes, it will act preemptively to change its doctrine in ways that suit its preferences. Like other political actors, militaries seek to avoid intervention by outsiders, and they will take action to prevent intervention if they anticipate that it might be on the horizon. Taking action prior to civilian intervention gives first-mover advantage to the military, enabling it to revise doctrine on its own terms. The possibility of intervention can serve as the impetus for military innovation. This doesn't mean that military and civilian preferences are maligned; preferences between the two might be consistent, but the possibility of intervention incentivizes the military to move quickly in its doctrinal innovation.

When militaries reject change, but change anyway in anticipation of civilian intervention, I expect to see evolutionary or cosmetic changes to doctrine that are promoted as major innovations. The best example of this in the case of the U.S. military can be found in the Army's response to Kennedy's promotion of counterinsurgency in the Vietnam War. In anticipation of and

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[16] Richard K. Betts, *Soldiers, Statesmen, and Cold War Crises*, 2nd ed. (New York: Columbia University Press, 1991), pp. 4-5.

in response to Kennedy's intervention, the Army proclaimed that it embraced the mission set and was "making excellent progress" in adopting a counter-guerrilla doctrine.[17] The reality was that there was deep institutional resistance to counterinsurgency in the Army. Surface-level changes to doctrine were publicized as major doctrinal innovations. This satisfied civilian demands while enabling little change, if any, to the Army's theory of victory, and therefore, it's keystone doctrine.

To assess these claims, I will start by determining and comparing the interests of military and civilian elites after an environmental shift. The military elites that I am most concerned with are the service chiefs and the Chairman. Relevant civilian elites are the service secretaries, the Secretary of Defense, other senior civilians in the Pentagon, and the President.[18] Civilian intervention typically comes in the form of written or verbal orders, public speeches in which leaders give cues about their preferences, and National Security Council directives.

Evidence that shows that civilian elites favor doctrinal change but military elites do not should be a hard test of my claim that civilian intervention is unnecessary to compel doctrinal change. Here I expect to see evidence of military doctrinal change in anticipation of civilian intervention as a way of warding off civilian influence and preserving the military's first-mover advantage. Preferences should initially not be aligned; the military organization should recognize this and take action; and the result should be a modified doctrine. Rather than a major doctrinal innovation, I expect to see evolutionary or cosmetic changes that are promoted by the military organization as major changes. The evidence must show that civilian elites wanted change, military elites did not, and military elites acted prior to civilian intervention to satisfy the interests

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[17] Walter E. Kretchik, *U.S. Army Doctrine: From the American Revolution to the War on Terror* (Lawrence, Kansas: University Press of Kansas, 2011), p. 185. Quote is from General Herbert B. Powell, commanding general of US Continental Army Command, cited in Lloyd Norman and John B. Spore, "Big Push in Guerrilla Warfare," *Army* 12, no. 9 (March 1962): 28.

[18] While there are many different groups of civilians that could impact the military, for simplicity purposes, I restrict my analysis to these specific groups.

of civilians through minor doctrinal change which is promoted as major innovation. Here, military elites can use formal doctrine as a tool to minimize civilian interference.

I contend that the last possibility - military elites prefer doctrinal innovation but civilian elites are against it - is most rare because militaries are not inclined to innovate doctrinally in ways that would be harmful to a state's national security interests. Civilian resistance to doctrinal change during peacetime is not expected unless the military's preferences for change are too expensive or clearly insubordinate to national interests. Doctrinal change is costly so military organizations have no incentive to promote innovation in the face of civilian resistance. If militaries favor change and civilians are against it, I expect that military organizations would avoid doctrinal innovation. If they pursue it, civilian elites can best prevent change through their control over the budget process.

In summary, when a relative power shift or a shift in the balance of threat causes a military organization to reevaluate its theory of victory, the logic above leads to two claims. First, without civilian support, military organizations will not innovate doctrinally. When civilians favor doctrinal change, militaries will change. Whether or not that change is major or minor depends on military elite preferences. When military elites favor change, expect to see major doctrinal innovation. When military elites do not favor change, expect to see minor doctrinal change that the military organization promotes as major change.

2.1.3. What Determines the Character of Innovation?

Once a relative power shift or a shift in the balance of threat causes a military organization to alter its theory of victory and innovate doctrinally, the second level of analysis which focuses inside the organization sheds light on the character of the new doctrine. This level of analysis

considers the possible role of competition between actors inside the organization, competition between services subordinate to the same state, and organizational culture. I discuss each, below.

2.1.3.1. Intraservice Rivalry

When an external shift causes a military organization to review its theory of victory, competition between branches might affect the new theory of victory and the character of the doctrinal innovation that follows. Confirmation of the effect of intraservice factors on doctrinal innovation requires the presence of three conditions: (1) contrasting preferences between one or more branches/combat arms over how the organization should respond to the environmental shift, (2) evidence of a competition between the actors that represent those preferences, and (3) a doctrinal change that represents either a compromise between factions or an organizational decision to favor one faction over the other.

If intraservice competition affects doctrinal innovation, then mechanisms designed to reduce intraservice friction - such as the establishment of combined arms formations - should either reduce the frequency of doctrinal innovation or change the character of that innovation. If the organization as a whole responds to the environmental shock with a coordinated doctrinal innovation, then that would deny the relevance of intraservice factors on innovation. Also, greater homogeneity within the Marine Corps leads us to expect less intraservice competition when compared to the more heterogeneous Army. Evidence of the influence of intraservice competition on the character of innovation can be found in the official and unofficial correspondence of the military leaders that are responsible for each of the branches, the curricula of branch schools, interviews with military officers, and official branch reports.

2.1.3.2. Interservice Rivalry

When an environmental shift affects a military organization's budget or causes a new mission area to emerge, interservice competition should affect the character of the innovation. We should see the services compete for scarce resources to either maintain their current position or to establish jurisdiction in the new mission area. Competition between services subordinate to the same state can act as an intervening variable between an external shift and a new doctrine. When two or more services are deadlocked in response to a shift, I expect to see civilian intervention into the doctrinal process. The purpose of this intervention is not to compel doctrinal change; it is to resolve friction between two services. In the absence of acute interservice competition, military organizations will anticipate civilian intervention and take action to render it unnecessary. When acute interservice competition is present and deadlock results, military organizations will have no choice but to allow (and respond to) civilian intervention.

Given the Marine Corps' historical use as a second land army, interservice competition between the Marine Corps and the Army is possible. In World War I, the performance of Marines on land in Europe "opened a rift between the Army and the Marines" that lasted for many years after the war and led some to question why the U.S. needed to maintain two services with the same capability on land.[19] Today, the Army and the Marine Corps compete in the arena of "strategic mobility" - each organization wishes to be rapidly deployable and capable of forcible entry on land abroad.[20]

Confirmation of the effect of interservice factors on doctrinal innovation requires the presence of two conditions: (1) contrasting preferences between one or more services (army, navy,

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[19] Duane R. Worley, *Shaping U.S. Military Forces: Revolution or Relevance in a Post-Cold War World* (Westport, CT: Praeger Security International, 2006), p. 180.
[20] Worley, 2006, p. 182.

air force, or marines) over the allocation of resources or jurisdiction and (2) evidence of competition between the actors of each service who represent those preferences. When the result is doctrinal innovation by one or more of the services, the source is the environmental shift that caused the competition, and interservice competition is the factor that influenced the character of the innovation.

The Marine Corps' historical struggle for survival is well-documented. Marutollo notes that about every eleven years since 1829, the Marine Corps faced a major threat to its existence.[21] According to Worley, this struggle led to innovation in amphibious operations, well-integrated air and ground operations, the employment of helicopters for vertical envelopment, urban combat capability, and the creation of a chemical and biological response force.[22] While the Marines clearly maintain primacy over all the services in the arena of amphibious assault, this mission is exceedingly rare and therefore difficult to use as leverage in arguments made with the executive branch over the Marine's indispensability. Much less has been written about instances in which the Army fought for its organizational survival, but there is evidence that it did so in the nuclear age of the 1950s.[23]

Given the scarcity of resources, the services are in a constant battle to maintain or increase their share of the overall military budget. When an external shift affords a military organization a budget increase, I expect that the organization will be less likely to innovate because existing

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[21] Frank Marutollo, *Organizational Behavior in the Marine Corps: Three Interpretations* (Westport, CT: Praeger Publishers, 1990), p. 1. The author cites R. D. Heinl, "The Cat with more than Nine Lives," *U.S. Naval Institute Proceedings* (June 1954): 658-671.
[22] Worley, 2006, p. 192.
[23] See, e.g., Andrew J. Bacevich, *The Pentomic Era: The U.S. Army Between Korea and Vietnam* (Washington: National Defense University Press, 1986).

ways of doing business are unthreatened.[24] When budgets decrease,[25] militaries should be more

inclined to innovate doctrinally to attain their own "doctrinally-sanctioned domains" within which

they can assure an autonomy of roles and missions.[26] According to Sapolsky, "There is no better

spur to candor, error correction, and creativity in defense planning than a very tight budget and a

few smart rivals competing for budget share."[27]

2.1.3.3. Organizational Culture

I use Kier's definition of culture: "the set of basic assumptions and values that shape shared

understandings, and the forms or practices whereby these meanings are expressed, affirmed, and

communicated to the members of an organization."[28] Long, drawing from the work of Builder,

argues that culture is the "personality" of the organization[29], and he emphasizes the important role

of the formative experiences of military organizations on the shared beliefs that constitute their

culture.[30] These shared beliefs (or mental models) serve as "heuristics which facilitate decision

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[24] I acknowledge that this hypothesis is counterintuitive. Others might suggest that scarcity will encourage organizations to focus on their core essence, while abundance will lead to experimentation or expansion into different realms.

[25] For example, in the 1950s, the U.S. Army was concerned with losing its budget share to the Air Force unless it adjusted to President Eisenhower's New Look policy. As such, it explored tactical nuclear weapons and fundamentally overhauled its doctrine/structure to the pentomic construct. When President Kennedy shifted to a different nuclear policy that no longer placed a premium on tactical nuclear weapons, the Army was no longer threatened by losing budget share to the Air Force and so it shifted back to its conventional doctrine.

[26] Kevin Sheehan, *Preparing for an Imaginary War? Examining Peacetime Functions and Changes of Army Doctrine* (Ph.D. diss. Columbia University, 1988), p. 259. Also, see Asa A. Clark, "Interservice Rivalry and Military Reform," in Asa A. Clark, Peter Chiarelli, J. S. McKitrick, J. W. Reed, eds., *The Defense Reform Debate: Issues and Analysis*. (Johns Hopkins University Press, 1984), pp. 250-271. From a research design perspective, the challenge is to account for the possibility that changes in the budget already take into account upcoming changes to doctrine.

[27] Harvey M. Sapolsky, "The Interservice Competition Solution," *Breakthroughs* (Spring 1996): 119-120.

[28] Elizabeth Kier, "Culture and Military Doctrine," *International Security* 19, no. 4 (1995): 69-70.

[29] Austin Long, *First War Syndrome: Military Culture, Professionalization, and Counterinsurgency Doctrine* (Ph.D. diss. MIT, 2010), p. 49;

Carl H. Builder, *The Masks of War: American Military Styles in Strategy and Analysis: A RAND Corporation Research Study* (Baltimore: Johns Hopkins University Press, 1989), pp. 7-8. Builder uses the term "institutional personality" which Long argues is synonymous with "organizational culture."

[30] Long, *The Soul of Armies: Counterinsurgency Doctrine and Military Culture in the US and UK* (Ithaca, NY: Cornell University Press, 2016), pp. 25-29. Long believes that a military's "first war" experience has a significant effect on the organization's culture. This culture is then transmitted over time through the organization's professional education system.

making under conditions of risk and uncertainty."[31]   For Long, culture serves two purposes: it provides the mental model that military organizations use in their assessment of "how the world works" and it affects the military organization's "view of right and wrong."[32]   For the sake of simplicity, when I look for culture, I look at an organization's values and norms.

I argue that organizational culture can condition the options that a military organization believes it has at its disposal. Organizational culture is not the source of military doctrine but rather it is an intervening variable between the international security environment (the source) and doctrinal innovation (the outcome). A military organization's culture should be resistant to change and therefore consistent and stable. When the international security environment changes, the military organization "continues to think along the lines set by its culture and integrates exogenous changes into established way of doing things."[33]   Culture mediates the effect of the exogenous shock on doctrine.

The challenge for the political scientist is to figure out what types of evidence must be analyzed to identify a military organization's culture. I agree with Kier that in order to determine a military's culture, the researcher must study the organization's history, internal correspondence between officers, educational curricula, and military journals.[34]   Long also provides a list of eight questions that the researcher can use to derive the elements of a military organization's culture. For my purposes, three of those questions are particularly important: (1) "What are the optimal methods of war (attrition/firepower, maneuver/shock, etc.), and how should they be combined?"

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[31] Long, 2010, p. 48. Long draws from Daniel Kahneman and Amos Tversky, "Prospect Theory: An Analysis of Decision Under Risk," *Econometrica* 47, no. 2 (March 1979): 263-292; Kahneman and Tversky, *Judgment Under Uncertainty: Heuristics and Biases* (New York: Cambridge University Press, 1982).

[32] Long, 2010, p. 35. Long views these two functions as a logic of consequences and a logic of appropriateness. See also, James G. March and Chip Heath, *A Primer on Decision Making: How Decisions Happen* (New York: The Free Press, 1994).

[33] Kier, 1995, p. 80. Kier focuses on changes in the domestic environment whereas I focus on changes in the international security environment.

[34] Ibid., p. 70.

(2) "What is the relationship between one's own military and other organizations (foreign, sister services, civilians, etc.)? and (3) "Is war frequent/limited or infrequent/total?"[35] Fortunately, I can turn to existing scholarship on the organizational cultures of the two military services at the center of my analysis - the U.S. Army and the U.S. Marine Corps - for a preliminary understanding of the personality of those organizations.

Books by Builder and Worley are the most comprehensive accounts of the cultures of these two services.[36] Worley identifies six characteristics of modern Army culture: (1) a preference for major wars over small wars, (2) a preference for offensive operations over defensive operations, (3) a preference for firepower over maneuver,[37] (4) a preference for combined arms operations over single branch operations,[38] (5) an emphasis on professional soldiers rather than part-time soldiers, and (6) the importance of history and doctrine.[39] While the Army of today emphasizes combined arms and joint operations throughout its doctrine, there are still distinct cultures within each one of the Army's branches. According to Worley, "Each branch has its separate entry point and cultural home, and all officers retain a strong relationship with their branches through which promotion and assignments are made."[40] The predominant cultures from which most of the Army's senior leaders come are the infantry and the armor. The Army's "preferred conception of

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[35] Long, 2016, p. 19. I quoted questions 1, 3, and 4 from Long's framework.

[36] Builder, 1989; Worley, 2006.

[37] I argue that this preference existed until World War I. After that war, the Army valued maneuver over firepower.

[38] This was not always the case. Warfare in the 20th century led the Army to transform its culture from one that valued individual branches (primarily the infantry and the cavalry) to one that valued combined operations (integrated operations between more than one branch).

[39] Worley, 2006, pp. 70-73.

[40] Ibid., p. 72. Builder, 1989, p. 27, makes the point that while Army officers self-identify with their branch, the "branches have a brotherhood not evidenced among the specialties of the other services." Rosen, 1991, is also particularly interested in the role that promotion pathways have on innovation.

war" tends to place infantry and armor "in the dominant *supported* role and all other branches in the *supporting* role."[41]

Worley's analysis supports Krepinevich's development of the idea of an "Army Concept" which characterizes Army culture as oriented on "a focus on mid-intensity, or conventional war and a reliance on high volumes of firepower to minimize casualties."[42] Builder's account of Army service culture confirms most of these attributes and adds one more: historically, Army culture has resisted new technologies, emphasizing individual soldier skills over the value of new equipment.[43]

Worley identifies two, primary "strains" of Marine Corps culture: (1) a preference for "attack[ing] into the teeth of the enemy" in the form of the amphibious assault and (2) a preference for conducting "expeditionary interventions" in the form of small wars.[44] The necessity for competence in amphibious assault and small wars leads Marine culture to emphasize versatility and adaptability. Marine Corps culture values major wars and small wars, but at least one scholar suggests that Marines prefer the latter.[45] Combined arms operations are important, but the Marine's primary focus is on the rifleman; "every marine a rifleman" is a commonly used slogan.[46] The Marines are not as stratified as the Army in terms of separate branches. Since World War II,

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[41] Worley, 2006, p. 73. The author contends that the armor branch is in the supported role but my experience suggests that the infantry branch and the armor branch are both viewed in that way.

[42] Krepinevich, 1986, p. 5. I don't think that the author intends to suggest that the Army culture values firepower over maneuver. Rather, I think he would argue that it values high volumes of firepower in support of maneuver.

[43] Builder, 1989, p. 24. The author claims that in recent years, "the Army is getting 'hooked' on toys too." Builder does not discuss the "institutional personality" of the Marine Corps. I assume that this is because of a perception that the Marines did not have substantial influence on strategic issues or force planning as a service. It might also be because the Marine Corps falls under the Department of the Navy.

[44] Worley, 2006, p. 176.

[45] See, e.g., Keith B. Bickel, *Mars Learning: The Marine Corps Development of Small Wars Doctrine, 1915-1940* (Boulder, CO: Westview Press, 2001), p. 238.

[46] Worley, 2006 pp. 194-195.

the Marine Corps consistently searched for opportunities to integrate tactical air support (i.e. aviation) into their operations.[47]

Hoffman compares Marine culture to Army culture.[48] According to Hoffman, the Marines value teamwork and an expeditionary ethos while the Army values its connection to the nation and its citizens; the Marines are more concerned about their legitimacy as an institution than the Army (even after the Corps' minimum size was codified in legislation); and the Marines minimize the importance of subcultures within their own service while the Army values and emphasizes intraservice differences. Holmes-Eber describes four Marine Corps cultural "ideals": "every Marine a rifleman," "soldiers of the sea," "honor, courage, and commitment," and "tip of the spear."[49]

Now that I have explained how scholars have defined the distinctive elements of Army and Marine Corps culture, it is necessary to discuss how these elements might affect the character of doctrine once a shock in the international environment leads to the initiation of a doctrinal change process. The challenge here is tautological. As Long writes, "The distinction between military doctrine and military culture is often quite blurry."[50] To distinguish between the two, Long argues that culture represents what organizations *believe*; doctrine represents what organizations *do*.[51] Doctrine is physical whereas culture "is transmitted through particular experiences and environments."[52]

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[47] Worley, 2006, p. 194.

[48] Frank. G. Hoffman, "The Marine Mask of War," *Foreign Policy Research Institute* (November 2011), accessed online at http://www.fpri.org/article/2011/11/the-marine-mask-of-war/.

[49] Paula Holmes-Eber, *Culture in Conflict: Irregular Warfare, Culture Policy, and the Marine Corps* (Redwood City, CA: Stanford University Press, 2014), pp. 29-108. These ideals have become clichés.

[50] Long, 2010, p. 42.

[51] Ibid., p. 43.

[52] Long, 2010, p. 44.

To compound the tautological challenge, I argue that the attributes that Worley and Builder claim are cultural are really manifestations of culture and not attributes of culture. The Army's preference for large over small wars is not necessarily a cultural characteristic. This is an issue beyond semantics. Mischaracterizing a preference for a type of war as a cultural attribute leads to tautological problems when a researcher looks for evidence to confirm culture's influence. If the cultural attribute is a preference for major wars, then I would need to see evidence of doctrine oriented on large-scale wars. This is tautological.

I argue that the actual cultural attributes that lead to the Army's preference for large wars are: "fear of unpreparedness," a desire to prepare for worst-case scenarios, a belief that a force competent in large wars will also be competent in small wars, and a penchant for the deliberate planning necessary to support the large-scale mobilization needed for a major war.[53] A preference for offensive over defensive operations is the result of an Army culture that prioritizes aggressiveness and seizing the initiative. Defensive operations are perceived to be counter to those traits - "one defends when his strength is inadequate; he attacks when it is abundant."[54] This also explains the Army's preoccupation with the armor and infantry branches - the two branches most critical to the spirit of the attack. Finally, Army culture values heterogeneity[55] in force structure - an attribute that explains the existence of subcultures in the Army's branches and a preference for combined-arms operations.

Using a similar thought process, I argue that Marine Corps cultural attributes include: versatility and adaptability, (the Corps embraces two fundamentally different expeditionary

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[53] Worley, 2006, p. 54. Worley addresses these facets of Army culture but does not distinguish them from the preferences which they lead to.

[54] Sun Tzu, *The Art of War*, trans. S.B. Griffith (New York: Oxford University Press, 1982), p. 85.

[55] Karen O. Dunivin, "Military Culture: Change and Continuity," *Armed Forces & Society* 20, no. 4 (Summer 1994): 535. The author focuses on military culture broadly (not service culture). She characterizes military force structure as heterogeneous in the "evolving model" that she discusses.

mission sets - amphibious operations and small wars), warrior spirit (every Marine a rifleman; Marines operate at the tip of the spear), and homogeneity in force structure (lack of stratification and centrality of the infantryman).

When Army culture intervenes in a doctrinal process, I expect to see doctrines that are offensive, firepower-centric, oriented primarily on the role of the infantry and the armor, and focused on mid-intensity operations.[56]   When Marine culture intervenes, I expect to see doctrines that are offensive, infantry-centric, and broad rather than specific and prescriptive. Broad doctrines enable maximum flexibility in operations; overly-prescriptive doctrines inhibit that flexibility. Infantry-centric doctrines are people-centric rather than equipment/weapons-centric. If either service perceives civilian intervention to force the development of a doctrine that is counter to its culture, I expect to see overt resistance or military change in anticipation of intervention that satisfies civilian demands in a way that still preserves the service's cultural preferences.

2.2. Case Study Selection

In this section, I explain the rationale behind conducting a comparative case study analysis. I introduce the two military organizations at the core of the analysis - the U.S. Army and the U.S. Marine Corps - and I explain the advantages and disadvantages of analyzing two services that are subordinate to the same state. I discuss the time period of analysis and the logic that drove it. I also generate a list of general questions that I use for data collection in the case studies. Finally, I describe the primary bodies of evidence that I will explore in the case study analysis - formal doctrinal manuals - to identify the outcome of interest - military doctrine.

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[56] High-intensity operations are characterized by "the large-scale exchange of strategic nuclear weapons." Mid-intensity operations are "direct force-on-force clash[es] between conventional forces - the organized forces of states." Low-intensity operations are characterized by "social conflict, failed or failing states, and the employment of irregular, militia, or guerrilla forces using terrorist tactics." See *Small Wars Manual*, United States Marine Corps (Washington, D.C.: U.S. Government Printing Office, 1940) cited in Worley, 2006, p. 7.

2.2.1. Methodology and Case Selection

The phenomenon under investigation in this study - military doctrine - lends itself to a qualitative research design. While a quantitative research design would allow the researcher to analyze a larger number of cases, it is not appropriate here because of the complexity of the doctrinal innovation process and the fact that the variables of interest are not easily quantified. A qualitative approach allows for a more careful study of fewer cases. The specific qualitative procedure that I use is a structured, focused comparison.[57] This approach is "structured" because I use general questions that "guide the data collection and analysis."[58] It is "focused" because "it deals selectively with only certain aspects of the historical case."[59] The purpose of a controlled comparison of two military organizations is to learn more about doctrinal innovation, to better develop the proposed theoretical framework, and to explain the cases that are examined.[60]

In regard to the design of the structured, focused comparison, the dependent variable is military doctrine and the independent variable is the balance of power in the international system (and, by extension, the nature of the perceived enemy threat).[61] Though it is not the primary outcome of interest, I am also attentive to evidence of changes in organizational structure to determine whether or not structural change has bearing on doctrinal change. Intervening variables

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[57] This approach is attributed to Alexander L. George, "Case Studies and Theory Development: The Method of Structured, Focused Comparison," in Paul G. Lauren, ed., *Diplomacy: New Approaches in History, Theory, and Policy* (New York: Free Press, 1979), pp. 43-68; Alexander L. George and Richard Smoke, *Deterrence in American Foreign Policy: Theory and Practice* (New York: Columbia University Press, 1974).

[58] George, 1979, pp. 61-62.

[59] Ibid., pp. 61-62.

[60] Ibid., p. 52, refers to this as a "heuristic" case study. He attributes this to Harry Eckstein, "Case Study and Theory in Political Science," in F. I. Greenstein and N. W. Polsby, eds., *Handbook of Political Science* (Reading, MA: Addison-Wesley, 1976), pp. 79-138.

[61] Because of the limitations of the balance of power approach discussed in the previous section, I deliberately decide, instead, to focus on the balance of threat in the international system.

that explain the character of doctrine are organizational culture, intraservice and interservice competition, and organizational interests related to survival.[62]

At first look, one might think that comparing two military organizations that are subordinate to the same state prevents variation on the independent variable, but I argue that is not the case. Military and civilian elites with jurisdiction over each of the military organizations often have different perceptions of the threats. It is not uncommon for assessments of the security environment to differ between services, particularly given the fact that services focus on components of the security environment that are most relevant to their own organizational missions, priorities, and interests. I can exploit the fact that changes in the threat environment have different effects on the Army and the Marines based on assumptions that each service has regarding the division of labor between the services as components of the broader U.S. military establishment.

From a research design perspective, employing change as an outcome variable is challenging because the existence of change and non-change can be subjective. For this study, I define a doctrinal change as one that redefines the organization's method(s) of fighting in war. I expect such a change to be codified in an organization's formal doctrinal manuals. The primary body of evidence that I examine to detect change will be a military's keystone doctrinal manual. New doctrines that are codified in a manual but are not reflective of the military's actual methods and modes of operating, do not meet the doctrinal change threshold. Changes in name only are inconsequential if/when the military goes to war. I consider such cases to be evidence of non-change.

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[62] I don't claim that balance of threat factors are the only possible cause of doctrinal change, but I approach the case studies in this dissertation from the balance of threat perspective because I think it is the most fruitful level of analysis for understanding the causes of doctrinal innovation.

I conduct the comparison between the U.S. Army and the U.S. Marine Corps from the post-World War II period until 2001. While the interwar period between the World Wars has been studied extensively, there is very little scholarship on the period from the end of the World War II until 2001. My primary purpose is to examine peacetime doctrinal change so I end my analysis prior to the U.S. intervention in Iraq and Afghanistan after the September 11, 2001 attacks.[63] Conflicts that occur throughout the case-study period are assumed to serve as factors that could affect military doctrine. These include military actions in Grenada, Panama, the first Gulf War, Somalia, Bosnia, and Kosovo. This period also includes a major balance of power shift that occurred at the end of the Cold War. The period from the fall of the Berlin wall to the 2001 attacks - referred to by some as the second interwar period[64] - is interesting because it was a period defined by military budget reductions, interservice competition, and strong interest in technologies that promised to digitize the battlefield.

During the case-study period, the U.S. Army established four fundamentally different doctrines - pentomic, Active Defense, AirLand Battle, and Full-Dimensional/Full-Spectrum Operations. The pentomic doctrine entailed a massive reorganization of the Army for the purpose of conducting tactical nuclear war. Active Defense was the first Army doctrine in its history to promote defensive over offensive operations. AirLand Battle synchronized the Army and the Air Force to an unprecedented degree. Full-Dimensional/Full-Spectrum Operations expanded the traditional Army focus on offensive and defensive operations to also include civil-support missions and stability operations. During the same period, the Marine Corps developed a vertical envelopment doctrine after the advent of nuclear weapons in the 1940s and 1950s, and published a maneuver warfare doctrine in 1989. Both organizations established a proponent for developing

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[63] I also don't proceed past 2001 because material from recent years is not yet in the archives.
[64] Sapolsky et al., 2009, p. 2.

doctrines and concepts during the case-study period. The Army developed the Training and Doctrine Command (TRADOC) in 1973 and the Marines developed the Marine Corps Combat Development Command (MCCDC) in 1985.

I expect that when both services are subject to similar external shifts *and* their perception of those shifts causes the development of a new theory of victory, they will generate similar doctrinal responses.[65] Environmental shifts might also lead both services to initiate the doctrinal innovation process but change their doctrine in fundamentally different ways. This is where we would expect cultural, interservice, and/or intraservice factors to come into play. Existing scholarship on U.S. military doctrine is disproportionately focused on the Army; scholars have ignored Marine Corps doctrinal development during this time period. Long conducts the only comparative case study of the Army and the Marine Corps in any time period, but he focuses only on counterinsurgency doctrine.[66] The majority of my research on the Marine Corps cases required archival work in Quantico, Virginia.

Comparing the Army to the Marine Corps has advantages and disadvantages. Comparing these two organizations is similar to a natural experiment in that both organizations are "armies" subordinate to the same state. Unlike in other states, the Marines and the Army can both operate in the same domain of battle - ground combat.[67] If the two organizations face similar external stimuli and their perceptions of those stimuli are the same, then I can hold external factors *constant* and exploit variance in the internal characteristics of the organizations that might affect the outcome of interest. If the organizations face the same external stimuli but their perceptions of

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[65] In my analysis, I am sensitive to the possibility that there is more than one shift and/or variation in when and how a particular service responds to a shift.

[66] Long, 2010, 2016.

[67] Worley, 2006, p. 51, makes the point that "The Marine Corps, too, seizes and holds terrain in support of national objectives, but orients on expeditionary warfare rather than on sustained land combat and major war." Still, the existence of two services that can both seize and hold terrain subordinate to the same state is unique.

those stimuli are fundamentally different, then I can look to see if the organizations changed in different ways.

The key mechanism for doctrinal change in Posen's balance of power theory is civilian intervention. My theoretical framework only expects intervention when two services are deadlocked in interservice competition. However, if civilian intervention in the Army did lead to more doctrinal innovation and the absence of such intervention enabled the Marines to avoid innovating, then that would confirm Posen's theory.

The most significant limitation in the organizational comparison is the size difference between the two services. In recent decades, the Army has traditionally been about twice as large as the Marine Corps. The literature on organizations argues that large organizations adopt innovations less often than smaller organizations.[68] Yet, with respect to the Army and the Marine Corps, we see the reverse: the larger, more diverse Army adopts more doctrinal innovations than the smaller, nimbler, and more homogenous Marine Corps.

A unique characteristic of the Marine Corps is its relationship with the U.S. Navy. This relationship originated when the Corps was created in 1775. Throughout the 1800s, Marines provided security on Navy ships and served as landing forces that operated from Navy platforms. As the Marine Corps mission changed over time from ship security to advanced base operations and small wars, the tactical link between the Navy and the Corps weakened but the administrative link endured. Today, Marines still serve on ships, but they are capable of fighting on land, sea, or air. Though the Marines are a separate service, they fall under the administration of the Department of the Navy. Like the other services, the Marine Corps has a service chief - known as the Marine

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[68] Wilson, 1971, p. 201. Large organizations are diverse - they have a complex task structure and incentive system which makes it more difficult for executives to exercise influence over the organization's members, thereby reducing the probability that innovations will be adopted.

Commandant[69] - but he/she reports to the Secretary of the Navy; the Marine Corps does not have a separate civilian secretary. Like the other services, the Corps budget is usually listed as a separate line item but in reality, the Marines receive their budget through the Department of the Navy.

2.2.2. Data Requirements for the Cases

To guide the comparison of the Army and the Marine Corps, I developed a list of general questions that I used in my analysis of each case. These questions serve are the "data requirements" for the controlled comparison.[70] The questions are general to ensure that they apply to all cases. However, when appropriate, I also ask specific questions of each case to identify distinctive characteristics that are relevant for theory development.[71]

1. What is the organization's theory of victory?

(a) What assumptions does the organization make about the nature of war? (it's enduring characteristics)

(b) What is the organization's vision of warfare in the next war? (mechanisms, methods, modalities)

2. Do external shifts - shifts in the balance of threat, development of a major military technology, collapse/rise of great power(s), change in the capability/intentions of an adversary, or a crisis/war - affect the existing theory of victory?

(a) How do military leaders respond to these shifts? How do they perceive the effect of the shift on the military organization?

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[69] In the 1980s, the Marine Corps achieved full status on the Joint Chiefs of Staff. This gave it de facto equality with the other services, but, curiously, did not alleviate Marine Corps anxiety over its survival.

[70] George, 1979, p. 55.

[71] Ibid., p. 62.

(b) What determines whether or not shifts cause a reevaluation of an existing theory of victory?

(c) To what extent do military leaders consider the capabilities/intentions of adversaries?

(d) How does the military organization prioritize threats when facing more than one?

3. When does a new theory of victory lead to the initiation of a doctrinal change process?

(a) What are the perceived costs and benefits of changing doctrine? Why does the organization think that the benefits outweigh the costs?

(b) Is organizational structural change considered in lieu of or in addition to doctrinal change? If so, why?

(c) What factors are considered by military leaders when they initiate doctrinal change?

4. How do civilians affect processes to reevaluate a theory of victory and to initiate doctrinal change?

(a) Are civilian interests aligned with military interests?

(b) If civilian elites want change, but military elites do not, what results?

(c) If military elites want change, but civilian elites do not, what results?

(c) Do military leaders take action in anticipation of civilian intervention?

5. When a doctrinal change process is initiated, do factors internal to the organization affect the new doctrine's character?

(a) What goals do military leaders have for the new doctrine?

(b) Do the cultural attributes of the organization - intervene to affect the nature of doctrinal change? If so, how?

(c) Is the organization competing with other organizations over technology, a desired mission set, or funding?

(d) Are sub-elements of the organization competing amongst themselves?

(e) If one or both of these competitions are present, how do they influence doctrine?

2.2.3. Evidence of Doctrine

The primary body of evidence that I use to confirm or deny the outcome of interest - doctrinal change - are keystone doctrinal manuals. Below, I provide background on doctrine in the Army and the Marine Corps.

2.2.3.1. Keystone Doctrine - U.S. Army

Keystone publications are the doctrinal manuals that provide the broadest expression of how the Army thinks it will fight at any given time.[72] Ney and Kretchik provide the most comprehensive assessments of the history of U.S. Army keystone doctrine from the American Revolution to the present day.[73] Ney contends that there are two, primary periods in the evolution of Army doctrine: the period from the American Revolution to World War I and from the end of World War I to the Vietnam War.[74] In first period, the evolution of the Army *field manual* (an official publication encapsulating doctrine) was dependent primarily (though not entirely) upon the publications of private individuals.[75] Field manuals published throughout the 1800s were mainly the work of military intellectuals at the United States Military Academy at West Point which was established in 1802. The publication of the *Field Service Regulations, United States Army, 1905* initiated the centralization of doctrine by the War Department. In Ney's second period (World War I to the Vietnam War), the post-World War I training literature program and the development of the Basic Field Manual by the War Department in 1930 initiated the beginning of

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[72] Army doctrine does not view keystone publications as superior to the dozens of other field manuals that it publishes, but it is clear that keystone manuals are the most informative when it comes to explaining how the Army will fight as an organization.

[73] Virgil Ney, *Evolution of the US Army Field Manual: Valley Forge to Vietnam* (Fort Belvoir, VA: Combat Operations Research Group, 1966); Kretchik, 2011).

[74] Ibid., p. 1.

[75] Ibid.

the "modern system of field manuals."[76] During this period, field manual production rested firmly under the control of the War Department (and by 1973, the Training and Doctrine Command, TRADOC) and the process formalized over time.

Kretchik concurs with Ney's first period - the American Revolution to World War I (1792-1904) - but subdivides Ney's second period into three, distinct eras. In the first era (1905-1944), the *Field Service Regulation* became the primary field manual officially produced by the Army's War Department General Staff (WDGS) based on direction from the Secretary of War, Elihu Root. At the outset of this period, the Army conducted a series of comprehensive evaluations to consolidate lessons learned from World War I into U.S. Army doctrine. While the interwar period lacked any fundamental doctrinal shifts, the onset of World War II spurred renewed attention to Army doctrine and resulted in another surge in the encapsulation of lessons learned in doctrine in 1941 and 1944. In the second era (1944-1962), doctrine expanded to account for multi-service (or joint) operations between the Army, the Navy, and the Army Air Force. In the third and final era (1962-present), coalition (and later, multinational and interagency) warfare was codified in doctrinal publications.[77]

The Army established the Training and Doctrine Command (TRADOC) on July 1, 1973 - an organization charged with the development of doctrine, leader development, recruiting and training, and shaping the organizational structure of the Army through force structure design and the integration of capabilities and materiel.[78] From the early 1940s to the late 1960s, the Army's training, doctrine, and education programs were managed by Army Ground Forces (1942-1948), Army Field Forces (1948-1955), the Continental Army Command (CONARC) (1955-1962), and

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[76] Ney, 1966, p. 2.
[77] Kretchik, 2011, p. 284.
[78] See http://www.tradoc.army.mil/About.asp for information about TRADOC's mission.

the Combat Developments Command (CDC) (1962-172).[79] TRADOC was the first deliberate action by the U.S. Army to centralize the doctrine development and publication process within an organization separate from the Army's central headquarters. The decision to do so implied a clear recognition of the importance of doctrine and it addressed the long, historical challenge to synchronize doctrine between the headquarters, units in the field, and the Army's school system.

From 1905 until 2016, the Army published 20 editions of its keystone doctrine.[80] The 1905, 1910, 1913, 1914, and 1923 publications were named *Field Service Regulations, United States Army*. The 1939 manual was named *Tentative Field Service Regulations* Field Manual 100-5 *Operations*. The 1941, 1944, 1949, 1954, and 1962 manuals dropped the "*Tentative"* and kept the rest of the name the same. The 1968 manual was named Field Manual (FM) 100-5 *Operations of Army Forces in the Field*.

In 1975, DePuy moved the task of writing Field Manual 100-5 from the Combined Arms Center (CAC) at Fort Leavenworth, Kansas to the Concepts Branch of TRADOC Headquarters.[81] By moving the doctrine-writing process to his headquarters, DePuy not only underscored the importance of the new FM 100-5, he also linked doctrine to acquisition - specifically, the development, analysis, and procurement of new weapons systems.[82] The 1976, 1982, 1986, and 1993 versions were named Field Manual 100-5 *Operations*. In 2001 and 2008, the manual was renamed Field Manual 3-0 *Operations*. In 2011, the name changed to Army Doctrinal Publication

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[79] Andrew J. Birtle, *U.S. Army Counterinsurgency and Contingency Operations Doctrine, 1942-1976* (Washington: Center of Military History, 2006), pp. 231-232.

[80] Today, the U.S. Army calls keystone doctrine "capstone doctrine." I argue that they are one and the same but I will use "keystone" throughout this dissertation.

[81] Benjamin King, "Victory Starts Here: A 35-Year History of the US Army Training and Doctrine Command," *Combat Studies Institute*, U.S. Army Command and General Staff College, 2008, p. 31. DePuy instituted this change in proponent partly because of a dispute over the role of doctrine with Lieutenant General John Cushman who commanded the Combined Arms Center while DePuy commanded TRADOC. Cushman saw doctrine as a guide; DePuy saw it as regulatory.

[82] Herbert, 1988, p. 78.

(ADP) 3-0 *Unified Land Operations*. Today, the manual is named Army Doctrine Reference Publication (ADRP) 3-0 *Operations*.

Although the life-span of each edition varied, on average the Army published a new keystone manual every five years.[83] For the first one-hundred and fifty years of Army doctrine, there was little effort by the institution to promote new keystone publications widely outside of the Army. This changed in the 1950's when the Army branded its new organizational structure and keystone doctrine with the term pentomic division.[84] After the pentomic division concept, branding doctrinal change became the Army's norm. The 1976 manual was known as Active Defense;[85] the 1982 manual was Air-Land Battle;[86] the 1986 manual was AirLand Battle Future;[87] the 1993 manual was Full-Dimensional Operations; the 2001 manual was Full Spectrum Operations;[88] and the 2011 manual was Unified Land Operations.[89] Today, the Army's Combined Arms Center (CAC) is working on the next keystone publication which will update the Field Manual 3-0 that was released in 2008.[90]

In the case study analysis that follows, Army keystone publications serve as the primary evidence that I use to understand military doctrine. Comparing a publication to its predecessor allows me to determine whether or not the manual is a doctrinal innovation. Rosen warns us not to label "Changes in the formal doctrine of a military organization that leave the essential workings

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[83] The 1913 manual had the shortest life-span, lasting only a year. The post-World War I 1923 manual had the longest life-span, lasting sixteen years.

[84] The pentomic doctrine was developed after the publication of the 1954 *Field Service Regulations* but was formalized in two updates to that manual in 1956 and 1958.

[85] Field Manual 100-5 *Operations* (Washington, DC: Headquarters, Department of the Army, 1976).

[86] Field Manual 100-5 *Operations* (Washington, DC: Headquarters, Department of the Army, 1982).

[87] Field Manual 100-5 *Operations* (Washington, DC: Headquarters, Department of the Army, 1986).

[88] Field Manual 3-0 *Operations* (Washington, DC: Headquarters, Department of the Army, 2001).

[89] ADP 3-0 *Unified Land Operations* (Washington, DC: Headquarters, Department of the Army, 2011).

[90] Jen Judson, "Army's New Operations Field Manual to Debut Next Year at AUSA," *Defense News* (October 13, 2016), accessed online at: http://www.defensenews.com/articles/armys-new-operations-field-manual-to-debut-next-year-at-ausa.

of the organization unaltered" as innovations.[91] Rosen cites the U.S. Army's doctrinal change

from 1945 to 1980 as an example of an institution that changed its formal doctrine without

changing its "essential workings."[92] Though the Army changed its doctrine three times over that

period - the pentomic division, Active Defense, and AirLand Battle - its central focus in all three

"was on fighting a conventional war with the Soviet army on the battlefield of central Europe."[93]

For Rosen, this means that the Army's "central combat function...remained unchanged."[94] I

disagree. While the Army's mission was relatively unchanged over the time period, the Army

articulated three distinct visions of warfare in each doctrine: the pentomic doctrine envisioned

tactical nuclear warfare; Active Defense envisioned the primacy of defensive operations for the

first time in the organization's history, and AirLand Battle envisioned offensive, combined arms

maneuver warfare.[95]

The content of these keystone publications can provide insight into the Army's rationale

for innovating doctrinally. For example, the 1976 manual which became known as the Active

Defense doctrine, points to the influence of the 1973 war in the Middle East and Warsaw Pact

conventional superiority as two factors which caused and influenced the character of the new

doctrine.[96] Formal doctrinal manuals not only reflect a military organization's theory of warfare,

they also provide the motivation behind the organization's decision to embrace a new doctrine.

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[91] Rosen, 1991, p. 8.
[92] Ibid., footnote 15, cites Sheehan, 1988.
[93] Ibid.
[94] Ibid.
[95] As Long writes, compared to Active Defense, "AirLand Battle derived from maneuver theory, not attrition theory; it focused on maneuver rather than firepower; it stressed the human dimensions of war instead of the technical, and it favored the offense over the defense." See Jeffrey W. Long, *The Evolution of US Army Doctrine: From Active Defense to AirLand Battle and Beyond* (Master's Thesis, U.S. Army Command and General Staff College, 1991), p. 48.
[96] Field Manual 100-5 *Operations* (Washington, DC: Headquarters, Department of the Army, 1976), p. 2-2.

2.2.3.2. Keystone Doctrine - U.S. Marine Corps

Unlike in the case of the Army, literature on the history of Marine Corps formal doctrine is limited. A comprehensive account of the evolution of Marine Corps doctrine does not exist and it is beyond the scope of this study to generate one. However, the evolution of Marine Corps doctrine can be traced by categorizing Marine history into distinct periods. The Marine Corps fought for its survival numerous times over the course of its history.[97] The Corps was not explicitly provided for in the Constitution, it was a substantially smaller service than the Army, and its original mandate - to fight aboard ships - was quickly rendered extinct.[98] In some instances where organizational survival was in jeopardy, the Marine Corps developed new core competencies to remain relevant and avoid extinction. When they did this, new formal doctrine manuals were written and published.

The four primary periods in the evolution of Marine Corps doctrine are: the period from the American Revolution to the start of the Spanish-American War (1776-1898), from the Spanish-American War to the end of the Banana Wars (1835-1935), from the Banana Wars until the creation of the Marine Corps Combat Development Command (MCCDC) (1935-1985), and from the creation of the MCCDC until the present day (1985-present).

In the first period of Marine Corps doctrine - the American Revolution to the Spanish-American War (1776-1898), the Marine Corps role consisted of shipboard policing and manning naval gunfire batteries on the Navy's battleships. In 1834, Congressional legislation made the Marine Corps officially part of the Department of the Navy.[99] In the second period of Marine

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[97] Victor H. Krulak, *First to Fight: An Inside View of the US Marine Corps* (Naval Institute Press, 1984). Krulak argues that there were 15 occasions in the Marines' history where its organizational survival was in jeopardy.

[98] Alan. R. Millett, *Semper Fidelis: The History of the United States Marine Corps* (New York: Free Press, 1991), p. 6.

[99] Long, 2010, p. 32.

Corps doctrine - the Spanish-American War to the end of the Banana Wars (1898-1935) - the Corps found itself searching for a "distinctive area of competence" and an "undisputed jurisdiction over a function" to ensure organizational survival.[100] U.S. intervention in the Caribbean at the outbreak of the century provided the Marines with the opportunity to shift from the shipboard mission to expeditionary warfare. Expeditionary warfare consisted of two different types of missions: the advanced base mission to seize and defend bases abroad and the small wars mission to conduct land-based warfare and irregular operations as part of American imperial policing.[101]

In regard to the advanced base mission, the U.S. Navy (of which the Marine Corps was now a part) published the 1915 *Landing Force Manual* - the organization's first official doctrine.[102] The Marine Corps continued to refine advanced base doctrine, releasing the *Tentative Manual on Landing Operations*[103] in 1935 and the *Landing Operations Doctrine*[104] in 1938. A Marine force dedicated to advanced base operations known as the Fleet Marine Force (FMF) was also formed at that time.[105] With respect to the small wars mission, the banana wars in Haiti (1915-1934), the Dominican Republic (1916-1924), and Nicaragua (1927-1933) allowed the Marines to develop an expertise in the small wars mission which they could use to establish themselves as the preeminent service for fighting those wars.[106] After the Dominican Republic, the Marines took more definitive informal measures to institutionalize doctrine for small wars. In 1934, the Marine Corps

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[100] Anthony Downs, *Inside Bureaucracy* (New York: Little, Brown, 1967), p. 7.

[101] Long, 2010, pp. 141-142.

[102] *Landing-Force Manual United States Navy* (Washington: Government Printing Office, 1915). This edition was revised and reissued in 1918, 1920, and 1921.

[103] *Tentative Manual on Landing Operations* United States Navy (Washington: Government Printing Office, 1935).

[104] *Landing Operations Doctrine* United States Navy FTP 167 (Washington: Government Printing Office, 1938).

[105] Long, 2010, p. 166. For details on the evolution of Fleet Marine Force doctrine, see William H. Russell, "The Genesis of FMF Doctrine: 1879-1899 (Part I thru V)," *Marine Corps Gazette* (Pre-1994) 35, numbers 4, 5, 6, 7, 11 (1951): I: 52-59, II: 48-53, III: 50-56, IV: 52-59, V: 14-22.

[106] For an account of the banana wars, see Lester D. Langley, *The Banana Wars: United States Intervention in the Caribbean, 1898-1934* (Wilmington, DE: Scholarly Resources Inc., 2002).

Commandant, Major General James Breckenridge, ordered the production of a comprehensive field manual on conducting irregular warfare. This document would become known as the *Small Wars Journal*, and from its publication in 1935 until the Army publication of Field Manual 3-24 *Counterinsurgency Operations* in December 2006, it served as the most insightful military manual on the conduct of irregular warfare.[107]

In the third period of Marine Corps doctrine - the end of the Banana Wars until the mid-1980's (1935-1985) - the Marines fought in numerous wars and participated in multiple interventions, while also fighting to preserve the advanced base mission and the Fleet Marine Force. In the interwar period, the Marine Corps conducted amphibious exercises which would later serve as the basis for amphibious operations in World War II.[108] In 1948, the Marines drafted and published *Amphibious Operations - Employment of Helicopters* (PHIB-31)[109] - a vertical envelopment doctrine on the use of helicopters in amphibious warfare.[110] As they had for the Army, the nuclear explosions at the end of World War II had a profound effect on the Marines, leading the service to explore options for fighting on a nuclear battlefield.

In 1955, *Landing Force Bulletin 17*[111] provided Marine doctrine on the integration of helicopters into amphibious operations. Doctrine on helicopters would eventually lead to the development of the 1963 Marine Air-Ground Task Force (MAGTF) and the concept of vertical envelopment. MAGTAFs are "combined arms forces consisting of aviation, ground, and logistic

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[107] Bickel, 2001, p. 129. See Chapter 6 for an extensive account of the development of the *Small Wars Journal*.

[108] MCDP 1-0 Marine Corps *Operations* (Washington, DC: Headquarters, Department of the Navy, United States Marine Corps, 2001), p. 1-4. However, I have not found evidence that lessons from these amphibious exercises were actually codified in formal doctrine.

[109] *Amphibious Operations Employment of Helicopters (Tentative), PHIB-31* (Marine Corps Schools, 1948).

[110] Allan R. Millett, *Semper Fidelis: The History of the United States Marine Corps* (New York: Macmillan Publishing Company, 1980), pp. 455-456. Marine early helicopter doctrine faced opposition in the Marines and the Navy.

[111] *Landing Force Bulletin 17* (Washington, DC: Headquarters, Department of the Navy, United States Marine Corps, 1955).

elements."[112] By the late 1970's, the Marine focus on seizing advanced bases diminished as carrier

aviation reduced the necessity for those types of operations.[113] The Marines employed MAGTAFs

in the Korean War and congressional legislation in 1952 supported the MAGTAF concept by

organizing the Marines with three combat divisions and three aircraft wings. From the end of the

Vietnam War until the early 1980s there is no record of any substantial doctrinal innovations.

In the fourth and final period of Marine Corps doctrine - from the establishment of the

Marine Corps Combat Development Command (MCCDC) until today (1985-present) - the Marine

Corps made a deliberate effort to formalize its doctrine. Today, Marine Corps doctrine is less

voluminous than Army doctrine, but the Corps views doctrinal processes and the importance of

keystone doctrine in much the same way as the Army. In 1987, the Marines created the MCCDC

to develop "concepts, plans, doctrine, and training" for the Corps.[114] Like the Army's TRADOC

created thirteen years earlier, the MCCDC serves as the Corps' proponent for the development and

publication of doctrine. The establishment of the MCCDC formalized Marine Corps doctrinal

processes and initiated the publication of the Corps keystone manual at more regular intervals.

In 1989, the Marine Corps published its first keystone publication since the *Landing Force

Bulletins* - a manual called the Fleet Marine Force Manual (FMFM) 1 *Warfighting*.[115] According

to General A.M. Gray - the Marine Corps commandant responsible for the doctrine - the

Warfighting manual "provides the authoritative basis for how we fight and how we prepare to

fight."[116] A comprehensive account of the development of FMFM 1 noted that the manual

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[112] MCDP 1-0 Marine Corps *Operations*, 2001, p. 1-2.

[113] Long, 2010, p. 169.

[114] Prior to the establishment of MCCDC, Marine Corps doctrine fell under the jurisdiction of Marine Corps Schools until 1968 when the Marine Corps Development and Education Command (MCDEC) was created. The MCCDC replaced the MCDED in 1987.

[115] Fleet Marine Force Manual 1 (FMFM-1) *Warfighting* (Headquarters, United States Marine Corps, Department of the Navy, 1989).

[116] Fleet Marine Force Manual 1 (FMFM-1) *Warfighting*, 1989, Foreword.

"signaled the official adoption of maneuver warfare."[117]   The timing of this maneuver warfare

doctrine is significant because it was released at about the same time as the Army's AirLand Battle

doctrine.   This doctrine was updated in 1997 with the publication of Marine Corps Doctrinal

Publication (MCDP) 1 *Warfighting*.[118]

Just prior to the September 11, 2001 attacks, the Marine Corps released MCDP 1-0 *Marine*

Corps Operations.[119]   This manual was significant because it operationalized the warfighting

concept introduced in the 1989 and 1997 manuals, and it included doctrine on the Marine's primary

expeditionary force, the MAGTAFs.   The 2001 manual provides the Marine Corps' vision of

expeditionary operations and other concepts like operational maneuver from the sea and *s*hip-to-

objective maneuver.[120]   The 2001 manual was updated in 2011.[121]   The 2011 manual reflected

lessons learned from operations in the wars in Afghanistan and Iraq, in addition to Marine

humanitarian and crisis response operations.   Of note, the 2001 manual was published the same

year that the Army published its *Full Spectrum Operations* and the 2011 manual coincided with

the Army's publication of its *Unified Land Operations* doctrine.

Unlike the Army which published 20 editions of its keystone doctrine from 1905 until the

present day, the release of Marine Corps keystone publications was more sporadic.   From 1905-

2016, the Marine Corps published 9 editions of its keystone doctrine.   Four of the first five manuals

focused on amphibious and advanced base operations.   The 1935 *Small Wars Journal* focused on

the other element of the Marine Corps' expeditionary concept - the conduct of counterinsurgency

and irregular warfare.   With the establishment of the MCCDC in 1987, the Marine Corps

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[117] Fideleon Damian, *The Road to FMFM 1: The United States Marine Corps and Maneuver Warfare Doctrine, 1979-1989* (MA thesis, Kansas State University, 2001), abstract.

[118] Marine Corps Doctrinal Publication (MCDP) 1 *Warfighting*, 1997.

[119] Marine Corps Doctrinal Publication (MCDP) 1-0 *Marine Corps Operations*, 2001.

[120] Ibid., Foreword.

[121] Marine Corps Doctrinal Publication 1-0 *Marine Corps Operations* (Headquarters, United States Marine Corps, Department of the Navy, 2011).

formalized its doctrinal processes, and since then the Marines have released four doctrinal publications - the 1989 FMFM 1 *Warfighting*, 1997 MCDP 1 *Warfighting*, and two versions of MCDP 1-0 *Marine Corps Operations* in 2001 and 2011. Unlike the Army, the Marine Corps did not brand any of its publications.

Chapter 3. Doctrinal Change for Conventional Warfare in the U.S. Army

The purpose of this chapter is to conduct a case study analysis of three instances of doctrinal change in the United States Army - the 1950's pentomic doctrine, the 1976 Active Defense doctrine, and the 1982/1986 AirLand Battle doctrine. All three cases are doctrines that focus on conventional warfare.[1] Conventional warfare refers to a certain type of fighting from the perspective of the state military. This type of fighting is usually defined by: (1) combat between two (or more) military organizations that are subordinate to different states, (2) mid- to high-intensity operations involving large-scale maneuver of military formations and the application of high volumes of firepower, (3) operational and strategic objectives related to the destruction, annihilation, or unconditional surrender of an adversary, (4) the absence of civil measures oriented on the civilian population,[2] and (5) minimal (to no) coordination between the military and other agencies of the state.[3] The three doctrines in this chapter were developed by the U.S. Army for the purpose of conventional warfare.

Using the theoretical framework outlined in the previous chapter and the structured, focused case study approach, I analyze the sources of each doctrine. All three instances of doctrinal change are peacetime innovations that were developed during post-war periods. The pentomic doctrine was formulated after World War II and Active Defense and AirLand Battle came after the Vietnam War. Only one of the doctrines - AirLand Battle - was actually employed

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[1] The use of the label "conventional" to refer to firepower-intensive, state-centric, and industrialized type of warfare is unfortunate because of the connotation of the term. "Conventional" suggests that this type of warfare is standard, typical, and most common. While warfare of this type might be the dominant convention during certain historical periods, most wars throughout history have actually been smaller scale civil wars (or intra-state wars).

[2] Examples of civil measures are: civil construction, road-building or other public works, military government (or operations designed to affect governance), agricultural reforms, judicial (including martial law), etc.

[3] Austin Long, *First War Syndrome: Military Culture, Professionalization, and Counterinsurgency Doctrine* (Ph.D. diss. MIT, 2010), argues that total war involves large units, massive and unrestrained use of firepower, and minimal coordination with other agencies.

and validated in war. The pentomic doctrine and Active Defense were major innovations, but after they were implemented, the Army jettisoned them.

I analyze the three doctrines in chronological order. For each, I employ a balance of power approach to explore the cause of the doctrinal change and an organizational approach to understand why the change happened in the way that it did. After providing an overview of each doctrine, I examine the environmental shift(s) that led to the change and I test hypotheses on civilian intervention, inter- and intra-service rivalry, organizational survival, budgets, and organizational culture. In the chapter's conclusion, I discuss implications for understanding military doctrinal change.

While I am primarily concerned with the source(s) of doctrinal innovation, I assess the content of each of the doctrines to gain insight on the source(s). My analysis draws from Army doctrinal manuals, primary, and secondary sources. When necessary, I explore Army educational curricula to better understand a particular doctrine. I also assess organizational structural changes that occur in synchrony with doctrinal changes. The pentomic doctrine came with a major organizational change that fundamentally altered the Army division.

3.1. The Major Doctrines

3.1.1. The Pentomic Doctrine

After fighting in the Korean War, the U.S. Army radically changed its core structure - the infantry division - to a nuclear-capable formation known as the pentomic division. The pentomic division was the most significant structural innovation in the organization's history. Often overlooked because it was never put into practice, the doctrine that supported the pentomic construct was equally innovative. Despite the time and energy that Army leaders put into the

pentomic innovation, by 1959 the organization jettisoned the construct and reverted to a more traditional structure and supporting doctrine.

In hindsight, it is clear that the Army knew at the time that no reorganization scheme could make a large fighting unit viable in the face of hundreds of nuclear detonations. Yet, Army leaders promoted the pentomic concept as a feasible and necessary innovation throughout the 1950s. The purpose of this section is to determine the source of the pentomic innovation, paying careful attention to changes in the external environment and the role of factors internal to the Army.

3.1.1.1. The Post-World War II Period (1945-1950)

Examining the immediate post-World War II period lends insight on the Army's theory of victory in the years leading up to the pentomic innovation. From May 1945 to June 1947, the Army post-war demobilization reduced the organization's personnel strength from 8,291,336 soldiers to 989,664 soldiers.[4] The Army demobilized quickly due to pressure from Congress and a war-weary public. The demobilization was not well-synchronized with remaining wartime demands, and the final personnel end-strength was divorced from any assessment of the short-term strategic environment. To assist with the demobilization process and to determine postwar strategy, the Army established the Special Planning Division (SPD),[5] and created a series of boards to evaluate its performance in World War II. In general, the consensus amongst Army leaders was that the Army's success in World War II meant that radical doctrinal and/or organizational innovations were not necessary.

The 1945 nuclear attacks on Hiroshima and Nagasaki and the success of firebombing in Japan led some analysts to argue that air power alone could enable the U.S. to achieve national

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[4] John K. Mahon and Romana Danysh, *Infantry Part I: Regular Army (*Washington, DC: Office of the Chief of Military History, United States Army, 1972), p. 71.

[5] Michael S. Sherry, *Preparing for the Next War: American Plans for Postwar Defense, 1941-1945* (New Haven, CT: Yale University Press, 1977), pp. 8-9.

objectives. Air advocates such as Generals Curtis LeMay, Henry H. (Hap) Arnold, and Carl A. Spaatz, contended that Army ground forces were becoming increasingly obsolete. The attack on Pearl Harbor was a vigorous demonstration of the overwhelming effectiveness of new airpower technologies.[6] A 1946 report by General Joseph W. Stilwell argued that any future surprise attacks on the United States similar to Pearl Harbor should be met with airpower, aerial bombing, and long-range missiles.[7] Army ground combat operations were important but less important than airpower.

Though Army Chief of Staff, General Dwight Eisenhower, argued for the continued existence of the Army Air Forces (AAF), the National Security Act of 1947 established a National Military Establishment led by the Secretary of Defense and including the Joint Chiefs of Staff as the heads of the Departments of the Army, the Navy, and, now, a separate Air Force.[8] Efforts by airpower enthusiasts to focus postwar planning on strategic airpower (rather than tactical airpower in support of ground troops) were successful in persuading civilian decision makers to establish an independent Air Force.[9] The establishment of an Air Force reduced intraservice friction in the Army but it generated interservice rivalry between the Army and Air Force over missions and funding.[10] In 1949, the new chief of staff of the Army, General Omar Bradley, acknowledged the importance of strategic airpower, but he cautioned against "starv[ing] the Army" in the effort to

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[6] Sherry, 1977, p. 27.

[7] General Joseph W. Stilwell, "Report on War Department Equipment Board," 19 January 1946, 10, Combined Arms Research Library.

[8] Walter E. Kretchik, *U.S. Army Doctrine: From the American Revolution to the War on Terror* (Lawrence, Kansas: University Press of Kansas, 2011), pp. 159-160. The National Security Act of 1947 also established other agencies such as the National Security Council and the Central Intelligence Agency.

[9] Sherry, 1977, p. 17.

[10] Kretchik, 2011, p. 160.

support the Air Force.[11]   This new rivalry would affect decisions related to doctrine and organizational structure in the years to come.[12]

The Army's first post-World War II keystone doctrinal publication - the *1949 Field Service Regulations* FM 100-5 *Operations* - was approved by General Bradley and published on August 15th, 1949.[13] The manual was the first keystone doctrine to be approved under the auspices of the Department of the Army - the organization's new designation in lieu of the War Department. Cold War escalation led Army planners to assume that the next battlefield would be on the European continent.[14] The 1949 manual was oriented on that vision of warfare. The contention of some that the delivery of nuclear weapons via strategic airpower would change the nature of warfare and render ground combat unnecessary, represented a threat to the Army's jurisdictional domain.

The 1949 manual emphasized offensive operations, large-scale maneuver, the centrality of the infantry branch within a broader combined arms approach, nine principles of war (objective, simplicity, unity of command, offensive, maneuver, mass, economy of forces, surprise, and security), and the dominance of the Army over the other services. It also assumed that the Air Force would employ nuclear weapons in the first stage of war, and the Army would follow with a large-scale ground force operation. The 1949 manual was a mechanism by which Army leaders expressed the importance of an effective ground combat force. The employment of nuclear

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[11] General Omar N. Bradley, "Creating a Sound Military Force," *Military Review* 29, no. 2 (May 1949): 3. Bradley made this speech at the National Industry Army Day Conference in Boston on February 4, 1949, p. 5.

[12] For a detailed discussion on interservice rivalry between the Army and the Air Force from 1945-1950, see Robert A. Doughty, "The Evolution of US Army Tactical Doctrine, 1946-76," *Leavenworth Papers, Number 1, Combat Studies Institute,* U.S. Army Command and General Staff College, 1979, pp. 3-4. This rivalry revolved around two issues: (1) the assignment of a small element of experts known as the tactical air control party (TACP) and (2) the role of the helicopter in combat. The conflict over the helicopter opened the door for the U.S. Marine Corps. In the helicopter, the Marines saw a way to evolve their historical amphibious role to one more appropriate for the modern-day battlefield. The Marines developed doctrine and tactics for the helicopter, culminating in the historic first-ever airmobile operation in Korea in September 1951.

[13] *Field Service Regulations* Field Manual 100-5 *Operations* (Washington, DC: Government Printing Office, 1949).

[14] Doughty, 1979, p. 2.

weapons was not mentioned in the manual.[15] The Army grudgingly acknowledged the increasing relevance of strategic nuclear weapons but rejected the idea that those weapons would render ground combat unnecessary. Infantry divisions would "fight sustained close combat…to gain and hold ground."[16] Armored divisions would conduct "deep penetration and seizure of decisive objectives…and [cause] the destruction of hostile armor."[17]

In 1949, the Army initiated a study to assess the feasibility of employing nuclear weapons in a tactical role. Three important papers on the subject were published shortly thereafter: (1) the Army Field Forces published, "Tactical Employment of the Atomic Bomb," (2) the Weapons System Evaluation Group (WSEG) published, "A Study on Tactical Use of the Atomic Bomb," and (3) Major General James M. Gavin published, "The Tactical Use of the Atomic Bomb."[18] By the early 1950s, the consensus of many in the Army favored the tactical deployment of nuclear weapons. Two faculty members at the Command and General Staff College produced "Atomic Weapons in Land Combat," which argued, "Atomic weapons, tactically employed, should be incorporated into our first line of defense against any creeping aggression."[19] The Army was forced to confront this issue head-on in the 1950s, but first it fought in the Korean War.

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[15] The only mention of atomic weapons in the 1949 manual comes in the chapter on security. Here, rather than discuss any changes to tactics, the manual only mentions the harmful effects of radiation and radioactive materials, cautioning Army units to employ protective measures if necessary. See *Field Service Regulations* Field Manual 100-5 *Operations* (Washington, DC: Government Printing Office, 1949), p. 60.

[16] 1949 *Field Service Regulations*, p. 256

[17] Ibid., p. 260.

[18] Doughty, 1979, p. 12.

[19] G.C. Reinhardt and W.R. Kintner, *Atomic Weapons in Land Combat* (Harrisburg, PA: The Military Service Publishing Co., 1953), p. 224, as cited in Doughty, 1979, p. 13.

3.1.1.2. The Korean War (1950-1953)

At the outset of the Korean War, most of the Army's divisions had major equipment shortages and their personnel strength barely reached 70 percent of their authorized strength.[20] The American public was still war-weary, the Army's budget was constrained, and Congress instituted personnel strength ceilings.[21] The Army entered the Korean War unprepared for limited war and at a poor state of readiness. General Matthew B. Ridgway, commander of the Eighth Army in Korea and the American commander in the Far East, stated that the Army was at a level of "shameful readiness" when the war began.[22] Army forces stationed in the Far East before the outbreak of the Korean War functioned "not as soldiers, but as policeman, and [therefore] they were not trained for combat, for such training would have interfered with their police duties."[23]

The Army's vision of warfare rested on a belief that the next war would be global and similar in terrain and tactics to World War II. Neither the Army's organizational construct nor its doctrine were oriented on a more limited war like the one in Korea. Not only was the war more limited than the total warfare of the World Wars, but it was the first time that U.S. Army units served America and a broader United Nations effort.[24] As a result of its unpreparedness, the Army sustained significant casualties in the initial battles of the war during the summer of 1950 until the Inchon landing in September 1950. The most notorious example of American unpreparedness was Task Force Smith - a battle in which American units were under-strength, under-trained, and under-equipped. Eventually, after improved performance in combat, a cease-fire was initiated on July 27, 1953 and the U.S. settled for a negotiated armistice.

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[20] Mahon and Danysh, 1972, p. 76.
[21] Ibid.
[22] Matthew B. Ridgway, *Soldier: The Memories of Matthew B. Ridgway* (Harbor & Brothers, N.Y., 1956), p. 191, as quoted in Doughty, 1979, p. 7.
[23] Ibid., p. 190.
[24] Mahon and Danysh, 1972, p. 79.

Despite clear limitations in the Army's effectiveness in combat operations in Korea, the Army took the official position after the war that the organization's keystone doctrine did not need to be modified. According to Doughty, "one of the training bulletins of the Army Field Forces concluded, 'The mass of material from Korea…reaffirms the soundness of US doctrine, tactics, techniques, organization, and equipment.'"[25] The Army fought in the Korean War with the same weapons and organizational structure that it had during World War II. Tactics were modified slightly but the Army's doctrine was unchanged.[26]

The Army's post-Korean War interest in three missile programs - space exploration, air defense (including surface-to-air missiles, SAMs), and tactical surface-to-surface missiles (SSMs) - fanned the flames of interservice rivalry between the Army and the Air Force. Confusion over which service had jurisdiction over air defense operations (particularly, continental defense operations) led to friction between the Army and the Air Force in 1956, manifested best in the Nike-Talos competition. The Nike was an Army long-range SAM with a nuclear warhead. The Talos was a Navy missile in the developmental stage that the Air Force announced it would acquire. The debate over which service would have jurisdiction over SAMs was only decided by the direct intervention of Secretary of Defense Wilson who established Army responsibility for the SAMS program. While this was a short-term victory for the Army, it soon became clear that the enormous cost of the development of nuclear delivery systems and SAMs designed to destroy strategic bombers would deprive the Army of much-needed funds in other areas of modernization.[27]

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[25] Training Bulletin Number 8, *Combat Information,* p. 1, as quoted in Doughty, 1979, p. 12.

[26] Some tactics were modified such as the retrograde, the defense, the use of cover, night operations, the employment of weapons, and the conduct of airborne operations

[27] Andrew J. Bacevich, *The Pentomic Era: The U.S. Army Between Korea and Vietnam* (Washington: National Defense University Press, 1986), pp. 99-100.

3.1.1.3. The Pentomic Era (1953-1958)

Political decisions on the purpose and use of nuclear weapons affected the Army considerably in the immediate post-Korean War period. President Dwight D. Eisenhower's New Look, the 1953 National Security Document 162/2 which granted nuclear weapons equal status with all other weapons, and the 1954 concept of massive retaliation all suggested that nuclear weapons were the new weapon of choice for policymakers.[28] Civilian policymakers argued that nuclear weapons could serve as a powerful deterrent. The threat to use nuclear weapons would intimidate adversaries and maintain order because of the known destructive potential of nuclear bombs. This logic caused a paradigm shift in policymakers' perception of the military's purpose. Rather than field and train a powerful military for the purpose of fighting a war, nuclear weapons afforded policymakers the ability to field and train a powerful military to avoid war.[29]

The new emphasis on nuclear deterrence increased the prominence of the Navy and the Air Force since those two services had primary control over the United States' nuclear capability.[30] The ability of the Air Force's Strategic Air Command (SAC) to conduct a nuclear attack gave that service preeminent status in the military hierarchy of the Eisenhower administration. Although the Army and Marine Corps both endured the preponderance of the fighting in the Korean War, in the post war environment both services found themselves having to justify their relevance in a nuclear world.

The introduction of nuclear weapons - a new military technology - put pressure on the Army to initiate doctrinal change. However, rather than responding to civilian intervention to compel change, the Army initiated doctrinal and organizational change processes on its own

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[28] Kretchik, 2011, p. 166.
[29] Bacevich, 1986, p. 13. See also Russell F. Weigley, *The American Way of War: A History of United States Military Strategy and Policy* (Bloomington, IN: Indiana University Press, 1977).
[30] In 1955, the Air Force budget was twice the size of the Army's. For a chart, see Bacevich, 1986, p. 17.

initiative. With the increased standing of the Navy and the Air Force, the Army felt pressure to prevent its irrelevance or at worst, its extinction. The Army began to explore the concept of limited nuclear warfare which involved the employment of small, nuclear weapons in a tactical capacity. As early as 1949, the Army began drafting a manual on the tactical use of atomic weapons at its Command and General Staff College (CGSC). The same year, the Army also added instruction on the employment of tactical nuclear weapons into the CGSC curriculum.[31] Under the direction of the Army Chief of Staff, General J. Lawton Collins (1949-1953), the Army developed atomic-capable artillery in the form of a 280mm gun called the M65 Atomic Cannon that employed a nuclear projectile. The Army successfully tested that system in May 1953. By 1954, the Army began equipping its units with a nuclear capable surface-to-surface missile known as the Honest John Rocket.[32]

One of the most prominent voices in the Army on the employment of tactical nuclear weapons was that of Major General Gavin, the former commander of the 82nd Airborne Division in World War II. In "The Tactical Use of the Atomic Bomb," Gavin wrote, "The greater the explosive effect of the atomic bomb the more effective it will be as a tactical weapon."[33] He argued that tactical nuclear weapons could be effective on the battlefield against Soviet and Chinese forces[34]. In 1951, the Army released Field Manual 100-31 *Tactical Use of Atomic Weapons*[35] which validated Gavin's logic. Regardless of their stance on the employment of tactical nuclear weapons, most Army leaders at least realized that limited nuclear war offered an alternative to the undesirable mission of serving as constabulary forces as part of an army of occupation after a

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[31] G. C. Reinhardt, "Nuclear Weapons and Limited Warfare: A Sketchbook History," *The RAND Corporation* (1964): 4.

[32] Bacevich, 1986, pp. 94-95, and Kretchik, 2011, p. 167.

[33] James M. Gavin, "The Tactical Use of the Atomic Bomb," *Combat Forces Journal* I, no. 4 (November 1950): 11.

[34] Kretchik, 2011, cites this in Footnote 23 on p. 319.

[35] Reinhardt, 1964, p. 5.

nuclear attack.[36] Limited nuclear war also helped the Army articulate its mission at a time when some officers in the organization bemoaned the lack of a clear mandate.[37]

1954 Field Service Regulations FM 100-5 Operations

At the end of the Korean War, the Army's keystone doctrine was still the *1949 Field Service Regulations* - a manual written before the war that ignored the employment of nuclear weapons. After the war, the Army initiated a process to update its keystone doctrine to capture wartime lessons learned. The Army's next official keystone doctrine - the *1954 Field Service Regulations* FM 100-5 *Operations* - was the organization's attempt to synthesize those lessons.[38] The Army also used the new doctrine to formalize a modified vision of warfare which signaled an increased interest in the employment of tactical nuclear weapons. The 1954 FSR was an incremental step in the Army's march towards a new organizational structure and doctrine which revolved around a vision of warfare centered on an atomic battlefield.

Compared to its predecessor, the 1954 FSR included more guidance on the role of atomic weapons in combat. According to the manual, "Atomic weapons provide a commander with the most powerful destructive force yet…The proper integration of atomic firepower and maneuver of the forces is of utmost importance…The Commander may consider atomic fires as additional firepower…or he may fit his maneuver plan to the use of atomic fires."[39] The new doctrine emphasized nuclear weapons on the battlefield to a degree not yet seen, but the manual stopped short of suggesting that nuclear weapons required the modification of tactical doctrine. The manual noted, "The integration of atomic weapons into tactical operations does not change tactical

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[36] Bacevich, 1986, pp. 12-13.

[37] For one such example, see John H. Cushman, "What is the Army's Story?" *Army Combat Forces Journal* 5, no. 3 (October 1955): 49-51.

[38] *Field Service Regulations* Field Manual 100-5 *Operations* (Washington, DC: Headquarters, Department of the Army, 1954). Hereafter, referred to as 1954 *FSR*.

[39] 1954 *FSR*, p. 40.

doctrine for the employment of firepower…"[40] Army leaders viewed nuclear weapons as an enabler of existing tactics for offensive operations. Chemical, biological, and radiological agents could be used "to reinforce the effects of the attack."[41] Armored vehicles such as tanks were presumed to be the most effective platform on an atomic battlefield, and an essential capability for defeating a numerically superior enemy.[42] Given the devastating ability for atomic weapons to destroy concentrated forces, the manual emphasized the importance of the dispersion of troops on the battlefield.[43]

Interservice Rivalry

The character of the 1954 FSR was shaped by interservice rivalry. The manual stated that the Army is "the decisive component of the military structure" because of ground forces' ability to close with and destroy the enemy, to seize and control ground, and to defend critical areas. It went on, "Army combat forces do not support the operations of any other component."[44] The new doctrine made a clear case that the Army was the military's dominant service, and as such, when the Army interacted with other services in combat, it would do so only under conditions in which those services supported its operations. The doctrine acknowledged the importance of the Air Force but it confined that service's role to transportation, logistics, defensive cover, mid-range fire support, and long-range weapons delivery against rear area installations - all done "toward insuring the success of the land force operation."[45]

Interservice rivalry was such an important factor during this period in both military and non-military circles that there was a front-page article on the release of the *1954 Field Service*

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[40] 1954 *FSR*, p. 96.
[41] Ibid., p. 103.
[42] Doughty, 1979, p. 15.
[43] 1954 *FSR*, p. 130.
[44] Ibid., p. 4.
[45] 1954 *FSR*, p. 4.

Regulations in *The New York Times* on January 4, 1955.[46] The article contended that the manual asserted the primacy of the Army and noted the irrelevance of the Air Force in smaller wars in Greece, Korea, and Indochina when air attacks were not permitted on the home territory of the Communist enemy. This *New York Times* article is the only instance in which an Army doctrinal manual was analyzed and discussed on the front page of the nation's most prominent newspaper.[47]

On a number of occasions throughout the 1950s, Army leaders resisted, often publicly, President Eisenhower's New Look and the policy of massive retaliation - two programs which the Army perceived as a threat to organizational survival, as a rationale for reduced funding, and as a cause of low morale and frustration throughout the ranks. According to Lieutenant General Gavin, New Look represented an "increasing emphasis on our strategic retaliatory power at the expense of our so-called 'conventional' forces."[48] Army leaders viewed New Look as a direct threat to personnel end-strength and the role of ground forces in combat. Chief of Staff General Ridgway voiced his displeasure in a closed session of the Senate Armed Services Committee and those remarks became public when the Committee chairman gave them to the press.[49] After retiring in June 1955, Ridgway sent a letter to Secretary of Defense Wilson - a major proponent of the New Look - in which he labeled the military "inadequate in strength and improperly proportioned" - an indictment of an over reliance on nuclear weapons and the disproportionate allocation of resources to the Air Force.[50]

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[46] Anthony Leviero, "Army is Top Military Force of U.S., It States in Manual: Book Approved by Stevens and Ridgway Implicitly Criticizes Plan of Massive Retaliation With Atom Weapons," *The New York Times*, January 4, 1955, p. 1 and 14.

[47] The article states that the public was not supposed to have access to this doctrine. Keystone doctrinal manuals during this period were supposed to be classified.

[48] James M. Gavin, *War and Peace in the Space Age* (Harper & Brothers, NY, 1958), p. 150. Gavin also stated (p.151), "And the tactical employment of nuclear weapons implied quite clearly an increase rather than a decrease in manpower requirements. The thesis upon which the New Look was based was entirely wrong, or at least it appeared to us to be."

[49] Bacevich, 1986, p. 42.

[50] Ridgway, 1956), pp. 323-332.

General Ridgway's successor, General Maxwell D. Taylor, and his Deputy Chief of Staff for Research and Development, Lieutenant General Gavin, were also critical of the Eisenhower administration's policies. These officers made the claim that all-out nuclear war would be so destructive that states would refrain from employing nuclear weapons, and instead engage in limited, non-nuclear conflict. This idea - that states with nuclear weapons will avoid war at the nuclear level of violence and will instead engage in conflict at lower levels of violence - gained prominence in the political science literature. According to Glenn Snyder (1965), "the greater the stability of the 'strategic' balance of terror, the lower the stability of the overall balance at lower levels of violence."[51] Or, summarized by Jervis (1984), "To the extent that the military balance is stable at the level of all-out nuclear war, it will become less stable at lower levels of violence."[52] Adversaries who possess nuclear weapons know that they will both seek to avoid nuclear war, but this "insurance policy" also increases the chances that they will engage in non-nuclear war. If true, the paradox[53] implies that the U.S. "needed to seek countervailing conventional and even tactical nuclear superiority over the Soviets to deter Soviet aggression, especially against U.S. friends and allies, for the sake of whom the United States could not credibly threaten its own survival."[54]

The extent of interservice rivalry between the Army and Air Force was most forcefully articulated in an internal study that was leaked to *The New York Times* and discussed in another

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[51] Glenn Snyder, "The Balance of Power and the Balance of Terror," in Paul Seabury, ed., *The Balance of Power* (San Francisco: Chandler, 1965).

[52] Robert Jervis, *The Illogic of American Nuclear Strategy* (New York: Cornell University Press, 1984).

[53] Jervis, 1984, is the most notable scholar to refute the stability-instability paradox. He argued that conventional military challenges (non-nuclear) to the interests of any nuclear power with a secure second-strike capability are extremely risky because there is no guarantee that conflict at the conventional levels of violence will not escalate into nuclear war. This could happen inadvertently due to the fog of war. Under conditions of mutually assured destruction (MAD), even an actor that is inferior in the conventional and tactical nuclear levels can deter aggression by deploying Schelling (1960's) "threat that leaves something to chance." This means the Soviets during the Cold War could never assume that a conventional war with the US or its allies would not escalate to a nuclear war.

[54] Thomas J. Christensen, "The Meaning of the Nuclear Evolution: China's Strategic Modernization and US-China Relations," *Journal of Strategic Studies* 35, no. 4 (2012): 447-487.

front-page article, this time on May 19, 1956.[55] The article quoted a leaked, classified Army study entitled, "A New Great Debate - Problems of National Security" (but informally known as the "Colonels' Revolt"[56]), which claimed that the United States was unprepared to defeat the Communist threat, primarily because of too much reliance on the Air Force and the Navy. The study (in addition to two other internal Army papers that were leaked to *The Times*) pointed to the Army's "indispensable role" in military operations in the Korean War and the "inability of air forces to prevent an enemy from deploying and maintaining large and effective land combat forces."[57] In a counter-study, the Air Force claimed it was the "dominant force in the Korean War" and it pointed out that in World War II, "Japan surrendered with an army of 1,300,000 men intact, well-equipped, and capable of contest," primarily because the presence of airpower made an Army invasion unnecessary.[58] The debate between the Army and the Air Force is a distinguishing feature of this period and it had a major effect on the Army's pentomic innovation, discussed in detail, below.

The Pentomic Division and Its Doctrine

The Army resisted the growing U.S. emphasis on strategic nuclear weapons because such a theory of victory afforded little role for the organization on the battlefield. However, nuclear weapons were a paradigm-shifting military technology that demanded that the Army change its doctrine and/or its organizational structure. Army leaders amended post-World War II theories of victory which envisioned non-nuclear combat on a European battlefield. New theories of victory developed by Army leaders like Taylor and Gavin gradually began to recognize the potential value

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[55] Anthony Leviero, "Military Forces Split by Conflict on Arms Policies: Issues Include Big Bombs, Ground Units, Missiles, and Aircraft Carriers," *The New York Times*, May 19, 1956, p. 1 and 8.
[56] Bacevich, 1986, p. 45.
[57] Leviero, 1956, p. 8.
[58] Ibid., p. 8.

of tactical nuclear weapons. The Army grudgingly embraced tactical nuclear weapons based on a pragmatic assessment of the political landscape in the mid- to late-1950s. Years of resistance to President Eisenhower's policies had done little for the Army. Senior civilian decision-makers were firm in their contention that the nature of warfare had fundamentally changed with the advent of nuclear weapons, and there was little patience left for an intransigent Army. The leaked "Colonel's Revolt" and other internal Army studies already risked threatening the Army's reputation within the defense establishment. The Army recognized that embracing tactical nuclear weapons was a way to demonstrate the organization's willingness to play ball in the new strategic environment.

Bacevich asserts that the Army was predisposed to tactical nuclear weapons based on its long-standing emphasis on firepower and new technology.[59] While Bacevich is correct that the Army prioritized firepower over maneuver throughout much of its history up until this point, I refute the assertion that the Army was predisposed to new technology. The historically infantry-centric army emphasized people over technology and the organization as a whole was often slow to adopt emerging technologies. The Army was slow to adopt machine-guns and armored vehicles throughout the early twentieth century. In these cases, the Army's dominant branch - the infantry - perceived these technological advances as a threat to their organizational domain, and, therefore, leaders in the infantry pushed back against their incorporation into infantry doctrine. Even in 1958, we see an Army emphasis on people over technology. That year, Colonel William DePuy noted, "No, Mr. Infantryman, you are not obsolete - you have never been more relevant to your country's

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[59] Bacevich, 1986, p. 57.

need, more important to its future. For no one yet has discovered how to acquire or defend land areas without you."[60]

Whether it was due to an inclination to embrace new technology or a pragmatic assessment of the environment, Army leaders became enthused about the prospect of using tactical nuclear weapons. A military doctrine focused on the employment of tactical nuclear weapons strengthened the Army's case for its relevance in the pentomic era, and bolstered the Army's contention that it needed a manpower increase.[61] Rather than viewing tactical nuclear weapons as a revolutionary development, the Army believed that these weapons were similar to highly effective artillery.[62] Army leaders argued that the strategic nuclear arsenals possessed by the United States and the Soviet Union were off-setting and balancing. Tactical nuclear weapons did not create an offsetting balance in the Army's view because such weapons would not lead to escalation (the gradual use of larger and larger nuclear weapons). This stance was based on an assumption that the Soviet Union would use restraint.

In 1955, once the Army determined that it needed to change, the key question for the organization was *how* it would change. Army leaders decided to fundamentally overhaul the organizational structure of their primary fighting unit - the infantry division. The new construct, known as the pentomic division, was developed after the publication of the Army's last keystone doctrine - the 1954 *Field Service Regulations* - but it was formalized doctrinally in updates to the manual in 1956 and 1958.

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[60] William DePuy, "11 Men 1 Mind," *Army* 8, no. 8 (March 1958): 22-24, 54-60, reprinted in Richard M. Swain, "Selected Papers of General William E. DePuy: First Commander, U.S. Army Training and Doctrine Command," *Combat Studies Institute*, U.S. Army Command and General Staff College, 1973, p. 17.

[61] Gavin, 1958, p. 151.

[62] Bacevich, 1986, p. 65.

The Army conducted a series of exercises to replicate the atomic battlefield and concluded that the existing infantry division structure was ill-suited to atomic warfare. The Atomic Field Army-1 (ATFA-1) field tests suggested that a *non-linear* force structure would function more effectively on a nuclear battlefield. The Army's VII Corps conducted exercises under the direction of Major General Gavin. Gavin believed that the armored division was the only existing organizational structure that was well-suited to atomic warfare.[63] The infantry division needed the ability to extend from a traditional depth of five to ten miles to a much further depth of one-hundred to one-hundred and fifty miles. Conventional artillery needed to be replaced with missiles that had much longer range.[64] The AFTA-1 tests were conducted in 1955 with the 1st Armored Division at Fort Hood, Texas and the 47th Infantry Division at Fort Benning, Georgia.[65] These studies led to the reorganization of the 101st Airborne Division in September 1956 and the submission of the Army's official request to the secretary of defense and the president for the reorganization of all Army divisions to the pentomic structure.[66]

The pentomic battalion became known as a battle-group, each battle-group was organized with five companies, and five battle groups formed one division (hence the name, pentomic division). Each battle group was smaller than the preexisting regiment and larger than the battalion. The purpose was to enable mobility while ensuring survivability.[67] The division commander personally controlled the battle groups through special task forces which served as command and control (C2) nodes. The division now included an armor battalion consisting of five tank companies. At the end of the reorganization, each infantry division would decrease in size

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[63] Gavin, 1958, pp. 137-39.
[64] Ibid., pp. 137-138.
[65] Doughty, 1979, p. 16; Robert T. Davis, "The Challenge of Adaptation: The US Army in the Aftermath of Conflict, 1953-2000," *The Long War Series, Occasional Paper 27,* Combat Studies Institute Press, U.S. Army Combined Arms Center, 2008, p. 25.
[66] Doughty, 1979, p. 16.
[67] Combat Studies Institute, 1999, p. 19.

by about 3,000 men.[68] The division headquarters possessed control over nuclear-armed artillery and Honest John rockets. While most previous organizational changes focused their aim at the division-level (and no lower than the regiment-level), in this case Army leaders focused their emphasis all the way down to the battalion-level.[69] The belief was that the battalion-level was the lowest possible echelon capable of conducting independent operations in depth. Each battle-group could disperse quickly and constantly shift to different positions on the battlefield. As Bacevich recounts in detail, Army leaders believed that the pentomic division structure would maximize dispersion, flexibility, and mobility.[70]

The new pentomic structure and its corresponding doctrine were championed by Army Chiefs of Staff Ridgway and Taylor from 1955 to 1958. In a move designed to ensure the Army's survival and to promote the organization's relevance on the atomic battlefield, they contended that the employment of limited war with tactical nuclear weapons was a mechanism that the United States could use to minimize the chances of major atomic warfare.[71] Again, this contention rested on the assumption that the Soviets would not escalate a tactical nuclear war to a strategic nuclear war.

The premise behind the pentomic innovation was that it enabled Army units to operate in a dispersed manner. Units at the battalion-level could now fight independently from one another, thereby minimizing the effects that a catastrophic nuclear blast would have on the force as a whole. The traditional division structure was an independent administrative unit capable of supplying itself for a combat operation. However, the long supply trains that this required rendered the

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[68] Doughty, 1979, p. 17.
[69] Kretchik, 2011, p. 173, correctly recognizes the parallels between this organizational change and the square construct of the 1800s (concept of "fours") and the triangular construct (concept of "threes") of the early 1900s.
[70] Bacevich, 1986, p. 70.
[71] Kretchik, 2011, p. 172.

division vulnerable on a nuclear battlefield since the trains were not mobile and could not disperse quickly. According to Gavin, "Supplies will have to be moved far to the rear, out of division responsibility."[72] The new pentomic construct needed to survive a nuclear attack and maintain the ability to win in a tactical nuclear engagement. Units in the pentomic structure needed to be pliable and sustainable. Pliability was established by increasing the number of units under a commander's control to provide him with numerous options for deploying forces on a non-linear battlefield. Sustainability was established by assigning units additional support assets capable of maintenance, reconnaissance, medical support, and communications.[73]

The final, approved pentomic division concept was unveiled at the Army's annual Association of the United States Army conference in October 1956. According to General Taylor, the pentomic division would optimize the force for the atomic battlefield while still maintaining the Army's ability to conduct warfare on a non-atomic battlefield. The Army, responding to the changed nature of warfare, developed what it perceived to be a "goldilocks" solution designed to not only justify the continued relevance of the Army but also to maximize the Army's role in a conventional (non-nuclear) fight. With the pentomic division structure, the Army focused primarily on the greatest threat - nuclear weapons - with the underlying assumption that an Army that is optimized for the atomic battlefield can also succeed on a non-atomic battlefield. The organization planned primarily for the most dangerous course of action rather than the most likely course of action.

The pentomic concept called for a renewed emphasis on penetration as the primary method of offensive operations. This approach was based on the assumption that a tactical nuclear blast

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[72] Gavin, 1958, p. 271.
[73] Bacevich, 1986, p. 105. Pliability and sustainability are two characteristics that the author identifies as critical elements of the pentomic structure.

would devastate the enemy's front, enabling mobile American forces in the pentomic construct to speed through the resulting gap to execute "the technical tasks and finishing touches" of the offensive operation.[74] Army forces that successfully penetrated the gap would then destroy enemy logistics, reserve units, and communications to its rear. According to Brigadier General William F. Train, the Assistant Commandant of the Command and General Staff College, the value of this approach was that it enabled "numerically inferior forces…[to] attain the capability of defeating numerically superior forces."[75]

To carry out this type of offensive operation, Army forces needed dispersion, mobility, improved communications, and greater flexibility.[76] Since attacking forces had to move in the open without cover or concealment, they would be particularly vulnerable to nuclear weapons. The requirement to maintain dispersion violated one of the Army's principles of combat - *mass*. Mass refers to the concentration of soldiers at the decisive point. According to Train, mass on the atomic battlefield was different in that, "Atomic weapons can of themselves create the effect of mass in a period of seconds or minutes."[77] Tactical nuclear weapons would enable the Army to achieve mass without concentrating troops, thereby preserving another principle of war - *economy of force* - the imperative to employ men, weapons, and equipment in the most effective (and economical) way possible.

Bacevich describes the folly of the Army's logic with respect to offensive operations under the pentomic doctrine - "A few well-placed tactical warheads would accomplish what millions of shells fired over periods of days or weeks had failed to do in World War I. Armed with this faith

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[74] Theodore C. Mataxis and Seymour L. Goldberg, *Nuclear Tactics* (Harrisburg, PA, 1958), pp. 164, 211, as quoted in Bacevich, 1986, p. 109.
[75] William F. Train, "The Atomic Challenge," *Military Review*, Volume XXXVI, no. 8 (November 1956): 8.
[76] Ibid.
[77] Train, 1956, p. 9.

in nuclear firepower, the Army believed the only question to be the technical one of learning how to pass exploitation forces through an area scorched by nuclear fires."[78] The critical question for a penetration through an enemy force devastated by a nuclear explosion was whether or not the maneuvering American soldiers would be harmed from the nuclear fallout.

In a highly publicized nuclear test in 1955 called Desert Rock VI in Yucca Flats, Nevada, an armored force maneuvered approximately two miles from a 30-kiloton atomic device and apparently suffered no ill-effects. However, according to a classified Army after-action report, the exercise was labeled "an unrealistic maneuver" since the administrative posture that troops maintained would have rendered them vulnerable to a true enemy threat.[79] During the exercise, high radiation levels inside Army tanks required the commander to maneuver his forces away from the tactical objective into an administrative zone. Additionally, the support vehicles that a unit would have to rely on in real combat did not participate in the exercise.

Pentomic doctrine on defensive operations was innovative in that it ran counter to traditional defensive doctrine. The requirement for dispersion was challenging in a defensive operation because it required forces to separate themselves at distances that made mutual support impossible. Under the new pentomic concept, rather than executing a traditional linear defense or a defense-in-depth, Army forces were required to conduct an area defense with small, mobile elements that could operate independently for unknown periods of time. In the area defense, the defender "attempts to canalize the attacker into noncritical areas…He ejects or destroys the enemy and restores the position by employing concentrated firepower, atomic, and non-atomic, in

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[78] Bacevich, 1986, p. 110.
[79] Ibid., pp. 112-113, discusses the limitations of the Desert Rock VI tests in detail. The now-declassified Army after-action report is: The Armored School, *Final Report of Test - Armored Task Force Participation - Exercise Desert Rock VI*, 1 August, 1955.

conjunction with vigorous counterattacks."[80]   Defensive units would employ tactical nuclear weapons to disrupt or to slow attempted enemy penetrations. This type of defensive operation would succeed only if Army units were able to conduct surveillance in the gaps between their independently operating units. Effective surveillance demanded reliable communications and other forms of control. A pentomic defensive operation would only work if Army forces employed nuclear weapons, but it is not clear how those forces would do so without causing their own destruction.

The establishment of the pentomic innovation had a deep effect on the Army's military education system. Faculty at Army schools taught officers and soldiers about the requirements of the atomic battlefield. The Command and General Staff College (CGSC) transitioned its curriculum from a deliberate focus on a conventional, non-nuclear battlefield to the atomic battlefield and the pentomic concept in the 1957-1958 academic year.[81] By 1959, the Army had made substantial progress in its effort to redefine its mission in the atomic era. Army leaders succeeded in developing a fundamentally new organizational structure and a doctrine in support of that structure.

3.1.1.4. Understanding the Sources of the Pentomic Innovation

Environmental Shifts

The environmental shift that affected the Army's theory of victory in the late 1940s and early 1950s was the introduction of nuclear weapons. The Army's initial response to the resounding effectiveness of the bombings at Hiroshima and Nagasaki and the military's infatuation with the new weapon system, was one of resistance. The Army thought that if it embraced the

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[80] Train, 1956, p. 7.

[81] Lionel G. McGarr, *Special Report of the Commandant, 1 January 1959*, U.S. Army Command and General Staff college, Fort Leavenworth, Kansas, 1959, as discussed by Doughty, 1979, p. 18.

transformative nature of nuclear weapons, it would only bolster arguments on the irrelevance of future ground combat which were being pushed by civilian and military elites, some of whom were motivated by a desire to increase the standing of airpower and the newly independent Air Force.

Further study on the feasibility of employing nuclear weapons in a tactical capacity, conducted in the context of increasing interservice rivalry between the Army and the Air Force, opened the door for the Army to reconsider its theory of victory. Though I did not uncover evidence that Army leaders were concerned with the Soviets' newfound nuclear capability as demonstrated in their successful 1949 nuclear test, one would assume that the Soviet possession of this capability heightened interest in the employment of nuclear weapons. Propelled by the arguments of influential leaders such as General Gavin who saw great value in the tactical employment of nuclear weapons on the battlefield against the Soviets or the Chinese, the Army modified its theory of victory from one oriented on a non-nuclear, conventional fight to one that envisioned a nuclear battlefield.

The Army believed that the possession of strategic nuclear weapons by the U.S. and the Soviets created a condition of mutual deterrence; the possession of nuclear weapons by both states created an offsetting balance. Its new theory of victory was based on the belief that, "In the next war tactical nuclear weapons would provide the great equalizer."[82] The next war would progress as follows. First, the Soviets would attack U.S. forces or allies (not U.S. cities), with "nibbling aggression," having carefully determined that such aggression would not trigger a U.S. strategic nuclear weapons attack.[83] Then, the Army would respond to the attack using conventional force similar to Army operations in World War II. Finally, the Army would "resort to small-yield,

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[82] Bacevich, 1986, p. 65.
[83] Ibid.

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limited-range, highly accurate [tactical] nuclear weapons, delivered either by cannon or rocket."[84] The use of these tactical nuclear weapons would enable the Army to overcome the numerical superiority of the Soviet forces.

Since tactical nuclear weapons would support Army conventional forces in the attack, not replace them, the Army still required sizable ground forces that were capable of large-scale maneuver. This new theory of victory accounted for the transformative effect of nuclear weapons, while at the same time emphasizing the Army's traditional framework for combat. However, since the new theory also assumed that the Soviets would employ nuclear weapons on the battlefield, the Army determined that it needed to change its doctrine and structure to increase the survivability and effectiveness of Army forces on an atomic battlefield. The pentomic innovation was the Army's solution.

Role of Civilians

Civilian elites' emphasis on strategic nuclear weapons was *not* the source of the Army's pentomic construct. Rather, the roots of the pentomic doctrine predate the Army's experience in the Korean War and the Eisenhower Administration's nuclear weapons policies. The Army, responding to the introduction of nuclear weapons as a transformative weapons technology in the post-World War II period, initiated the innovation process first in the absence of civilian intervention. Where Army elites and civilian elites clashed was over what the Army perceived to be the Eisenhower Administration's overemphasis on "strategic retaliatory power at the expense of…so-called 'conventional' forces."[85] As General Gavin noted, Army leaders believed that "The thesis upon which the New Look was based was entirely wrong…"[86] Though President

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[84] Bacevich, 1986, p. 65.
[85] Gavin, 1959, p. 150.
[86] Ibid., p. 151.

Eisenhower supported the tactical use of nuclear weapons if necessary to account for U.S. personnel shortages with respect to the Soviet Union, New Look and massive retaliation prioritized strategic nuclear weapons as the focal point of American war policy. The policy specified in NSC 162/2 rested on America's "capability of inflicting massive retaliatory damage by offensive striking power."[87] That capability rested with the Air Force and its Strategic Air Command (SAC). This afforded the newly independent Air Force preeminent status in the military hierarchy - a fact that grated on Army leaders who worried deeply about the Army's organizational survival.

Interservice Rivalry

The emergence of nuclear weapons increased the prominence of the Air Force and led to competition between the Army and the Air Force over budgetary outlays and battlefield jurisdiction. Individuals inside and outside the Army worried about the organization's survival in the atomic era. In 1955, General Lyman L. Lemnitzer noted, "it seems to me that the very survival of the Army…is at stake."[88] Some analysts outside the Army believed "the Army is obsolescent and probably obsolete."[89] The magnitude of interservice rivalry between the Army and the Air Force in the 1950s can be seen in the growing disparity between the two services' defense expenditures. By 1955, the Air Force's share of the budget was twice the size of the Army's and this trend continued into the early 1960s.[90] From 1955-1961, the Army cut 240,000 personnel.[91]

In a nuclear war, some questioned whether the Army had a role. Junior officers writing in professional military journals, senior officers in the Army, and observers outside of the Army

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[87] Bacevich, 1986, p. 13. The quote comes from *National Security Council 162/2*.
[88] Ibid., p. 21, citing Lyman L. Lemnitzer, "This is a Significant Beginning," *The Army Combat Forces Journal* 6 (November 1955): 62.
[89] Bacevich, 1986, p. 21, citing "A Program for the Army," *The Army Combat Forces Journal* 6 (September 1955): 19.
[90] Bacevich, 1986, pp. 16-17.
[91] Ibid., p. 19.

contended that the Army was becoming obsolete.[92] Diminished budgets, personnel cuts, and the rising status of the Air Force reinforced that view. In addition to manpower concerns, the Army bemoaned the fact that funding was not provided for its surface-to-surface and surface-to-air missile programs, its satellite program (proposed in 1954), and research and development programs tied to developing land forces in the atomic age.[93] An altered Army force structure with a supporting doctrine would not only fare better against the Soviets in combat, but it would also ensure the Army's survival in the atomic era and it would place the organization on a more equal footing with the Air Force.

Competition between the Army and the Air Force in the early 1950s acted as an intervening variable between the introduction of a new military technology - nuclear weapons - and the pentomic doctrine and organizational structure. The Army's diminished status relative to the other services put it on the defensive and this magnified tension and increased interservice rivalry. We don't see civilian intervention in this interservice competition to resolve the friction because there was not deadlock. The allocation of the strategic nuclear mission to the Air Force and the tactical nuclear mission to the Army resolved friction over any jurisdictional concerns.

Budgets

From a budgetary perspective, the theoretical framework suggests that when a service experiences a decrease in its budget it is more likely to innovate. The decreasing budget should force the organization to innovate to maintain its influence and to justify requests for an increase in their allocation of resources. This appears to be the case with the Army of the 1950s. Reeling from sharp spending and personnel decreases after the Korean War and from the prioritization of

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[92] See Bacevich, 1986, p. 21, for a series of quotes from junior and senior officers writing at the time.

[93] Gavin, 1958, p. 152. The Army's sudden interest in missile programs stemmed from the expansion of the battle area on the atomic battlefield which demanded longer-range weapons than existing Army artillery could provide.

resources to the Air Force, the Army innovated. In a search to "find some use of the Army,"[94] the

organization engaged in a healthy debate on the effect of nuclear weapons on future warfare and

the Army's role on an atomic battlefield.[95]

Organizational Culture

The pentomic innovation ran counter to some of the Army's cultural imperatives. While

it aligned with a preference for major wars over small wars and firepower over maneuver, the

construct emphasized decentralized operations and cellular offensive and defensive tactics. This

was in tension with the Army's traditional preference for centralized operations and linear

offensive and defensive operations. However, concern for the Army's organizational survival and

its standing vis-à-vis the Air Force outweighed cultural preferences.

3.1.1.5. Conclusion

In its determination to validate the relevance of the Army in a nuclear world, Army leaders

promoted the pentomic innovation despite the fact that there was little evidence to suggest that the

concept would enable the Army to prevail against a nuclear-armed adversary. Army leaders

refused to accept the idea that ground combat during the nuclear era was not feasible. The Army

adopted the pentomic doctrine in the face of evidence which illuminated its futility.

By 1959, the Army jettisoned the construct at the first available opportunity because

leaders recognized that *no potential scheme for reorganization could make a large fighting unit*

viable in the face of hundreds of nuclear detonations. By that year, the Army's budget had

increased and calls for the Army's irrelevance diminished. Regardless of their mobility or degree

of dispersion, it is unlikely that Army units could have succeeded on a battlefield marked with

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[94] Bacevich, 1986, p. 49, quoting Army Lieutenant General Paul W. Caraway.
[95] Bacevich, 1986, pp. 54-55, discusses the intensity of this debate in the Army's service journals. Innovation and reform were byproducts of the debate.

nuclear fallout from their own tactical nuclear weapons, let alone Soviet nuclear weapons. Though the Army used the Desert Rock VI tests as proof that it could operate on an atomic battlefield, the tests were unrealistic. The lack of realism in the field tests was due to overeagerness on the part of Army leaders to demonstrate the Army's relevance on an atomic battlefield. Army leaders should have been attentive to NATO's 1955 Carte Blanche exercise which simulated the use of tactical nuclear weapons and revealed that those weapons would prevent military units from fighting effectively regardless of their structural organization or doctrine.[96]

Even in recent years, the Army has been unwilling to acknowledge the artificiality of the atomic tests that it conducted to validate the pentomic innovation.[97] The Army's official position on the failed pentomic construct (written over forty years later), contends that the major weakness of the concept was "that it lacked the combat power to cope with an enemy armored force in a conventional battle."[98] While the pentomic division's ability to defeat an enemy armored force on a conventional (non-nuclear) battlefield was clearly in question, it is curious that the Army assesses this as its primary weakness. One could make the argument that under the pentomic construct, the Army was incapable of effective operations on any type of battlefield (armored or not), given the Soviets' numerical superiority. It is also not clear that the pentomic construct would have enabled effectiveness on a nuclear battlefield given the artificiality of the tests and exercises that the Army cited as proof of concept. Army leaders were clearly relieved that the pentomic concept was never put to the test in war. According to General Paul Freeman, commander of Continental Army

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[96] Adam Rawnsley, "Revealed: NATO's Cold War Nuclear Battle Plan Would Have Killed Millions," *The National Interest* (September 6, 2015). The exercise also concluded that tactical nuclear warfare would result in 4-5 million civilian casualties.

[97] Combat Studies Institute, "Sixty Years of Reorganizing for Combat: A Historical Trend Analysis," *Combat Studies Institute*, U.S. Army Command and General Staff College, 1999, p. 20.

[98] Combat Studies Institute, 1999, p. 23.

Command, "Every time I think of the…Pentomic Division I shudder…Thank God we never had to go to war with it."[99]

Even if the pentomic construct could have worked, the Army failed to synchronize the organizational transformation with the requisite technology, personnel, and doctrine. These mechanisms were necessary to translate the pentomic concept into practice. The new technology required to support the organizational construct - radios, other communication equipment, radars, aircraft - was not available in time to field to the units. The Army claims that the concept failed because "the Eisenhower administration…would not develop and fund the artillery, communications equipment, and airlift capabilities to put viable pentomic divisions in the field."[100] The Army also experienced significant reductions in personnel strength under the Eisenhower administration. Personnel strength decreased from 1,026,778 soldiers in 1956 to 861,964 soldiers in 1959.[101] The Army emerged from the Korean War with 20 combat divisions but by 1961 there were only 14 divisions remaining (three of which were training divisions that were not prepared for combat).[102] Given the catastrophic nature of a nuclear attack, the Army argued that it needed a personnel end-strength increase, but increased budgetary outlays to the Air Force caused the opposite to happen.

Finally, offensive and defensive operations under the pentomic construct required a paradigm shift in Army tactics and doctrine. Remarks from junior Army leaders and enlisted soldiers at the time indicate that aspects of military training that are normally critical such as building camaraderie and reinforcing unit history and traditions were no longer valued in the post-World War II (and post Korean War) Army. Bacevich presents convincing evidence that the Army

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[99] Combat Studies Institute, 1999, p. 20.
[100] Ibid., p. 21.
[101] Doughty, 1979, p. 19.
[102] Bacevich, 1986, pp. 19-20.

transitioned to an organization that was, "centralized, bureaucratic, and impersonal."[103] Contrary to any previous period in its history, Army leaders focused on science and technology and prioritized efficiency over effectiveness. Though the Army amended the 1954 FSR twice in 1956 and 1958, the changes that were made were not comprehensive enough to support the major changes to unit tactics that senior Army leaders envisioned were necessary under the pentomic construct. Rather, in the Army's haste to develop and field the pentomic construct, it failed to codify the pentomic concept's major warfighting tenets fully in formal doctrine, relying instead on senior leader speeches and articles in professional journals.

It is worth considering whether or not we can characterize the pentomic construct as an innovation given the speed with which it was replaced. Bacevich notes that in retrospect the pentomic reforms were "striking for their impermanence."[104] I argue that despite its short-lived nature, the pentomic construct qualifies as an innovation because the Army fundamentally altered its view of how the organization would fight. Though doctrine in support of the pentomic construct was never fully implemented, the organizational structural change alone was a major innovation which drastically changed an Army structure that had been in existence for decades. Of the five cases of doctrinal change that I examine, two of the five - the pentomic construct and the 1973 Active Defense doctrine (discussed in the next section) - were jettisoned by the Army before they were ever validated in combat. While I don't think that this fact disqualifies the changes from being true innovations, it does suggest that the deeper the innovation, the more susceptible it will be to getting replaced when policies or the leaders that shepherded the innovations are replaced.

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[103] Bacevich, 1986, p. 119.
[104] Ibid., p. 142.

3.1.2. Active Defense Doctrine

After the Vietnam War, the Army faced tremendous challenges with respect to soldier discipline and unit morale. Military and civilian analysts criticized the Army for its performance during the war. Soldiers returning to the United States were looked down upon. The Army was an institution in crisis. The 1973 decision to transition to an all-volunteer military worried Army leaders who were concerned that eliminating the draft would result in lower quality admits. The same year, the Army established the Training and Doctrine Command (TRADOC) to begin a process to professionalize its training, doctrine, and education programs.

In 1976, in the context of these challenges, the Army developed the first defense-oriented keystone doctrine in its history. The doctrine, known as Active Defense, required Army units to fight from defensive positions. Contrary to all doctrine that preceded it, Active Defense focused on defensive operations, not as a precursor to offensive operations, but as the organization's primary effort. After a period of extensive analysis by Army leaders, the Active Defense doctrine was published in the Army's keystone manual in 1976, and integrated in Army schools and across the force.

Despite a major effort by the Army to develop, publish, and implement Active Defense, there was significant resistance to a defensive doctrine. By the late 1970s, new Army leaders initiated another doctrinal change process which eventually led to the jettison of Active Defense. In hindsight, it is clear that an Army culture that valued offensive operations was at odds with the defensive Active Defense doctrine. Yet, Army leaders promoted Active Defense as the only viable doctrine to defeat a numerically superior Warsaw Pact force in Europe. The purpose of this section is to explore the sources of Active Defense.

3.1.2.1. The Final Years of the Vietnam War (1973-1975)

In 1973, as the Vietnam War came to a close, three events - one political, one internal to the Army, and one external to the United States - influenced the Army's quest to develop a new keystone doctrine in the post-war period. They were the military's transition to an all-volunteer force (AVF), the establishment of TRADOC, and the Arab-Israeli War. Though the Army resisted it at first, the AVF was an important step in the organization's effort to repair itself after the Vietnam War. The establishment of TRADOC marked the formalization of the Army's doctrine-writing process and linked doctrine with training and education programs. Commanded by a four-star General Officer, TRADOC elevated the stature of doctrine in the Army. Finally, the Arab-Israeli War was of great interest to the Army because Arab forces were equipped and trained by the Soviets. All three developments set the stage for the formulation and adoption of the Active Defense doctrine in 1976. I discuss them each, below.

A Political Development - The Establishment of the All-Volunteer Force

On January 27, 1973, Secretary of Defense Melvin Laird said, "With the signing of the peace agreement in Paris today…I wish to inform you that the Armed Forces henceforth will depend exclusively on volunteer soldiers, sailors, airmen and Marines. Use of the draft has ended." With that, the U.S. military embarked on a transition to an all-volunteer force.[105] The rationale for the AVF was five-fold.[106] First, a volunteer military had been the norm for much of American

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[105] I only cover the transition to the all-volunteer force briefly here. For more details, consult: Bernard Rostker, *I Want You! The Evolution of the All-Volunteer Force* (Santa Monica: RAND, 2006); Beth L. Bailey, *America's Army: Making the All-Volunteer Force* (Cambridge: Belknap Press of Harvard University Press, 2009); Robert K. Griffith, *The U.S. Army's Transition to the All-Volunteer Force, 1968-1974* (Washington, DC: U.S. Army Center of Military History, 1997); Cheyney Ryan, *The Chickenhawk Syndrome: War, Sacrifice, and Personal Responsibility* (Lanham, MD: Rowman & Littlefield, 2009); Christopher T. Mayer, *Committed Service in the Military: Bringing Together Selflessness and Self-Fulfillment* (Ph.D. diss, University of Virginia, 2010). For a bibliography with many more sources, see Jenny Silkett, *The All-Volunteer Force: A Selected Bibliography* (Carlisle Barracks: U.S. Army War College Library, February 2013).

[106] Rostker, 2006.

history.[107] Second, the Vietnam War draft was perceived as unfair because the eligible pool was so much larger than the military's personnel requirements. Third, the unpopularity of the Vietnam War meant that some draftees were fighting for reasons that they did not support. Fourth, the disciplinary problems in the military were proof to some leaders that the draft had been ineffective. Finally, some questioned the moral obligation of military service.[108]

The transition to the AVF required a paradigm shift for the Army. The draft was the mechanism that the Army used for the mass mobilization of manpower in the event of war. With the draft, the U.S. was able to maintain the small standing Army that the Founders envisioned. When the draft was abolished, the Army had to make service in the Army attractive in order to appeal to volunteers. Like the other services, the Army needed to develop an effective capacity to recruit. The Army would now have to rely on the National Guard and the Reserves to an extent that it never had before in order to mobilize quickly during war.

Before the Army realized that a workforce of volunteers could be an important element for the professionalization of the force, some leaders thought that eliminating the draft would lead to a less effective organization. According to Army Lieutenant General William DePuy in 1973, "We don't have the high quality as we had coming in through the draft."[109] Over time, Army leaders realized that the elimination of conscription actually made the organization a more professional force.[110] These leaders hoped that the AVF would be a remedy to address low morale

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[107] The United States draft system was not devised until after the Civil War (with the origination of the Selective Service) and it was only implemented during World War I and on the eve of World War II. Truman ended the draft for a short period in 1947, but initiated it again in 1948. The draft persisted until 1973.

[108] Professor Milton Friedman of the University of Chicago believed that the draft was inconsistent with a free, democratic society. See Rostker, 2006, p. 16.

[109] William DePuy, briefing given on Jun 7, 1973, at Fort Polk, Louisiana, reprinted in Swain, 1973, p. 60.

[110] Since the establishment of the All-Volunteer Force, the IQ of the average soldier went up and the percentage of high school graduates increased. Rostker, 2006, p. 6, also contends that the All-Volunteer Force enables greater representativeness in the military of the society it serves. There is a sizable literature on the Army as a profession that lists volunteerism as a major component of a professional force.

and the lack of discipline. The AVF was a mechanism that the Army could use to establish standards of conduct for a professional force.[111] The Army eventually embraced the AVF concept, spending more money in 1972 to support the transition than all three of the other services combined.[112]

An Internal Development - Establishment of the Training and Doctrine Command (TRADOC)

Operation Steadfast[113] - an effort to reorganize the U.S. Continental Army Command (CONARC) under the direction of Army Chief of Staff, General Creighton W. Abrams, Jr. in 1971-1972 - resulted in the establishment of the U.S. Army Training and Doctrine Command (TRADOC). Established in 1955, CONARC's span of control had become too large. With the establishment of TRADOC, the Army inactivated the Combat Developments Command (CDC) which had existed since 1962. TRADOC would be responsible for the Army's doctrine, its military education schools, training, and combat developments. Lieutenant General William E. DePuy, the assistant vice chief of staff of the Army at the time, led Operation Steadfast and was named the first commander of TRADOC. DePuy commanded TRADOC from 1973-1977.

As the TRADOC commander, DePuy was responsible for all of the Army's schools and training centers except for West Point and the U.S. Army War College.[114] Part of the justification for TRADOC was the contention that the Army had failed to modernize during its 10-year war in Vietnam. The combat development responsibility empowered TRADOC to focus on weapons and

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[111] Rostker, 2006, p. 147. The decision to end the draft had its critics in 1973 and now. In recent years, some observers have lamented that the absence of a draft has created a situation in which only a very small demographic actually engages in fighting the nation's wars. Some argue that the draft served as a social contract between the American citizen and the state. See Rostker, 2006, p. iii.

[112] Ibid., p. 154.

[113] James A. Bowden, *Operation STEADFAST: The U.S. Army Reorganizes Itself*, U.S. Marine Corps Command and Staff College, Quantico, VA, April 1985.

[114] It is not clear why TRADOC's jurisdiction did not cover USMA and the War College. See Paul H. Herbert, "Deciding What Has to Be Done - General DePuy and the 1976 Edition of FM 100-5," *Leavenworth Papers*, Number 16, Combat Studies Institute, U.S. Army Command and General Staff College, 1988, p. 22.

equipment. TRADOC was expected to accelerate weapons development to transform the Army into a "modernized, trained, and ready force" capable of defending Europe and balancing against the Warsaw Pact buildup.[115]

TRADOC was the lead agency for producing and publishing doctrine, developing the Army's force structure, and training and educating officers and soldiers. Designating one organization with responsibility for these tasks, meant that for the first time in its history, the Army signaled doctrine's importance to the institution and recognized the explicit link between doctrine and education in Army schools. The link between doctrine and schools was clearly present throughout the Army's history, but the establishment of TRADOC formalized that link and it empowered the leader of the organization with the ability to have a deep effect on the Army.

DePuy also created a Tactical Doctrine office which was distinct from TRADOC's training and combat development functions. This accorded the doctrine development process an equal footing with TRADOC's other functions, and marked the elevation of the Army's keystone doctrine - Field Manual 100-5 *Operations* - to a "central role in defining Army doctrine."[116] DePuy also moved the task of writing FM 100-5 from the Combined Arms Center (CAC) at Fort Leavenworth, Kansas to the Concepts Branch of TRADOC Headquarters.[117] By moving the doctrine-writing process to his headquarters, DePuy not only underscored the importance of the new FM 100-5, it also helped his effort to link doctrine to acquisition - specifically, the development, analysis, and procurement of new weapons systems.[118]

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[115] Benjamin King, "Victory Starts Here: A 35-Year History of the US Army Training and Doctrine Command," *Combat Studies Institute*, U.S. Army Command and General Staff College, 2008, p. 2.

[116] Ibid., p. 6.

[117] King, 2008, p. 31. DePuy instituted this change in proponent partly because of a dispute over the role of doctrine with Lieutenant General John Cushman who commanded the Combined Arms Center while DePuy commanded TRADOC. Cushman saw doctrine as a guide; DePuy saw it as regulatory.

[118] Herbert, 1988, p. 78.

DePuy directed TRADOC to create the Army Training and Evaluation Program (ARTEP) which prescribed required missions and articulated standards of performance for those missions. For each critical task listed in the ARTEP, there was a detailed checklist that specified the supporting tasks for every level of the Army from squad through battalion.[119] This enabled DePuy to force Army units to comply with doctrine.[120]

An External Development - The 1973 Arab-Israeli War

On October 6, 1973, Egyptian and Syrian troops attacked Israeli forces in the Golan Heights and the Sinai Peninsula. The purpose of the attack was to reclaim territory lost to Israel in the 1967 Six-Day War. Israel was unprepared for the sudden attack. Many Israeli Defense Forces (IDF) were celebrating Yom Kippur when the Egyptian and Syrian forces initiated the attack and it took them a few days to adequately mobilize for war. Egyptian and Syrian troops fought with Soviet weapons and equipment. After suffering high casualties in the initial battles of the war, the IDF, supported by an airlift of American weapons, crossed the Suez Canal on October 16th and seized the initiative from the Egyptian and Syrian forces. On October 25th, due in part to a U.S. decision to upgrade its nuclear posture to an alert status which put pressure on the parties to negotiate, United Nations Security Council Resolution 340 led to a ceasefire. As I discuss in detail in the next section, this war had an important influence on General DePuy, other leaders in TRADOC, and Army doctrine writers in the period immediately preceding the formulation of the Active Defense doctrine.

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[119] Herbert, 1988, p. 39. The author credits the creation of the ARTEP to Brigadier General Paul F. Gorman, General DePuy's deputy chief of staff for training.
[120] Kretchik, 2011, p. 201.

Theory of Victory Prior to Active Defense

In the midst of the Army's transition to the AVF and before the organization had a chance to learn from the Arab-Israeli War, Secretary of the Army Howard Callaway and the Army Chief of Staff General Creighton W. Abrams ordered analysts at the War College to produce a report on the Army's role in the post-Vietnam War world. The report[121] envisioned the deployment of Army forces for the purposes of assurance and deterrence. The U.S. would use its "strategic nuclear retaliatory capability, made credible by forward deployments of conventional forces" to provide assurance to its allies.[122] Deterrence of the Soviet Union and China would be accomplished by achieving "sufficient conventional capability to deter limited…conventional attacks, and to control such attacks without resorting to nuclear weapons."[123] The purpose of forward deployed Army forces would be to reassure allies in Western Europe and Japan.

The report also emphasized the importance of the deployment of conventional forces for deterrence.[124] Cognizant of the American public's war-wariness, its negative perception of military force after the war, and the increasing "euphoria of detente,"[125] the report recognized that appeals to defend Western Europe from the threat of "communist hordes"[126] would be a hard sell. The Army recognized that its theory of victory could not succeed without the support of the American people. That theory was bolstered by the Nixon Doctrine which reduced U.S.

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[121] The report is also known as "The Astarita Report: A Military Strategy for the Multipolar World."

[122] Harry G. Summers, Jr., "The Astarita Report: A Military Strategy for the Multipolar World," *An Occasional Paper from the Strategic Studies Institute* (Carlisle, PA: U.S. Army War College, 1981), p. 42. Summers' paper is a summary of the oral report ordered by Secretary Callaway in 1973. Summers was a member of the Strategic Assessment Group.

[123] Ibid., p. 43.

[124] Robert T. Davis, "The Challenge of Adaptation: The US Army in the Aftermath of Conflict, 1953-2000," *The Long War Series, Occasional Paper 27*, Combat Studies Institute Press, U.S. Army Combined Arms Center, 2008, p. 53.

[125] Richard Lock-Pullan, "'An Inward Looking Time': The United States Army, 1973-1976," *The Journal of Military History*, 67, no. 2 (April 2003): 484. The author argues that the establishment of the AVF had more of an influence on the Army than the Vietnam War, technology, or any changes in the strategic environment.

[126] Summers, 1981, p. 22.

commitments in Asia and the Middle East but reinforced an American commitment to the strategy of flexible response. The Nixon Administration promised to "maintain U.S. forces [in Western Europe] at existing levels through 'at least' mid-1971."[127]

The Army's vision of warfare in the early 1970s was similar to its vision in the early 1960s after the abandonment of the pentomic construct and before the Army escalated its involvement in the Vietnam War. The 1968 *Field Manual* 100-5 was its keystone doctrine. The manual emphasized that the Army would maintain the ability to fight effectively across a spectrum of war - cold war, limited war, and general war - but its central purpose was to reassure American allies in Europe that the Army still possessed the ability to defeat the Soviets in Europe, despite the Army's engagement in Vietnam.

3.1.2.2. The Active Defense Doctrine

From 1973-1975, TRADOC focused on the formulation of a new Army doctrine. In 1976, TRADOC published the *1976 Field Manual* 100-5 *Operations* manual. Upon publication, TRADOC distributed over 170,000 copies of the manual to individuals and units across the Army.[128] The 1976 FM 100-5 formalized what became known as the Army's Active Defense doctrine.[129] The new manual required a significant doctrinal shift for the Army. First, the manual diverged sharply from its predecessor which emphasized operations across a spectrum of war. Cold War operations, stability operations, and unconventional warfare were removed from the

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[127] Davis, 2008, p. 46. He cites *First Annual Report to the Congress on the United States Foreign Policy for the 1970's*, 18 February 1970. For more on the Nixon Doctrine, see Robert Dallek, *Nixon and Kissinger: Partners in Power* (New York: Harper Collins, 2007).

[128] Herbert, 1988, p. 95.

[129] The 1976 doctrine is colloquially known as Active Defense but it is not clear where the term came from. While the lateral movement of forces in defensive operations is surely the rationale for the use of the phrase, the label itself does not appear in the 1976 manual. German doctrine emphasized the active movement of defenses so it is possible that the term originated there. DePuy describes the concept and uses the label "active defense" in an undated handwritten note included in Swain's compilation of DePuy's selected papers from his years as the TRADOC commander. See Swain, 1973, pp. 141-142.

Army's keystone doctrine. Second, for the first time in its history, the Army focused its doctrine on defensive operations rather than offensive operations.

Given the post-Vietnam U.S. policy shift away from foreign intervention and the conclusion that the greatest threat to America and its allies was the Soviet Union in Europe, the Army changed its doctrine to focus almost entirely on conventional operations. According to the 1976 FM 100-5, "The Army's primary objective is to win the land battle - to fight and win in battles, large or small, against whatever foe, wherever we may be sent to war."[130] This mandate differed from the 1968 FSR which stated, "The fundamental purpose of U.S. military forces is to preserve, restore, or create an environment of order or stability within which the instrumentalities of government can function effectively under a code of laws."[131] According to Birtle, "Gone were all references to counterinsurgency, nation-building, civil affairs, and psychological operations, replaced by a single-minded emphasis on the conduct of conventional combat operations in a major war."[132] The nuclear superiority that the U.S. maintained over the Soviets in the 1950s and 1960s was replaced with parity by the late 1960s and early 1970s. Under conditions of nuclear parity and conventional inferiority, the Army made the case that it needed to improve technology and change doctrine to defend NATO.

The Army's new theory of victory leading to the publication of the 1976 manual is well-summarized by Herbert: "Future warfare would entail conventional battle against a numerically superior enemy with comparable equipment, which could break out at any moment…"[133] Two slogans that originated from this new theory had a major effect on the drafting and publication of

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[130] *Field Manual* 100-5 *Operations* (Washington, DC: Headquarters, Department of the Army, 1976), p. 1-1.

[131] *Field Manual* 100-5 *Operations of Army Forces in the Field* (Washington, DC: Headquarters, Department of the Army, 1968), p. 1-6.

[132] Andrew J. Birtle, *U.S. Army Counterinsurgency and Contingency Operations Doctrine, 1942-1976* (Washington: Center of Military History, 2006), p. 482.

[133] Herbert, 1988, p. 102.

the 1976 FM 100-5 *Operations* manual - "Fight outnumbered and win" and "Win the first battle."[134] This new theory of victory demanded that the Army innovate doctrinally. Although the Army was in a period of tremendous pressure on its budget, DePuy determined that the benefits of doctrinal innovation outweighed the costs. A systems-based approach to weapons acquisition that was cost-effective would keep costs relatively low. The defense-oriented 1976 doctrine could be executed with the Army's existing manpower and would be more effective against a numerically superior enemy. An offense-oriented doctrine would have required a personnel increase that was not feasible in the existing budget climate.

The defensive orientation of the 1976 FM 100-5 *Operations* manual stemmed from the use of force ratios as the primary factor used to determine how best to employ Army units. Successful offensive operations required an Army unit to achieve a 6-to-1 manpower superiority whereas a successful defense required smaller than a 1-to-3 ratio.[135] Achieving the force-ratio necessary for a successful attack was impossible, since the Soviets already had numerical superiority over the American military. The defensive orientation of the 1976 manual - termed "active defense" - was DePuy's way of coping with the Soviets' numerical superiority and the fact that the USSR would have the initiative in any major war to defend West Germany. In DePuy's own words, "The 'active defense' is designed to fight successfully against greatly superior numbers of attacking armored vehicles with mounted or dismounted infantry, heavily supported by artillery, protected by mobile air defense weapons and also supported in varying degrees by armored helicopters and fighter aircraft."[136]

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[134] Herbert, 1988, p. 102.
[135] Ibid., p. 8.
[136] DePuy in Swain, 1973, p. 141.

An "active defense" is one in which defensive forces fight in a "covering force area" in front of their main defensive positions to force the enemy to commit his main attack.[137] Once the enemy commits, the defensive forces seek to defeat the enemy's main attack by deploying elements that move "laterally from other sectors of the battlefield where the defender would accept a certain degree of risk."[138] The defender cedes some ground to the attacker and uses these lateral operations to maximize his force ratio at the point of battle. The net effect of the operation is to "wear down" the enemy attacking force through "combined arms" teams fighting from mutually supported battle positions.[139] For the first time in the history of its doctrine, the Army did not view defensive operations as merely a precursor for offensive operations.[140] Defensive operations were prioritized because of their favorable combat power ratio.

Herbert provides convincing evidence that the Army's active defense concept mirrored German doctrine.[141] At the heart of German doctrine was a forward defense concept that derived from NATO's position as a *defensive* alliance. Given West Germany's geographical location in Europe and NATO's defensive mission, it is unsurprising that German doctrine would emphasize defensive operations. The U.S. Army drew heavily from Germany's approach. Similar to active defense, forward defense emphasized weakening the enemy attack through fire initially, and then displacing laterally to disrupt and eventually defeat enemy formations.[142]

Correspondence between the United States and West Germany on the Active Defense doctrine was extensive since any Soviet attack in Europe would transverse through Germany.[143]

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[137] Another way to look at active defense is the use of battle positions organized in depth. Doughty, 1979, p. 45, makes this point. The active defense had three areas - the covering force area, the main battle area, and the rear area.

[138] Herbert, 1988, p. 9.

[139] DePuy in Swain, 1973, p. 141.

[140] Kretchik, 2011, p. 198.

[141] Herbert, 1988, pp. 65-66.

[142] According to Herbert, 1988, p. 84, "the Germans said their defense, 'will be conducted actively.'"

[143] Kretchik, 2011, p. 196.

The Germans only mission - defending NATO Europe - was the Army's primary mission.[144]

Herbert describes the U.S. Army's collaboration with Germany. First, General DePuy established a close working relationship with the German High Command. Second, the Army engaged with the Germans in a series of talks about doctrine and training, and the results of those exchanges were consolidated in joint papers. Finally, there was a deliberate exchange of doctrine between the U.S. Army and the Germans. Not only did DePuy use the German manual HDv 100/100 *Command and Control in Battle* to draft American doctrine, he also sent drafts of the 1976 manual to the German Army for feedback.[145] The Army also spoke to the Germans about how to interpret lessons learned from the use of armored and mechanized infantry and the suppression of air defense weapons that came out of the 1973 Arab-Israeli War. DePuy not only used engagements with the Germans as a way to improve the doctrinal concepts that he codified in the 1976 FM 100-5, he also used German support of those concepts to his advantage as a way of convincing leaders in the U.S. Army that the concepts were sound.[146]

3.1.2.3. Understanding the Sources of the Active Defense Doctrine

Environmental Shifts

Two factors affected the Army's theory of victory in the early 1970s and led to the Active Defense doctrine. They were: (1) a shift in the strategic nuclear balance between the U.S. and the Soviet Union and (2) the 1973 Arab-Israeli War.

In the early 1960s, before the Soviets advanced their nuclear capability, the U.S. commitment to extended deterrence in Europe was credible. However, U.S. nuclear superiority

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[144] Herbert, 1988, p. 61. The author provides a comprehensive account of U.S.-German collaboration in Chapter 6.

[145] Ibid. See also, John L. Romjue, "From Active Defense to AirLand Battle: The Development of Army Doctrine 1973-1982," Historical Office, U.S. Army Training and Doctrine Command, Fort Monroe, VA, p. 84. DePuy elaborates on collaboration with the Germans in his letter to General Weyand on 18 February 1976.

[146] Herbert, 1988, p. 63.

over the Soviets was replaced with parity by the late 1960s and early 1970s. Increased Soviet nuclear weapons capability rendered the U.S. commitment to extended deterrence in Europe less tenable.[147] The Army was aware of the change in strategic balance because it paid close attention to Soviet capabilities and Soviet military doctrine through intelligence reports developed internally and from national intelligence agencies.[148] The Active Defense doctrine was the Army's response to this shift in the strategic nuclear balance. The forward deployment of Army forces in Europe was a critical element of U.S. strategy. The Active Defense doctrine was thought to be the most effective method of defeating a numerically superior Warsaw Pact in the event of an attack on Europe.

The 1973 Arab-Israeli War also had a major effect on the Army's theory of victory because it demonstrated the increased lethality of combat, the importance of winning the first battle of a war, and the limitations of American technologies and tactics when confronted with Soviet technologies and tactics. The TRADOC commander, General DePuy, organized Army conferences that focused on Soviet doctrine and the Arab-Israeli War.[149] DePuy's goal was to write a doctrine that prepared the Army for a conventional operation to defend U.S. allies in western Europe from a Soviet attack. Given the Army's challenges in the post-Vietnam period, most analysts assumed that the Army did not have the capability to defeat a numerically superior Soviet force in Europe. The Army's tactical experience in the Vietnam War was believed to be of

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[147] Long, 2015, unpublished paper. See also, Gregg Herken, *Counsels of War* (New York: Oxford University Press, 1987) and William Burr, "The Nixon Administration, the 'Horror Strategy,' and the Search for Limited Nuclear Options, 1969–1972: Prelude to the Schlesinger Doctrine," *Journal of Cold War Studies*, v. 7, no. 3, (Summer 2005): 34-78.

[148] This is not to suggest that the Army or the U.S. intelligence community had perfect information on Soviet military composition and capability. See Joan Bird and John Bird, "CIA Analysis of the Warsaw Pact Forces: The Importance of Clandestine Reporting," *CIA Historical Collections*, found online at https://www.cia.gov/library/publications/cold-war/the-warsaw-pact-forces/index.html. Chapter 5 discusses the challenges of estimating the strength and capabilities of Soviet-Warsaw Pact forces from 1963-1968.

[149] King, 2008, p. 31.

little use on a European battlefield.[150] DePuy was determined to use the 1976 FM 100-5 as the primary tool in his broader effort to change the Army.

The 1973 war had a major influence on DePuy's approach to the 1976 manual[151] and the Active Defense doctrine. The Army was interested in the war because the Arab forces were equipped and trained by the Soviets and the Israeli forces used American equipment and had similar mobilization requirements. The Yom Kippur War was a "microcosm of potential conflict in Europe…"[152] Compared to the low-intensity, counter-guerrilla operations of the Vietnam War, the 1973 war was mid-intensity and the weapons used by both sides were modern and sophisticated. The war illustrated the lethality of armored warfare and the importance of winning the first battle. In regard to the latter, though Israel won the war, the IDF's unpreparedness when the war started led to heavy Israeli casualties. The emphasis on winning the first battle reinforced the lessons the Army learned from two previous American first battle defeats - Kasserine Pass in World War II and Task Force Smith in Korea.[153] With the increased lethality of new weapons, Army planners assumed that a loss in the first battle would mean a loss of the war.[154] Planners also believed that the older mobilization concept in which forces could be mobilized and trained in time for an impending war was obsolete.

DePuy was deliberate in documenting lessons learned from the Arab-Israeli War and using those lessons to change Army doctrine and equipment. In a letter to the Chief of Staff, General Abrams, on January 14, 1974, DePuy discussed lessons learned and emphasized the importance of using those lessons to reform Army tactics, techniques, training, equipment performance, and

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[150] Herbert, 1988, p. 6.
[151] For an in-depth review of the effect of the 1973 Arab-Israeli war on the Army and TRADOC specifically, see Herbert, 1988, pp. 29-36.
[152] Davis, 2008, p. 54.
[153] King, 2008, p. 31.
[154] Doughty, 1979, p. 42.

weapon systems acquisition.[155] In a letter two years later to the next Army Chief of Staff, General Fred C. Weyand, DePuy noted that "the implication of the Middle East War and our review of our status involved problems and challenges at every echelon…TRADOC therefore embarked on a program to reorient and restructure the whole body of Army doctrine from top to bottom…the key would have to be the substantial revision of FM 100-5 - Operations, the basic statement of our solutions to the challenge of modern weapons across the whole integrated battlefield…"[156]

Though Israel won the war, Syrian and Egyptian forces caught the Israelis by surprise and, using Soviet technology, were successful in destroying American armor.[157] In a report on the implications of the Arab-Israeli War for the U.S. Army, DePuy listed three major lessons: (1) "modern weapons are vastly more lethal than any weapons we have encountered," (2) "[the Army] must have highly trained and highly skilled combined arms teams of armor, infantry, artillery, and air defense," and (3) "the training of the individual as well as the team will make the difference between success and failure on the battlefield."[158] In the same report, DePuy concluded that existing tanks were ten times more lethal than World War II tanks, and he talked at length about the tremendous tank losses that both sides experienced in the war.[159] DePuy intended to use the combat development arm of TRADOC to enhance the Army's technological capability through the weapons acquisition process.[160]

DePuy's plan to modernize the Army and to improve its training faced one major obstacle - a reduced Army budget after the Vietnam War. The postwar Army was reduced to 785,000

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[155] Swain, 1973, p. 69-74.
[156] Romjue, 1984, p. 83. The letter from DePuy is dated 18 February 1976.
[157] Kretchik, 2011, p. 196.
[158] William E. DePuy, "Implications of the Middle East War on U.S. Army Tactics, Doctrine, and Systems," in Swain, 1973, p. 76.
[159] DePuy, in Swain, 1973, p. 79.
[160] Kretchik, 2011, p. 196, and others make the point that DePuy had learned the systems approach to planning, programming, and budgeting from his time serving in the Pentagon during the 1960s under then Secretary of Defense Robert M. McNamara. See also: Doughty, 1978, p. 41; Herbert, 1988, p. 101.

soldiers, and compared to the Navy and the Air Force, the Army's budget was low.[161] General DePuy was aware of the link between the Army's budget and its doctrine, and he believed that doctrine could be used as justification in the weapons and technology acquisition process. Before taking command of TRADOC, DePuy watched two of the Army's major procurement programs get cut - the MBT70 main battle tank and the Cheyenne advanced attack helicopter.[162] DePuy was convinced that the Army needed to do a better job linking technology to doctrine. New technologies included drones, night-vision devices, an attack helicopter, the M1 main battle tank, and the M2 Bradley (mechanized infantry combat vehicle).

Taking a systems-approach to the budget process (in the style of Robert McNamara in the 1960s), DePuy's effort to link doctrine to weapons acquisition was more oriented on efficiency (minimizing costs and maximizing capabilities) than effectiveness (selecting the best weapons for the most likely future mission-sets).[163] This systems-based approach was unusual for the Army - a service that traditionally focused on soldiers rather than equipment. An emphasis on systems had the unintended consequence of prioritizing weapons over tactics and leadership in the new doctrine. This would be a major factor in the replacement of the Active Defense doctrine in the early 1980s.[164]

The eventual rejection of DePuy's systems-oriented approach notwithstanding, the technological acquisitions that the Army made during the 1970s and the 1980s were integral to the Army's renaissance after the Vietnam War and the Army's performance during the 1991 Persian Gulf war. The "Big 5" - the Abrams main battle tank, the Bradley fighting vehicle, the Apache

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[161] Herbert, 1988, p. 100.
[162] Ibid., p. 27.
[163] Ibid., p. 101.
[164] Herbert, 1988, p. 101. According to the author, "the Army rejected DePuy's doctrine as too mechanical, too mathematically certain, too specific. The writers of the 1982 manual [AirLand Battle] set out to describe 'how soldiers, not systems, fight and win.'"

attack helicopter, the Black Hawk utility helicopter, and the Patriot air defense missile system - were acquisitions made by the Army in the aftermath of the 1973 Yom Kippur War and in response to the Soviet threat in Europe.[165] The consensus in the Army today is that this five-pronged acquisition was a major component in the development of the U.S. Army's preeminence in ground combat. The Big 5 provided the Army with the tools it needed to defeat a numerically superior Soviet force in conventional, mid-intensity warfare.[166]

Role of Civilians

There is no evidence of civilian intervention to compel the Army to change its doctrine in the years leading up to Active Defense. The most significant civilian action during the period was the 1973 Congressional decision to abolish the draft. While this action had a major effect on the Army's approach to recruiting, training, and mobilizing in the event of war, there is no evidence to suggest that the AVF was a source of Active Defense. Nixon's reduction of forces in Asia and his administration's focus on the defense of Western Europe through flexible response were welcome policies for the Army. The preferences of civilian elites matched the preferences of Army leaders who were eager to transition their focus from the Vietnam War to Europe.

The Nixon Administration's 1970 *National Security Decision Memoranda 95* argued that it was "vital that NATO have a credible conventional defense posture to deter and, if necessary, defend against conventional attack by Warsaw Pact forces."[167] The civilian emphasis on the

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[165] Many authors mistakenly include the Multiple Launch Rocket System (MLRS) as a Big 5 acquisition instead of the Patriot missile system. I don't discuss it here, but the road to each element of the Big 5 was fraught with challenges and setbacks. For a detailed account of the Big 5, see David C. Trybula, "'Big Five' Lessons for Today and Tomorrow," accessed online at http://www.benning.army.mil/Library/content/NS P-4889.pdf.

[166] Colin Jackson, "From Conservatism to Revolutionary Intoxication: The U.S. Army in the Second Interwar Period," in Harvey Sapolsky, Benjamin Friedman, and Brendan Green, eds., *Creation Without Destruction: The Revolution in Military Affairs and the U.S. Military During the Second Interwar Period* (New York: Routledge, 2009), p. 44.

[167] Nixon Library, "National Security Decision Memoranda 95: U.S. Strategy and Forces for NATO," 25 November 1970, accessed online at: https://www.nixonlibrary.gov/virtuallibrary/documents/nsdm/nsdm_095.pdf. Also, quoted in Davis, 2008, p. 49.

defense of NATO gave Army Chief of Staff General Abrams the support he needed to establish United States Army Forces Command (FORSCOM) and TRADOC - organizations that would prioritize Army force readiness and training/education, respectively. When Abrams boldly, and without analysis from his staff, declared in March 1974 that the Army would establish a 16-division force even though it was only budgeted for 13 divisions, civilian policymakers did not intervene to stop him.[168] In fact, the Nixon Administration supported his plan by promoting the integration of the National Guard and Reserves into the total Army force posture.[169] As the Army historian Davis notes, "the Army's turn to Europe fell in sync with the proclaimed foreign policy agenda."[170]

In recent years, some scholars have criticized the Army for jettisoning lessons learned related to counterinsurgency in the post-Vietnam War period. In 1979, Secretary of Defense Laird proposed a 1-and-1/2 war concept whereby the Army would split its force structure into a conventional warfighting force and an unconventional warfighting force for the Europe and Korea theaters, respectfully.[171] Laird's proposal fizzled out and was not implemented. Davis argues that high civilian turnover which enabled military autonomy is the primary reason why the proposal was abandoned.[172] If Laird had pushed his proposal, then there would have been a direct conflict between civilian elites and Army elites, since the latter were already in the process of reducing the Army Special Forces and purging military school curricula of lessons related to counterinsurgency.

Interservice Rivalry

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[168] Lewis Sorley, *Thunderbolt: General Creighton Abrams and the Army of His Times* (New York: Simon and Schuster, 1992), p. 342. See also Davis, 2008, p. 52, and Harry G. Summers, Jr., *On Strategy II: A Critical Analysis of the Gulf War* (New York: Dell Publishing, 1992), pp. 74-75. Abrams promised not to exceed 785,000 volunteer soldiers in the 16-division construct. See Herbert, 1988, p. 100.

[169] Richard Lock-Pullan, *U.S. Army Intervention Policy and Army Innovation* (New York: Routledge, 2005), pp. 51-53.

[170] Davis, 2008, p. 52. The author notes that in 1973, President Nixon and his National Security Advisor, Henry Kissinger, called it the "Year of Europe."

[171] Ibid., p. 47. Laird called unconventional wars "sub-theater hostilities." Laird proposed this idea in a report entitled, "A Strategy for Peace: A National Security Strategy of Realistic Deterrence."

[172] Ibid., p. 48.

Interservice rivalry did not have a major effect on the Active Defense doctrine, but the *avoidance* of interservice rivalry did. The Army of the early 1970s believed that interservice cooperation with the Air Force was critical.[173] This was an interesting development given the historic rivalry between these services in the preceding years. Part of the emphasis on increased cooperation with the Air Force stemmed from the Army's realization that the constrained budget environment required a very clear separation of missions and roles between the two services. The 1973 Arab-Israeli War also demonstrated that the nature of mid-intensity warfare had changed - both sides in that war used their air force in a battle to dominate the airspace. Air operations were critical to ground operations so it was imperative not only that the Air Force control the sky, but also that the military as a whole could execute a comprehensive and effective air defense system.[174]

The 1976 manual stated, "…the Army cannot win the land battle without the Air Force." In fact, the Army consciously avoided the development of weapons or equipment to perform functions which the Air Force could perform more effectively."[175] The doctrine noted that the requirement for the Army and the Air Force to work together on the battlefield under joint commanders meant that the services needed to develop an air-ground communications system and a mutually, agreed-upon employment concept. The Army saw five roles for the Air Force: defeat enemy air forces, provide intelligence on the enemy, battlefield interdiction (attacks against enemy targets on the ground), close air support (tactical fighters attack targets on the ground that are designated by Army commanders), and tactical airlift (the movement of troops and supplies).[176]

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[173] Herbert, 1988, p. 8. The Army's next doctrinal innovation - AirLand Battle - was the first doctrinal innovation in the Army's history that was affected by interservice cooperation (rather than interservice rivalry).

[174] Ibid., p. 69.

[175] 1976 FM 100-5, p. 8-1.

[176] 1976 FM 100-5, p. 8-2. The rest of this chapter focused on airspace management, logistics, reconnaissance, and electronic warfare.

Cooperation between the Army and the Air Force would be a major feature of the Army's next doctrinal innovation in the early 1980s - AirLand Battle.

Budgets

Decreasing budgets in the aftermath of the Vietnam War should have forced the Army to innovate to maintain its influence and to justify requests for an increase in the allocation of resources. Budgetary famine in the 1970s did indeed play a role in shaping the Army's effort to innovate doctrinally. Sheehan argues that the budget cuts were due to: a reduction in the perception of external threat due to detente, reduced executive authority as a result of Vietnam and Watergate, a decreased willingness to use force, and a perception of Army incompetence.[177] General DePuy, recognizing the constrained budget environment, spent considerable effort prioritizing needed weapons systems and "demonstrat[ing] the Army's need for each budget item by explaining its role in an over-arching concept of how the Army would fight."[178] A defense-oriented doctrine like Active Defense was predicated on Soviet numerical overmatch, which was itself a byproduct of a constrained Army budget which prevented personnel growth beyond 785,000 soldiers.

The Army also focused on weapons acquisition to increase its budgetary outlays. The Army made a strong argument in favor of a deliberate focus on technology and weapons, claiming that it "lost a generation of modernization" during its "preoccupation with the Vietnam War."[179] According to DePuy, "The next decade will see virtually every major weapon or piece of equipment replaced by a much more capable but more costly and complex counterpart."[180]

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[177] Kevin Sheehan, *Preparing for an Imaginary War? Examining Peacetime Functions and Changes of Army Doctrine* (Ph.D. diss. Columbia University, 1988), p. 149.

[178] Herbert, 1988, p. 100.

[179] William E. DePuy, "Are We Ready for the Future?" *Army* 28, no. 9 (September 1978): 22-29, reprinted in Swain, 1973, p. 267.

[180] DePuy in Swain, 1973, p. 267.

Organizational Culture

The Active Defense doctrine was at odds with an Army organizational culture that emphasized offensiveness, aggressiveness, and seizing the initiative. These cultural characteristics should have caused deep resistance to DePuy's efforts to publish the doctrine. Because DePuy wanted to implement the doctrine as quickly as possible, he did not share it with units or attempt to gain buy-in from other headquarters normally involved in the doctrine-writing process. There is no evidence to confirm or deny whether DePuy did this because he anticipated resistance or because such a centralized approach was his preferred style of leadership. Herbert suggests a combination of both: "Centralization of decision making, isolation of opponents, command attention to priority projects, strict adherence to a demanding time schedule, and an aggressive (sometimes abrasive) campaign of persuasion all reflected a command style nurtured since World War II and best described by DePuy himself in 1969: 'Decide what has to be done, tell someone to do it, and check to be sure that they do.'"[181]

3.1.2.4. Conclusion

In the budget constrained environment of the post-Vietnam War period, as the Army struggled to adjust to the all-volunteer force, the changing strategic nuclear balance and the war in the Middle East were the catalysts for the Army's Active Defense doctrine. The establishment of TRADOC - a four-star headquarters with direct access to the Chief of Staff of the Army - afforded doctrine a prominent position within the Army, and gave General DePuy the mechanisms he needed to quickly formulate and publish a new keystone doctrine. However, in his haste to publish Active Defense, DePuy underestimated the criticism that he would receive from across the Army.

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[181] Herbert, 1988, p. 104.

Almost as soon as Active Defense was published, a new commander of TRADOC - General Donn A. Starry - started drafting its replacement.

The Army jettisoned Active Defense because its defensive orientation was a radical departure from long-standing cultural norms reinforced again and again in the Army's doctrine. All twelve prior keystone doctrines published in the twentieth century were offensive. Senior Army leaders such as General Alexander M. Haig, the Supreme Allied Commander Europe (SACEUR), believed that the manual over-emphasized defensive operations. Like many of his contemporaries, he thought offensive operations were superior in defeating an enemy force.[182] As soon as Army leaders updated their assessment of Soviet capabilities and doctrine, and concluded that the Soviets were unlikely to attack with a massed armored breakthrough, they took action to replace Active Defense. Rather than replacing it with a revised defensive doctrine that could account for a more mobile Soviet attack, the Army scrapped the defensive orientation and created an offensive one.

General DePuy's systems-based approach and its emphasis on force ratios ignored the psychological components of war.[183] The emphasis on weapons and technologies was at odds with an organizational culture that was people-centric. Kretchik explains it best: "Since the 1779 Regulations, the American soldier had been upheld as a cultural icon. Despite changes in technology since the American Revolution, no manual advocated subjugating people to technology, armor and mechanized infantry included. Although the 1855 rifle-musket and the post-World War II tactical nuclear weapon had affected army doctrine, the Regulations and field

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[182] For detailed assessments of the 1976 manual, see Philip A. Karber, "Dynamic Doctrine for Dynamic Defense," *Armed Forces Journal* 114, no. 2 (October 1976): 23-29; Archer Jones, "The New FM 100-5: A View from the Ivory Tower," *Military Review* 58, no. 2 (May 1984): 27-36; Colin S Gray, "Force Planning, Political Guidance and the Decision to Fight," *Military Review* 53, no. 4 (April 1978): 27-36; Herbert, 1988, pp. 96-97; and Kretchik, 2011, p. 201.
[183] Herbert, 1988, p. 96.

manuals of those eras accommodated technology as a tool for enhancing soldier performance in battle. In seeking to regulate the chaos of war through technology, DePuy's 1976 doctrine tore at the very fabric of the Army's cultural beliefs."[184] Also, the way in which DePuy viewed tactics - as "the application of new weapons to military problems" - was a fundamental divergence from historical conceptions of the term which viewed tactics as the movement or maneuver of soldiers on the battlefield.[185] DePuy believed that the Army had shifted from "an organization of people with weapons to an organization of weapons with crews."[186]

Had the Active Defense doctrine been employed against the Soviets on the battlefield, it only would have worked if the Soviets employed a major armored concentrated breakthrough at one point in the American defense, rather than smaller attacks at vulnerable points in the American (or allied) front.[187] The Active Defense doctrine also had two other tactical problems. First, a unit conducting defensive operations as specified in the manual would lack a critically needed reserve force at the tactical level. Second, the overemphasis on winning the first battle predisposed the Army to ignore related or subsequent operations that might be fundamentally different.

Though the Warsaw Pact's numerical superiority was a factor in DePuy's decision to develop a defense-oriented doctrine, estimating the size of the Soviet force was difficult. The 1958 National Intelligence Estimate (NIE) determined that the Soviet force consisted of 175 combat-ready divisions, with an additional 125 divisions available in 30 days. Four years later, the 1962 NIE determined that the Soviet force consisted of 80 combat-ready divisions, with an additional 65 divisions that could be combat-ready with augmentation. With 30 days of advance notice, "the

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[184] Kretchik, 2011, p. 202.
[185] William E. DePuy, "Technology and Tactics in Defense of Europe," *Army* 29, no. 4 (April 1979): 14-23, reprinted in Swain, 1973, p. 279.
[186] Herbert, 1988, p. 95.
[187] King, 2008, pp. 31-32.

Soviets could expand their total forces to about 100 combat-ready divisions and 125 others less well prepared."[188] A 1963 assessment ordered by Secretary of Defense McNamara concluded that the Soviet force consisted of 115-135 divisions, "including 22-45 cadre (skeleton) divisions…"[189]

The U.S. Army was the primary contributor, with the new Defense Intelligence Agency (DIA), to these assessments.[190] By the early 1970s, intelligence community analysts adjusted their estimates of the Warsaw Pact force again. Accounting for the manpower differences between Warsaw and NATO divisions, their analysis showed greater parity between sides. A 1971 RAND report noted that the Warsaw Pact had 46 combat ready divisions compared to NATO's 28, but concluded that in terms of manpower, NATO forces held a slight edge.[191]

Given the Army's contribution to the Warsaw Pact assessments of the 1960s, it is not surprising that DePuy referenced those assessments when making the case for Active Defense as the best doctrine to fight a numerically superior Soviet force. By the time that Active Defense was published in 1976, numerical parity between NATO and Warsaw Pact forces was the new consensus of intelligence analysts. This set the conditions for the Army's transition from the defense-oriented doctrine back to an offensive doctrine.

Recently released information by the Central Intelligence Agency (CIA) on clandestine reporting shows that the U.S. intelligence community had considerable insight on Warsaw Pact war plans in the 1970s.[192] Colonel Ryszard Kuklinski of the Polish General Staff, began providing clandestine information to the U.S. as early as 1972. Kuklinksi's reporting provided important

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[188] See Joan Bird and John Bird, "CIA Analysis of the Warsaw Pact Forces: The Importance of Clandestine Reporting," *CIA Historical Collections*, found online at https://www.cia.gov/library/publications/cold-war/the-warsaw-pact-forces/index.html. Date is unknown, p. 25.

[189] Ibid., p. 26.

[190] Ibid., p. 25.

[191] Alian C. Enthoven and K. Wayne Smith, "How Much is Enough: Shaping the Defense Program, 1961-1969," *RAND* (1971): 132-156.

[192] Bird and Bird, p. 31.

insights on Soviet logistics, training, and readiness, and these insights formed the basis of the 1979 *National Intelligence Estimate*.[193] While it is not clear the degree to which Army leaders were informed of Kuklinski's reporting, it is likely that intelligence on Soviet war plans was shared with senior Army leaders. This intelligence supported the Army's transition from Active Defense to an offensive doctrine, once intelligence confirmed limitations in Soviet capabilities and the numerical parity between NATO and Warsaw Pact forces by the mid- to late-1970s.

In regard to the doctrine formulation process itself, DePuy's micromanagement of the process boxed out the Army's Infantry School and its Combined Arms Center, meaning that the final version of the manual was the result of only a "select group of generals and staff officers from the U.S. Army Armor School and Headquarters, U.S. Army Training and Doctrine Command."[194] DePuy employed an ad hoc group of mid-level officers as his doctrine-writing team at TRADOC. The "boathouse gang" (as they were called because their office was in a former yacht club), received DePuy's direct guidance and produced drafts of the 1976 manual much faster than he could have if he had employed traditional doctrine-writing protocol which was centralized and slow.[195]

In the literature on the post-Vietnam Army, much is made of DePuy's role in developing the Active Defense doctrine. It is worth considering the counterfactual: in the absence of DePuy, would the Army have developed the same defense-oriented doctrine or would it have developed something different? Given the Army's weakness in the post-Vietnam War period, the relative decline in resources, and the difficulty of defending Europe from what was believed to be a numerically superior Soviet Union, it is not clear that another TRADOC commander in DePuy's

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[193] Bird and Bird, p. 35.
[194] Herbert, 1988, p. 85.
[195] Ibid., pp. 86-88.

shoes would have pushed for a doctrine different from Active Defense. However, it certainly is odd that for the first time in its history, the Army adopted a defense-oriented approach that privileged technology over the soldier. If these dynamics truly are at odds with the Army's culture, one can argue that it took the effort of a leader like DePuy to force the Army to adopt the doctrine, particularly since there is no evidence of a cultural change in the Army at this time. Many point to the fact that General Starry, DePuy's replacement at TRADOC, immediately moved to replace the Active Defense doctrine with AirLand Battle. It isn't clear if this transition happened because of Starry - a leader with new priorities and a different approach - or because the Army as an organization was defaulting back to its traditional emphasis on the offense and the soldier.

3.1.3. AirLand Battle Doctrine

The Army replaced the 1976 Active Defense doctrine with the AirLand Battle doctrine in 1982. Major consternation in the Army over the defense-oriented Active Defense doctrine and a growing belief that interservice cooperation between the Army and the Air Force would be critical in combat against the Soviets, led to the development of AirLand Battle.[196] While Active Defense was a doctrine that focused mainly on defensive tactics, AirLand Battle was an operational concept that integrated combat power in both the land and air domains.

The AirLand Battle doctrinal innovation differed from the pentomic and the Active Defense doctrines in two fundamental ways. First, AirLand Battle was the only doctrine of the three to be employed in combat. Following a minor revision to the doctrine in 1986, the Army employed AirLand Battle and validated the concept in the 1991 Gulf War. Second, once AirLand Battle was finalized in 1986, it enjoyed the resounding support of Army leaders at all echelons.

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[196] Kretchik, 2011, p. 197, also discusses the effect of the 1973 Arab-Israeli War on AirLand Battle.

AirLand Battle restored the Army's preference for an offensive doctrine oriented on maneuver. The purpose of this section is to explore the sources of the AirLand Battle doctrine.

3.1.3.1. From Active Defense to AirLand Battle (1976-1986)

Active Defense doctrine assumed that the Soviet Army was inflexible. Army intel analysts thought Soviet doctrine only focused on the use of the "massed armored breakthrough."[197] Active Defense envisioned a "structured 'central battle' to be fought methodically and aggressively against attacking heavily armored forces…this central battle would focus on a firepower battle along the forward edge of the battle area…"[198] The 1976 FM 100-5 manual stated,

> The Soviet Army…attacks on very narrow fronts in great depth, with artillery massed at 70 to 100 tubes per kilometer in the breakthrough sector. Against a US Division in Europe, Warsaw Pact forces might throw as many as 600 tanks into the leading echelon, followed by an equal number shortly thereafter. This doctrine had its origins in World War II. It is deeply ingrained in the Soviet Army and if we should go to war in Europe these are exactly the tactics we would face.[199]

However, like the U.S. Army, the Soviet Army drew many lessons from the 1973 Arab-Israeli War. The Soviets modified their tactics and doctrine to add "multi-pronged attacks" and "meeting engagement's" (i.e. fighting on the move) to their repertoire.[200] A major, armored concentrated breakthrough at one point in the American defense was no longer the Soviet's only option. The U.S. Army's V Corps commander in Europe in 1976 (and the next TRADOC commander), Lieutenant General Donn A. Starry, recognized this and led the charge to replace Active Defense.

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[197] Sheehan, 1988, p. 214.
[198] John L. Romjue, "The Evolution of the AirLand Battle Concept," *Air University Review* (May-June, 1984), accessed online at http://www.au.af.mil/au/afri/aspj/airchronicles/aureview/1984/may-jun/romjue.html.
[199] 1976 FM 100-5, p. 5-2.
[200] Sheehan, 1988, p. 215.

Most analysts correctly point to the major role that Starry had on the new AirLand Battle doctrine.[201] Based on his experience in Germany from 1975-1976, Starry developed an operational concept known as Central Battle which later became Integrated Battle, followed by Extended Battle. The synthesis of all three manifested itself in the AirLand Battle concept as it was specified in the 1982 FM 100-5 *Operations* manual.[202] Starry thought that "the commander's view of the battlefield had to be wider and deeper."[203] There was also a strong desire to return to a doctrine that was centered on offensive operations. AirLand Battle doctrine writers thought that defensive doctrine sacrificed "maneuver and initiative" and "minimized the human dimension."[204] Facing pressure from General Edward C. Meyer, the Chief of Staff of the Army from 1979-1983, who wanted the Army to possess the ability to deploy globally, Starry paved the way for a major revision to Army doctrine. AirLand Battle was based on a philosophy known as "deep attack," whereby American forces would disrupt a Soviet attack by striking and destroying enemy tanks behind the Soviet's lines.[205]

The 1982 Field Manual 100-5 Operations

Written by Lieutenant Colonels Huba Wass de Czege and L.D. Holder, the 1982 Field Manual 100-5 *Operations* formalized the AirLand Battle doctrine. AirLand Battle would persist as the Army's keystone doctrine throughout the remainder of the Cold War and into the 1990s. Many would credit the Army's success in Panama in 1989 and the Gulf War in 1991 to the concepts

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[201] For e.g., see Aaron J. Kaufman, "Continuity and Evolution: General Donn A. Starry and Doctrinal Change in the U.S. Army, 1974-1982," Unpublished monograph, M.A., School of Advanced Military Studies, United States Army Command and General Staff College, 2012. It is fair to ask the question, in the absence of Starry, would the Army have discarded Active Defense and replaced it with AirLand Battle? While I acknowledge that new commanders might have an incentive to change doctrine, in this case, the argument that Active Defense was abandoned based on its inadequacies with respect to new Soviet doctrine is more compelling.

[202] Kaufman, 2012, pp. 65-66.

[203] King, 2008, p. 32.

[204] Huba Wass de Czege and L. D. Holder, "The New FM 100-5," *Military Review* 62 (July 1982): 53.

[205] James Q. Wilson, *Bureaucracy: What Government Agencies Do and Why They Do It* (New York: Basic Books, 1989), p. 219.

in the 1982 manual. AirLand Battle was a doctrine that focused on the operational level of war. According to the 1982 manual, "An Army's operational concept is the core of its doctrine. It is the way the Army fights its battles and campaigns, including tactics, procedures, organizations, support, equipment, and training."[206] The manual was the first to describe an operational level of war that existed between the tactical and the strategic. This addition was important because it added much-needed resolution to the way in which battles and campaigns fed into the accomplishment of strategic objectives.

Envisioning the battlefield as three-dimensional (depth, frontage, and altitude), AirLand Battle prioritized "deep attack." In a deep attack, ground forces focused on the Soviet's first echelon while helicopters, aircraft, and rockets were employed to strike the Soviet's second echelon.[207] U.S. forces would hit the Soviets' attacking force while simultaneously disrupting or delaying his follow-on echelons. For the first time in its history, the Army developed a doctrine that placed great value on coordination with another service - the Air Force.

The 1982 manual also highlighted the deterrent effect of the AirLand Battle doctrine. In the first sentence of the manual (in the preface), it stated, "The fundamental mission of the United States Army is to deter war."[208] The Army believed that the offense-oriented readiness posture that it maintained under AirLand Battle, along with the ability to conduct operations at great depth, would deter the Warsaw Pact from conducting any aggressive actions against NATO.[209] However, deterrence is only mentioned three more times in the manual. It is not afforded the prominence given to it in the manual's preface.[210]

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[206] Field Manual 100-5 *Operations* (Washington, DC: Headquarters, Department of the Army, 1982), p. 2-1.
[207] Kretchik, 2011, p. 204.
[208] 1982 FM 100-5 *Operations*, p. i.
[209] Romjue, 1984, p. 16.
[210] Deterrence is listed as a fundamental Army mission in the 1986 FM 100-5 and the 1993 FM 100-5.

AirLand Battle brought the Army's emphasis back to offensive operations and the fighting spirit of the soldier. Though the doctrine still placed great value on firepower, it was the Army's first ever maneuver doctrine. According to the manual, "The object of all operations is to impose our will upon the enemy…To do this we must throw the enemy off balance with a powerful blow from an unexpected direction, follow up rapidly to prevent his recovery, and continue operations aggressively…these operations must be rapid, unpredictable, violent, and disorienting."[211] Harkening back to an earlier era in the Army's history, the manual stressed the value of the individual fighting soldier as the key to victory (not technology). The manual emphasized initiative, flexibility, violent execution, surprise, and momentum in the attack. The basic tenets of AirLand Battle - initiative, depth, agility, and synchronization - were defined in detail with direct and indirect references to Sun Tzu, Clausewitz, Jomini, and Liddell Hart. These references illustrated the authors' attempt to ground the new doctrine in the philosophy of war. The principles of war, which were left out of the 1976 manual, were added back to the 1982 manual.[212]

The writers of the 1982 manual tried to transition the Army's focus away from war against the Soviets in Europe. The manual stated, the Army "must be prepared to fight highly mechanized forces typical of Warsaw Pact or Soviet surrogates *in southwest or northeast Asia*" (emphasis added).[213] However, the manual did not address low-intensity conflict and it only allocated four pages to contingency operations.[214] Contingency operations were viewed primarily as nonmilitary operations. This lack of detail on contingency operations had immediate consequences because the Army engaged in a contingency operation in Grenada shortly after the manual's publication.

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[211] *Field Manual* 100-5 *Operations* (Washington, DC: Headquarters, Department of the Army, 1986), p. 14. This language was modified slightly from the 1982 manual.

[212] Jeffrey W. Long, *The Evolution of US Army Doctrine: From Active Defense to AirLand Battle and Beyond* (Master's Thesis. U.S. Army Command and General Staff College, 1991), p. 48.

[213] 1982 FM 100-5, p. 1-1.

[214] Kretchik, 2011, p. 208. See the 1982 FM 100-5, Chapter 16, for the section on contingency operations.

Operation Urgent Fury in Grenada in 1983 was a multi-service operation.[215] It revealed many challenges in the joint capability of the services and the Army's lack of preparedness for operations in low-intensity conflict. The operation was not an application of the AirLand Battle doctrine because the manual hadn't even reached the Army's units or schools yet. Most of the Army leaders who fought in Grenada were more familiar with the Active Defense doctrine.

The 1986 Field Manual 100-5 Operations

While the 1986 *Field Manual* 100-5 *Operations*[216] did not specify a fundamental change to Army doctrine, it is important because it not only reinforced the Army's support for AirLand Battle but it also expanded a few of its central concepts. The manual is noteworthy less for its new concepts and more for its validation of already-published concepts. One of its authors characterized the manual as, "a second edition of current doctrine."[217] Continuing the trend since the controversial publication of the 1976 manual, there was intense engagement amongst the community of Army officers after the AirLand Battle concept was published in 1982. A quick scan of *Military Review* - the Army's primary journal during the 1980s - reveals numerous articles about AirLand Battle before and after the publication of the 1982 manual. The 1986 FM 100-5 *Operations* manual addressed some of the elements of criticism that arose in that professional dialogue.

Lieutenant General William R. Richardson, the former deputy commander of the Combined Arms Command (CAC) and the new TRADOC commander, took the lead on the manual and he wrote an article in *Military Review* in 1986 that explained the changes made to AirLand Battle and the rationale for those changes. Richardson was a major proponent of doctrine

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[215] For details on the operation, see Mark Adkins, *Urgent Fury: The Battle for Grenada* (Lexington, MA: D.C. Heath & Co., 1989).
[216] 1986 FM 100-5.
[217] L. D. Holder, "Doctrinal Development, 1975-1985," *Military Review* 55, no. 5 (May 1985): 50-52.

and he encouraged officers to engage in productive debates regarding AirLand Battle's components. Richardson believed that AirLand Battle was enormously important: "Only a leader well-grounded in the AirLand Battle can exploit opportunities to fix the enemy and to attack at the decisive point in battle."[218] While this might have been an overstatement, in his role as the commander of TRADOC it was important for Richardson to act as an ambassador for the new doctrine to reinforce its concepts inside the Army and to explain the manual's importance to stakeholders outside of the organization.

The 1986 manual further refined the operational level of war concept, provided more balance between offensive and defensive operations, and synchronized the various components of the deep extended battle concept.[219] The new manual also placed a stronger emphasis on the human dimension of warfare. Factors such as leadership, cohesion, morale, courage, and skill were "raised to an equal footing with the 'physics' of war - weapons, lethality, time, distance, space, speed, and material quality."[220] While an emphasis on these psychological components of combat was not unique in the Army's history, the 1976 doctrine focused instead on technology and systems. The 1986 manual stressed that the Army needed to be ready for "strategic challenges across the full-range of threats from terrorism through low- and mid-intensity operations to high-intensity and nuclear operations."[221] That said, the manual barely addressed low-intensity operations.[222]

While the 1982 manual defined the operational level of war, the 1986 manual further explained the concept. Battles and engagements were fought at the tactical level; campaigns and

[218] William R. Richardson, "FM 100-5: The AirLand Battle in 1986," *Military Review* LXVI, no. 3 (1986): 10.
[219] Romjue, 1993, p. 30.
[220] Richardson, 1986, p. 6.
[221] 1986 FM 100-5, pp. 4-5.
[222] Kretchik, 2011, p. 212.

major operations were fought at the operational level. Armies, joint, and allied commands fought at the operational level. Divisions, brigades, and regiments fought at the tactical level. According to Richardson, the corps was the only level of command that "can and will operate at both the tactical and operational levels."[223] Distinguishing between the levels of war in the 1986 manual was important because some analysts erroneously conflated the 1982 tactical and operational doctrine with NATO and allied strategic objectives.[224] In fact, the Germans were particularly worried that the 1982 version of AirLand Battle was too aggressive.[225] To address that concern, the 1986 manual stated that the new doctrine was "compatible with…NATO land forces tactical doctrine…[but] more general so as to meet U.S. needs in other theaters."[226]

In addition to providing more nuance on the operational level of war, the manual also clarified confusion resulting from the 1982 manual's emphasis on "deep battle." Renaming this concept "deep operations," the new manual emphasized that operations in depth must be well integrated with the close fight. Deep, close, and rear operations should be mutually supportive. The new manual also made the air-ground link between the Air Force and the Army more explicit by acknowledging the joint element of future campaigns and major operations.

The manual's attempt to restore balance between offensive and defensive operations derived from criticism of the 1982 manual which argued that it over-emphasized the offense. To address this, the 1986 manual explained how offensive operations nested within defensive campaigns in a new chapter on defensive operations.[227] The new manual defined defensive operations in greater depth, but still emphasized the superiority of the offense. It stated,

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[223] Richardson, 1986, p. 5.
[224] Ibid.
[225] White Paper 1983, "The Security of the Federal Republic of Germany," Federal Ministry of Defense, 1983, p. 160, cited in Kretchik, 2011, p. 210.
[226] 1986 FM 100-5, preface.
[227] 1986 FM 100-5, pp. 139-151.

"commanders undertake the defense only when the strategic, operational, or tactical situation makes it impossible to conduct offensive operations or to economize forces to permit and attack elsewhere."[228]

3.1.3.2. Understanding the Sources of the AirLand Battle Doctrine

Environmental Shifts

The Soviet adjustment in doctrine in the mid-1970s was the catalyst for the U.S. Army's replacement of the Active Defense doctrine with AirLand Battle - a doctrine that gave the Army the ability to maneuver on the battlefield against a new style of Soviet offensive operations. In 1977, senior Army leaders conducted an assessment of the Soviets and determined that Active Defense was not sufficient for countering the Soviets' newly developed ability to conduct attacks using maneuver rather than overwhelming firepower concentrated at one point. As Wilson notes, "If the Soviets did not rely on the massive armored attacks that they employed in World War II but instead used flexible, probing attacks, then the thin, mobile defense defined by the new American doctrine might be overwhelmed."[229]

Though he supported the Active Defense doctrine and played a role in its publication, Starry's experience as the V Corps commander gave him a "new appreciation of up-to-date Soviet doctrine and capabilities."[230] Starry believed that the Soviets would conduct a penetration of the NATO defense and then employ "operational maneuver groups[231] to strike deep into NATO rear areas."[232] In 1982, two of the authors of the AirLand Battle doctrine wrote, "[Army] commanders believe they could beat the leading Soviet echelons using the "active defense" but that the initial

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[228] 1986 FM 100-5, p. 139.
[229] Wilson, 1989, p. 219.
[230] King, 2008, p. 32.
[231] These groups were combined arms formations that were approximately equal in size to a U.S. Army Corps. See Ingo Trauschweizer, *The Cold War U.S. Army: Building Deterrence for Limited War* (Lawrence: University Press of Kansas, 2008), pp. 212-214.
[232] Kretchik, 2011, p. 201.

battles would render our units ineffective while leaving Soviet follow-on forces intact with complete freedom of action."[233] AirLand Battle was the Army's solution to address that.

Role of Civilians

There is no evidence of civilian intervention into the development of AirLand Battle by any officials in the chain of command. The only civilian interest in the doctrine came from civilians in the 1970's military reform movement.[234] Their proponent in government in 1981 was Senator Gary Hart. Two prominent members of this group - William S. Lind and Edward Luttwak - were outspoken on the limitations of the Active Defense doctrine, but there is no evidence that they caused the Army's rejection of that doctrine or the creation of AirLand Battle.[235] Members of the reform movement promoted concepts like maneuver, agility, and the human element of war - concepts that appeared in the 1982 manual. However, many of the concepts that the reform movement proposed were already rooted in Army doctrinal manuals that were published in the final years of World War II.[236] In fact, General Starry ordered doctrine writers to consult the 1941 keystone manual for inspiration for the AirLand Battle doctrine.[237] Long notes that there was also substantial divergence between the preferences of reformers and Army doctrine writers in the area of technology. AirLand Battle doctrine promoted sophisticated weapons technologies; most reformers were dubious of new technological solutions.[238]

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[233] De Czege and Holder, 1982, p. 53.

[234] For the key themes of this group, see John M. Oseth, "An Overview of the Defense Reform Debate," in Asa A. Clark IV, Peter W. Chiarelli, Jeffrey S. McKitrick, and James W. Reed, eds., *The Defense Reform Debate: Issues and Analysis* (Baltimore, MD: Johns Hopkins University Press, 1984), pp. 44-61.

[235] See, e.g., William S. Lind, "FM 100-5, Operations: Some Doctrinal Questions for the US Army," *Military Review*, vol. 77, no. 1 (Jan/Feb 1977): 135-143; Edward Luttwak, "The American Style of Warfare and the Military Balance," *Survival* 21 (March-April 1979): 57-60; Luttwak, The Operational Level of War," *International Security* (Winter 1980-1981): 61-80.

[236] Long, 1991, pp. 182-183.

[237] Romjue, 1984, p. 43.

[238] Long, 1991, p. 183.

Interservice Rivalry

In the 1940s and 1950s, the emergence of nuclear weapons increased the prominence of the Air Force and threatened the Army's organizational survival. In the 1970s, the Army avoided rivalry with the Air Force by focusing instead on clearly separating roles and missions between the two services. In the case of AirLand Battle, an unprecedented degree of interservice *cooperation* between the Army and the Air Force defined the character of the doctrinal innovation.

Theories that argue that interservice rivalry is the primary cause of innovation (see Cote (1996) and Sapolsky (1972, 1996, and 2000)) cannot account for why the reverse happened with AirLand Battle. The *absence* of interservice rivalry is a more feasible explanation for this particular innovation. These authors argue that innovation "comes from competition among organizational rivals for resources and standing, who overcome the costs of implementing change through their concern about the greater costs of losing to a competitor."[239] Concerns over resources, budgets, and standing were still present in the Army and the Air Force in the late 1970s, but the Army's interest in making the doctrine functional outweighed the costs of "losing" to the Air Force on the budget front. In fact, part of the reason that the Army cooperated with the Air Force on the concept was because the equipment that it needed to execute AirLand Battle's "deep attacks" behind Soviet lines - missiles, radars, and computers - had not yet been requisitioned.[240] The 1982 doctrine represented the "fusing of air and land battle into closely concerted operations of air power and ground forces."[241]

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[239] Sapolsky et al., 2009, p. 8.
[240] Wilson, 1989, p. 219.
[241] Romjue, 1984, p. 20.

Budget

In the early 1980s, defense budgets steadily increased as a result of the Reagan administration's emphasis on national security. In 1981, the total Department of Defense (DOD) service appropriations increased 10.9 percent; in 1982 it increased 12.7 percent, and in 1983 it increased 13.2 percent - a total increase of 21.6 percent in real terms during the three-year period.[242] At first glance, the formulation of this new doctrine seems to be at odds with the budget hypothesis - the Army developed a doctrine during a period of increasing budgets (budgetary feast). However, two factors make this a more nuanced story. First, much of AirLand Battle was a return to doctrinal concepts that had been previously emphasized in the Army's history prior to the establishment of Active Defense. It is possible that the Army used this period of budgetary feast to prioritize the types of operations (and the associated training and procurement) that it *preferred* - it's organizational essence. Second, while the early 1980s was a time period of absolute increase in the DOD budget, the Army experienced a relative decline in budget share compared to the other military services.

Organizational Culture

The Army's organizational culture was anathema to a defense-centric, technology-oriented doctrine like Active Defense and so Army leaders focused on ensuring that the new AirLand Battle doctrine was centered on offensive operations designed to restore a spirit of "aggressiveness" to the force. AirLand Battle's concept of deep-strike would disrupt the Soviet's ability to reinforce its front-line forces. Rather than waiting in a defensive posture to respond to a Soviet attack, AirLand Battle was an offensive doctrine that allowed the Army to seize the initiative. The Active Defense doctrine was abandoned in part because it was a sharp departure from an organizational

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[242] Clark, 1984, pp. 261-262.

culture that valued soldiers over technology. De Czege and Holder noted that the 1976 doctrine

"paid insufficient attention to the human element in battle."[243] Kretchik contends that Starry was

influenced deeply by history whereas DePuy was focused almost entirely on the future.[244] The

former included numerous historical vignettes in the 1982 manual - including a detailed discussion

of the Battle of Vicksburg and the Battle of Tannenburg. DePuy did not include any historical

references in the 1976 manual, filling it instead with numerical analysis, charts, and graphs.[245]

3.1.3.3. Conclusion

AirLand Battle was a revolutionary change from Active Defense. As Long writes,

"AirLand Battle derived from maneuver theory, not attrition theory; it focused on maneuver rather

than firepower; it stressed the human dimensions of war instead of the technical, and it favored the

offense over the defense."[246] Starry recognized that Active Defense could not account for "the

enemy's massive second-echelon forces, which, according to Soviet doctrine, would roll through

the first echelon and exploit any advantages the [Soviet] first echelon might have gained."[247]

Starry's assessment was confirmed by the results of a study that he ordered at the Field Artillery

School in Fort Sill, Oklahoma. The study made the case for the interdiction of Soviet targets "deep

in the enemy rear to disrupt the Soviet second echelon during an assault."[248] This concept

demanded close cooperation between the Army and the Air Force. The AirLand Battle doctrine

also reflected a renewed emphasis on offensive operations, mission-type orders (a method of

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[243] De Czege and Holder, 1982, p. 55.

[244] Kretchik, 2011, p. 205. The author points out that Starry used historical vignettes to illustrate key concepts in the 1982 FM 100-5 *Operations*.

[245] Long, 1991, pp. 46-47.

[246] Ibid., p. 48.

[247] Romjue, 1984, accessed online at http://www.au.af.mil/au/afri/aspj/airchronicles/aureview/1984/may-jun/romjue.html.

[248] King, 2008, p. 32.

decentralized execution at the small-unit level), and a focus on the human and psychological dimension of warfare.

As Chief of the Armor branch, Starry worked very closed with DePuy to develop the Active Defense doctrine, but he led the effort to replace the doctrine shortly after taking command of TRADOC. Though Starry had a different leadership style than his old boss, General DePuy, he was vocal in his support for Active Defense during the drafting process and in the period immediately following the publication of the 1976 manual. Starry's support for the doctrine is informative because it demonstrates that the source of Active Defense was more than just the interests of the highly ambitious, DePuy. If Starry had been against Active Defense from the beginning, then we could say that his replacement of it once he was in charge was the natural extension of his early resistance. The fact that he defended Active Defense suggests that he truly believed in the theory of victory that the Army had in the early 1970s which led to the doctrine. Only when Active Defense proved impractical in training, and the Army's new intelligence assessment of the Soviet Army indicated more sophisticated Soviet capabilities, did Starry take action to replace Active Defense with AirLand Battle.

In a letter to DePuy in September 1976, Alexander M. Haig, the Supreme Allied Commander in Europe, wrote that the 1976 manual's focus on Europe "may induce too narrow a focus on defense for its own sake." He thought that this was a dangerous byproduct of a doctrine that "focus[ed] on a particular contingency."[249]   The fact that doctrine-writers addressed this fixation with Europe in the AirLand Battle doctrine illustrates a recognition of the hazards of focusing a keystone doctrine on one particular geographic terrain. De Czege and Holder wrote, "A doctrine based solely on European requirements would place us at a disadvantage when called

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[249] Both Haig quotes are cited by Herbert, 1988, pp. 96-97.

on to fight in another area."[250] It also suggests that Army leaders recognized that combat against Soviet surrogates outside of Europe was a possibility.

3.2. Conclusion

The three doctrines for conventional warfare studied in this chapter - pentomic, Active Defense, and AirLand Battle - occurred after environmental shifts that shifted the balance of threat. In the 1940s and 1950s, the advent of nuclear weapons led to the pentomic doctrine. When the Soviet Union's nuclear weapons capability advanced considerably in the 1960s, threatening the U.S. commitment to the defense of Europe, the Army developed the Active Defense doctrine. Finally, changes to Soviet doctrine in the 1970s was the catalyst that led to the Army's development of AirLand Battle.

Contra Posen, civilian intervention was not necessary to compel doctrinal change in any of the three innovations. Though the civilian emphasis on strategic nuclear weapons in the 1950s threatened the Army's standing in the national security establishment, the decision to reorganize infantry divisions into battle groups and to develop a doctrine for the employment of tactical nuclear weapons was one made by elites in the Army. It is likely that the Army anticipated civilian intervention in its doctrinal processes if it did not take nuclear weapons seriously. A nuclear weapons doctrine preempted intervention, and it afforded the Army the opportunity to revise doctrine on its own terms. In the case of Active Defense, the preferences of Army leaders matched the preferences of civilian elites. Both sets of actors wanted to transition focus from the Vietnam War to the defense of Europe from the Warsaw Pact. Finally, civilian officials did not intervene to compel the replacement of Active Defense with AirLand Battle in 1982. The Army adopted some

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[250] De Czege and Holder, 1982, p. 57.

ideas on maneuver from civilian defense reformers and intellectuals, but those civilians were outside of the official chain of command.

Contrary to the literature which predicts minimal innovation during periods of peace, all three of the doctrinal innovations occurred during periods of peace after war. Posen argues that military organizations are unlikely to initiate doctrinal change in the absence of conflict because they seek to minimize uncertainty. Change processes are inherently uncertain. This argument does not hold for the pentomic, Active Defense, or AirLand Battle doctrines. Murray also argues that innovation is unlikely during peace because decreasing military budgets constrict the processes necessary to vet new ideas and develop new doctrines. This argument also falls short in explaining these three innovations. Sharp budget decreases in the aftermath of World War II had the reverse effect. Pressure on Army budgets led to innovation and the realization that new doctrines could be used as justification for more funding. The Army used the Active Defense doctrine in the constrained budget environment of the post-Vietnam War period to justify new weapons acquisitions tied to the overarching doctrine. The Army also experienced budget decreases relative to the other services during the years leading up to the adoption of AirLand Battle.

Contra Rosen, who argues that military innovation is most likely when advocates for change compete with rivals in the organization, intraservice rivalry did not play a role in any of the doctrinal innovations in this chapter. There is no evidence of competition between the Army's combat branches during the formulation of these doctrines. Similarly, Jensen's argument on the necessity of incubators and advocacy networks to compel doctrinal change is not relevant for these cases.

The interservice perspective, which argues that innovation is the result of competition between military organizations that are subordinate to the same state for resources, standing, and

prestige, is the most difficult dynamic to unpack in these three cases. While the pentomic innovation was clearly the result of a major rivalry between the Army and the Air Force, both Active Defense and AirLand Battle were shaped by cooperation between those two services. In the case of the pentomic doctrine, Sapolsky's prediction is accurate. When the Army calculated that a loss in budgets and prestige to the Air Force was costlier than innovation, it innovated. A new mission area emerged between the two services, and they competed for scarce resources to establish jurisdiction in that area. Fears of organizational extinction after the advent of nuclear weapons also drove innovation. As Downs' theory predicts, the Army had to demonstrate that its services were still worthwhile. The Army developed a tactical nuclear weapons doctrine to explain its comparative advantage within the domain to establish autonomy and ensure the organization's relevance. The Army was so worried about its survival during the 1950s that it was willing to promote a tactical nuclear weapons doctrine that surely would have failed if it was put to the test in combat. The Army abandoned the pentomic doctrine as soon as the Army's survival was no longer in jeopardy, in part because it recognized the doctrine's impracticality.

Contrary to the pentomic doctrine, the formulation of Active Defense and AirLand Battle was shaped by cooperation between the Army and the Air Force. The two services worked together to develop a coordinated air-ground concept. AirLand Battle was the embodiment of interservice cooperation. While the two services still competed with each other for limited resources, the careful delineation of responsibilities separated between the land and air domains minimized interservice rivalry. Both services recognized that they could gain from AirLand Battle. In both cases, competition with the Air Force was not substantial enough to cause the Army to worry about its survival.

The quick abandonment of the Active Defense doctrine can be explained through the lens of organizational culture. Culture didn't lead to the innovation because culture was static over the time period, but it did shape the urgency of the Army's efforts to jettison the doctrine as soon as the external environment changed. The defensive doctrine was in friction with the Army's offensive-oriented culture. Once the balance of power shifted, the Army moved quickly to ditch the defensive doctrine, replacing it with AirLand Battle. Army elites capitalized on the opportunity to transition away from a doctrine that was at odds with the organization's culture. The pentomic and Active Defense doctrines demonstrate that the Army will innovate doctrinally in ways that are counter to the organization's cultural imperatives in order to ensure survival and maintain relevance.

One source of criticism of these three doctrinal innovations is the charge that the Army only innovated to defeat a potential Soviet invasion of western Europe. Wilson argues that though the Army fought in Korea, Vietnam, the Dominican Republic, and Grenada, "None of these *actual* or *likely* wars produced the same degree of rethinking and experimentation that was induced by the *possibility* of a war in Europe."[251] If military organizations innovate based on a rational assessment of the most dangerous threat to American vital interests as my theoretical framework suggests, it is not surprising that the Army oriented its doctrinal innovations on the greatest threat of the period - the Soviets. I test this hypothesis in the next chapter on doctrinal innovations for irregular warfare.

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[251] Wilson, 1989, p. 220. Wilson cites Sheehan, 1988, pp. 352-353, 368, 371-377, and 395-396.

Chapter 4. Doctrinal Change for Irregular Warfare in the U.S. Army

The purpose of this chapter is to conduct an analysis of U.S. Army doctrine with respect to irregular warfare. With the transition of the presidency from President Dwight D. Eisenhower to President John F. Kennedy in January 1961, a new policy of Flexible Response replaced the 1950s New Look and the concept of massive retaliation. Consequently, the Army was tasked with expanding its repertoire from one purely focused on operations against conventional militaries to one also focused on operations against irregular forces. First, I examine the absence of doctrinal innovation with respect to counterinsurgency operations prior to, during, and after the Vietnam War. Second, I analyze the factors leading to two keystone doctrines developed by the Army in the 1990s - Full-Dimensional Operations and Full-Spectrum Operations. The stated purpose of these two doctrines was to enable the Army to operate effectively in low-intensity conflict. However, the doctrines were incremental rather than innovative and their adoption had a negligible effect on the Army as a whole. Army leaders continued to demonstrate an unwillingness to change doctrine for irregular warfare based on the dubious contention that effectiveness in conventional warfare would enable effectiveness in irregular warfare. The cases in this chapter illustrate what happens when civilian elites promote doctrinal change that is at odds with the Army's preferences.

Irregular warfare refers to a certain type of fighting defined by combat between a state military organization and non-state armed groups[1] involving competition for legitimacy and influence over a civilian population.[2] In the last century, the U.S. military referred to irregular warfare (and efforts to counter it) as: unconventional warfare, guerrilla warfare, counterterrorism,

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[1] This military organization might be the government's own military or another state's military that is intervening in the conflict at the government's request - for example, the U.S. in South Vietnam or the U.S. in Iraq after the formation of the post-Saddam Iraq government.

[2] The U.S. Department of Defense defines irregular warfare as "a violent struggle among state and non-state actors for legitimacy and influence over relevant population(s)." (DOD Dictionary, October 2015)

low-intensity conflict, asymmetric operations, Military Operations Other than War, (counter) insurgency, and small wars.[3]   While it would be easiest to refer to irregular warfare as unconventional warfare as a way of contrasting it directly with conventional warfare, I deliberately do not do so because in the parlance of today's U.S. military, unconventional warfare (UW) refers to operations conducted by Special Forces with or through irregular forces in support of a resistance movement or insurgency. From the military's perspective, UW must be conducted with or through surrogate forces who are irregular.[4]

While the state military will often engage in low- to mid-intensity combat operations against armed groups in these types of wars, the military will also need to prioritize political, economic, diplomatic, and social actions designed to maximize the degree of governmental control (or influence) over the population. Sometimes these operations take on a quasi-police nature during periods that are relatively peaceful. In some instances, civil measures require establishing working relationships with local security forces and in other cases they require complete martial law and significant efforts to "reshape the subject society."[5] When a state military participates in an irregular war it needs to coordinate extensively with other agencies of the state to accomplish broad strategic objectives. The degree to which this actually occurs is affected by the nature of the security threat. State militaries often do not have the resident expertise to carry out some of the necessary civil measures in irregular warfare, but the inherent danger in the security environment might prevent or dissuade other non-military agencies of the state from intervening to assist.

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[3] Janine Davidson, *Lifting the Fog of Peace: How Americans Learned to Fight Modern War* (Ann Arbor, MI: University of Michigan Press, 2011), pp. 203-208.

[4] See Field Manual 3-05.130, *Army Special Operations Forces Unconventional Warfare*, September 2008. Accessed online at: https://fas.org/irp/doddir/army/fm3-05-130.pdf.

[5] Andrew J. Birtle, *U.S. Army Counterinsurgency and Contingency Operations Doctrine, 1860-1941* (Washington: Center of Military History, 1998), p. 5.

In this chapter, I use the same theoretical framework and structured, focused case study approach that I used to assess Army doctrine with respect to conventional warfare in the previous chapter. The Vietnam case is the first (and only) case that I analyze in which the Army was engaged in war. Full-Dimensional and Full-Spectrum Operations were doctrinal changes that were made during periods of relative peace. Analysis of the most recent doctrinal change - Full-Dimensional/Full-Spectrum Operations - draws from primary source materials that have been understudied until now.[6] In my analysis, I am also attentive to evidence of organizational structural change. We see organizational change immediately prior to the Vietnam War and during the war itself. In the chapter's conclusion, I compare the absence of doctrinal change vis-à-vis counterinsurgency operations during the Vietnam War with the doctrinal changes made in the 1990s after the Gulf War.

4.1. The Major Doctrines

4.1.1. Counterinsurgency Doctrine

The Army entered the Vietnam War with a doctrine and a force structure that were designed for conventional operations against another state's organized military. However, in the war, the Army was confronted with a conventional enemy force and a guerrilla force. Its doctrine was ill-suited for counterinsurgency and counterguerrilla operations. The Army's reliance on overwhelming firepower during the war inflicted numerous casualties on North Vietnamese soldiers, but this approach often came at the expense of the degradation of U.S. pacification efforts. During the war, at the behest of civilian officials, the Army made a number of adjustments to its

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[6] The only authors to study Full-Spectrum Operations are Davidson, 2011, and Benjamin Jensen, *Forging the Sword: Doctrinal Change in the US Army* (Stanford, CA: Stanford University Press, 2016). In an interview in February 2016, Dr. Robert T. Davis of the U.S. Army Combined Arms Center (CAC) at Fort Leavenworth, Kansas confirmed that Full-Spectrum Operations is understudied. For Dr. Davis' study of the Army from 1953-2000, see Robert T. Davis "The Challenge of Adaptation: The US Army in the Aftermath of Conflict, 1953-2000," *The Long War Series, Occasional Paper 27,* Combat Studies Institute Press, U.S. Army Combined Arms Center, 2008.

doctrine with respect to counterinsurgency operations, but those changes fell short of being innovative. The purpose of this section is to examine the factors which influenced the absence of doctrinal innovation during the lead-up to and execution of the Vietnam War.

4.1.1.1. Lead-up to U.S. Escalation in the Vietnam War (1960-1963)

In the late 1950s and early 1960s, immediately prior to U.S. escalation in the Vietnam War, the Army replaced its pentomic structure and transitioned its keystone doctrine to a focus from nuclear warfare to conventional. Below, I discuss the organizational change and the publication of the Army's 1962 keystone doctrine. I also briefly examine the state of the Army's unconventional warfare doctrine immediately prior to the war.

A New Organizational Construct - ROAD

By 1961, President Eisenhower's New Look and the concept of massive retaliation were replaced by President John F. Kennedy's strategy of "Flexible Response."[7] Flexible Response called for the U.S. to respond to any aggression with "suitable, selective, swift, and effective means."[8] President Kennedy directed the Chief of Staff of the Army, General George H. Decker, to change the Army's organizational structure to improve effectiveness on a nonnuclear battlefield.[9] For the reasons discussed in the previous chapter, the Army quickly discarded the pentomic structure and its doctrine. According to Bacevich, "Battle groups, Pentomic divisions, the emphasis on dispersion and non-linearity, the quest for light formations, the commitment to fighting with tactical nuclear weapons: all quietly were shelved or unceremoniously dumped."[10]

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[7] General Maxwell Taylor described Flexible Response in 1959. See Maxwell D. Taylor, *The Uncertain Trumpet* (New York: Harper, 1960).

[8] John F. Kennedy quoted in Robert A. Doughty and Ira D. Gruber, *American Military History and the Evolution of Western Warfare* (Lexington, MA: D.C. Heath, 1996), p. 593. Also, quoted in Walter E. Kretchik, *U.S. Army Doctrine: From the American Revolution to the War on Terror* (Lawrence, Kansas: University Press of Kansas, 2011), p. 180.

[9] William H. Zierdt Jr., "The Structure of the New Army Divisions," *Army* 11, no. 7 (July 1961): 49.

[10] Andrew J. Bacevich, *The Pentomic Era: The U.S. Army Between Korea and Vietnam* (Washington: National Defense University Press, 1986), p. 142.

The new organizational structure - called Reorganization Objectives Army Division (ROAD) 1965 - was a transition back to a division oriented on maneuver and the physical destruction of an enemy force through offensive operations and overwhelming firepower - a return to the Army's doctrinal roots.[11] The ROAD division took four forms: airborne, infantry, mechanized, and armored.[12] Airborne units remained stateside as a quick response force for contingency operations. Infantry units deployed to Korea based on their ability to function effectively in constrained terrain. Armor and mechanized forces deployed to Europe since they could maneuver effectively on the open terrain.[13] While these units were organized to fight in nonnuclear environments, in theory they were supposed to be able to convert to a nuclear-ready force if necessary.[14] Army leaders claimed the ROAD construct was flexible and adaptable and therefore capable of making such a transition.[15]

The Kennedy administration approved the ROAD reorganization for implementation in early 1962. The administration recognized the limitations of a force only capable of employing strategic and tactical nuclear weapons, and therefore emphasized the importance of the development of a powerful conventional force. The Army was happy to oblige since this aligned with the organization's preferences. The first two divisions that were reorganized were the 1st

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[11] According to General Barksdale Hamlett, "This [ROAD] concept was developed in recognition of the fact that Army forces must be flexible - prepared for employment under the widely varied conditions of climate or terrain that exist throughout the world. The keynote of the ROAD organization is flexibility, which permits ready tailoring of divisions - and brigades within divisions - to meet any known mission or situation." See James M. Snyder, "ROAD Division Command Staff Relationships," *Military Review* 43, no. 1 (January 1963): 62.

[12] According to Kretchik, 2011, p. 321, armored divisions contained 15,000 soldiers, six armor battalions, and five mechanized infantry battalions. Mechanized divisions had the same number of soldiers, with seven mechanized infantry battalions and three armor battalions. The infantry division had 15,000 soldiers with eight infantry battalions and two armor battalions. The airborne division contained 14,000 soldiers in nine airborne infantry battalions with one assault gun battalion.

[13] Kretchik, 2011, p. 180, and James M. Snyder, "ROAD Division Command and Staff Relationships," *Military Review* XLIII, no. 1 (1963): 57–62.

[14] It is not clear what this nuclear-ready force would look like, but this is the claim in the Army's official history of the ROAD reorganization.

[15] Robert A. Doughty, "The Evolution of US Army Tactical Doctrine, 1946-76," *Leavenworth Papers,* Number 1, Combat Studies Institute, U.S. Army Command and General Staff College, 1979, p. 22.

Armored Division (activated in February 1962 and operational under the ROAD construct in August 1962) and the 5ᵗʰ Infantry Division (activated in February 1962 and operational under the ROAD construct in October 1962). The remaining divisions in the Army were reorganized to the ROAD construct from January 1963 to May 1965.[16]

When compared to the pentomic construct, it is striking the degree to which the Army allocated resources and time to fielding, testing, and validating the ROAD construct. Not only was comprehensive testing done in the field, but there was a clear attempt to solicit feedback from subordinate commanders and to integrate lessons learned in military educational curricula. Under the pentomic construct, the exercises that were used to validate the concept were artificial and unrealistic. Under ROAD, Army leaders had no trouble creating realistic live-fire exercises at multiple echelons of command and then using preexisting assessment mechanisms to evaluate and certify units in those exercises. Validation of ROAD proceeded through a sequence of individual, small-unit, and large-unit training exercises which culminated at the division-level. Every type of unit was evaluated and questionnaires were distributed to units in the field. Lessons learned from training exercises were captured in formal reports and sent to the branch schools and the Command and General Staff College.[17] Units reported no significant difficulties with the ROAD construct. Similar to previous configurations, the ROAD construct initially suffered from a lack of critical technology and manpower, but, in time, those issues were remedied.

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[16] Combat Studies Institute, "Sixty Years of Reorganizing for Combat: A Historical Trend Analysis," *Combat Studies Institute*, U.S. Army Command and General Staff College, 1999, p. 23.

[17] Combat Studies Institute, 1999, p. 24.

A New Manual - 1962 FM 100-5 Operations

The Army published the *1962 Field Service Regulations* FM 100-5 *Operations* manual in conjunction with its transition to ROAD.[18] In this manual, the Army signaled an intention to be prepared to fight in a range of different types of conflicts. According to the manual, "At one end of the spectrum are those conflicts in which the application of national power short of military force is applied. This type of war is termed cold war. The other end of the spectrum represents unrestricted application of military force termed general war. The center portion…is defined as limited war…"[19] The doctrine explicitly ended the debate between nuclear and nonnuclear operations, declaring the requirement for Army forces to operate effectively in both types of operations.[20] The manual also defined the new division construct with a section on each type of division - infantry, mechanized infantry, armored, and airborne.[21] A section of the manual focused on airmobile operations - the "employ[ment] [of] aviation, infantry, artillery, cavalry and reconnaissance units" through "rapid shifts of combat forces within the combat zone with little regard to intervening obstacles."[22] The Army experimented with these types of operations after the Korean War and increasingly valued airmobile operations as a way to quickly deploy infantry units for the purposes of seizing objectives, conducting raids, or outflanking enemy positions.[23]

Although the Army had participated in multiple irregular (or unconventional) campaigns throughout its history, for the first time the Army discussed these types of operations in its keystone doctrinal manual. Most of the principles specified in the manual were a rehash of concepts already

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[18] *Field Service Regulations* Field Manual 100-5 *Operations* (Washington, DC: Headquarters, Department of the Army, 1962). Hereafter, 1962 *FSR*.

[19] Ibid., p. 5.

[20] The manual affirmed the requirement for the Army to maintain a dual capability. See 1962 *FSR*, p. 30.

[21] 1962 *FSR*, pp. 31-32.

[22] Ibid., pp. 104-105.

[23] Kretchik, 2011, p. 183.

printed in the 1961 FM 31-15 *Operations Against Irregular Forces*[24], but the inclusion of these concepts in FM 100-5 elevated their standing in the Army. Unconventional warfare was believed to include guerrilla warfare, evasion and escape of friendly military personnel, and subversion against hostile states. The Army defined irregular operations as "guerrilla, insurgent, subversive, resistance, terrorist, revolutionary, and military personnel, organizations, and methods."[25] The manual described irregular operations at some length but there was much less in the way of prescribing Army operations to counter irregular activity.

Unconventional Warfare Doctrine Before the War

In his graduation speech at the United States Military Academy at West Point in June 1962, President Kennedy warned the soon-to-be U.S. Army officers of "another type of war, new in its intensity, ancient in its origin - war by guerrillas, subversives, insurgents, [and] assassins...[which] requires a whole new kind of strategy, a wholly different kind of force, and therefore a new and wholly different kind of military training."[26] One of the aims of Kennedy's speech was to pressure Army leaders to develop a counterinsurgency doctrine. Indicative of a belief that guerrilla warfare (or insurgency more broadly) could easily be countered with soldiers trained only for interstate war between uniformed militaries, General Decker pushed back against Kennedy's directive to modify existing doctrines for fighting, remarking that "any good soldier can handle guerrillas."[27] Decker was not alone in his assessment; Joint Chiefs of Staff Chairman General Lyman L.

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[24] Andrew J. Birtle, *U.S. Army Counterinsurgency and Contingency Operations Doctrine, 1942-1976* (Washington: Center of Military History, 2006), p. 240. Birtle points out that the Army published FM 31-15 (a lower-level manual) before it published FM 100-20 *Field Service Regulations, Counterinsurgency*. The former was published in 1961; the latter in 1964. FM 100-20 put counterinsurgency operations within the broader national context; FM 31-15 describes Army operations in counterinsurgency.

[25] 1962 *FSR*, p. 137.

[26] John F. Kennedy, "Remarks at West Point to the Graduating Class of the U.S. Military Academy," June 6, 1962, accessed online at http://http://www.presidency.ucsb.edu/ws/?pid=8695.

[27] As quoted in D. S. Blaufarb, *The Counterinsurgency Era: US Doctrine and Performance, 1950 to the Present* (New York: Free Press, 1977), p. 80. President Kennedy did not appoint Decker for a second, two-year term due to his resistance to counterinsurgency.

Lemnitzer, General Maxwell D. Taylor (the president's military advisor and future chairman of the Joint Chiefs), and Marine Corps General Victor H. Krulak concurred with Decker.[28]

While a number of senior Army leaders did proclaim a commitment to building a capacity for effective unconventional warfare operations, the Army Chief of Staff General Decker did not see eye-to-eye with President Kennedy on the best way to conduct special warfare operations. Rather than train Army units to counter guerrillas through the execution of low- to mid-intensity operations by small units, most senior Army leaders believed that Army units capable of successfully conducting conventional operations with large-scale formations and high levels of firepower could also defeat guerrillas with the right leaders and the right training.[29] General Decker, as late as October 1961, was chiefly concerned with balancing the Army's ability to conduct nuclear and nonnuclear operations. The Army remained focused on the most dangerous threat to the United States - the Soviet Union and the Warsaw Pact forces - rather than guerrilla elements functioning as proxies for the Communists. Counterinsurgency operations were not a priority for Army leaders.[30]

The Army was unwilling to overhaul its organization for the purpose of counterinsurgency. The editor of *Army* magazine in 1962, John Spore, and a co-author, Lloyd Norman, characterized the Army's fear well: "[concentrating on guerrilla warfare] could have meant an active Army of 500,000 or less and an Army without the modern weapons and equipment the exploding technology of war was capable of developing."[31] The Army thought it was critical that it make a case for operations across the entire spectrum of war (from guerrilla warfare on the low end to

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[28] Birtle, 2006, pp. 226-227.

[29] Kretchik, 2011, p. 185. See also Lloyd Norman and John B. Spore, "Big Push in Guerrilla Warfare," *Army* 12, no. 9 (March 1962): 28.

[30] George H. Decker, "Where Stands a U.S. Soldier, There Stands the U.S.A.," *Army* 12, no. 3 (October 1961): 38-39. In fact, there is no evidence in this journal, which focused on the Army's "Global Frontiers," of any focus on counterinsurgency whatsoever.

[31] Norman and Spore, 1962, p. 36.

nuclear warfare on the upper end), in order to guarantee its organizational survival and to make a claim for the budgets and resources necessary to modernize its weapons and other technological systems.

Kennedy recognized the Army's unwillingness to fundamentally change its structure or doctrine for counterinsurgency operations and so he appointed a committee to determine if the Army really was "making excellent progress in Special Warfare," as General Herbert B. Powell, commander of Continental Army Command (CONARC) claimed.[32] Though the Army had established the Special Forces in 1952, and codified Special Forces doctrine in the 1962 *FSR*, the new branch was small and incapable of conducting and winning a small war on its own. Though the 1962 *FSR* included operations against irregular forces, it did not elaborate on many critical aspects of counterinsurgency.

Counterinsurgency operations were not in the Special Force's repertoire. The Special Forces were designed to train guerrilla forces (not defeat them) and to conduct psychological operations behind enemy lines in support of Army conventional forces. The North Koreans employed guerrillas in the Korean War but traditional defensive efforts had proven successful against these forces so there was little impetus for the Army to change its doctrine or to develop a comprehensive counter-guerrilla doctrine.[33] However, by 1961 the Special Forces embraced the new counter-guerrilla mission and worked to develop and disseminate the necessary tactics and doctrine.[34] In 1962, the Special Forces only consisted of about five-thousand men, so it was not practical to assign them to a wide-ranging counterinsurgency operation without significant augmentation from another military organization. Therefore, the U.S. military really only had

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[32] Kretchik, 2011, p. 185. The Powell quote comes from Norman and Spore, 1962, p. 28.
[33] Doughty, 1979, p. 25.
[34] Walt W. Rostow, "Countering Guerrilla Attack," *Army* 12, no. 2 (September 1961): 53-57.

three options: assign the counterinsurgency mission to the Army as its primary mission, assign it to the Army as a secondary mission, or assign it to the Marine Corps as a primary mission.[35]

4.1.1.2. Doctrine During the Vietnam War (1964-1972)

The Army entered the Vietnam War with the ROAD force structure and the doctrine specified in the 1962 *Field Service Regulations* FM 100-5 *Operations* manual. Of the various types of divisions under ROAD, the Army selected the infantry division of 13,500 soldiers as its primary fighting element based on the Army's experiences in the constrained terrain of the Korean War and after-action reports of the French who failed to employ their tanks effectively in support of the infantry in Vietnam.[36] The 1962 *FSR* included a chapter on fighting unconventional wars and fighting against irregular forces but the reality was that the only component within the Army that was even close to being organized and trained for this type of combat was the Special Forces (and the Special Forces represented a very small slice of the Army's overall strength).

As the Army bolstered its presence in the Vietnam War in 1965, the 82nd Airborne Division (in addition to a contingent of Marines) intervened in the Dominican Republic under the orders of President Lyndon B. Johnson in response to a coup. This tiny war might be looked at as a dry run for some of the activities that the Army would have to perform in Vietnam that were traditionally perceived as outside the Army's domain. These included election support, engagement with host-nation civilians, and training host-nation security forces. The Army did not collect and distribute lessons learned in the Dominican Republic, even though doing so might have prepared Army forces for the unconventional operations they would conduct in Vietnam.

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[35] Stephen L. Bowman, *The Evolution of United States Army Doctrine for Counterinsurgency Warfare: From World War II to the Commitment of Combat Units in Vietnam* (Ph.D. diss, Duke University, 1985), pp. 183-186.
[36] Kretchik, 2011, p. 186.

By 1965, the U.S. Army was deeply engaged in the conflict in Vietnam and its primary source of doctrine was still the 1962 *FSR*. While the manual covered airmobile operations, the path that the Army took to develop, train, and employ that capability was a long one and it is worth recounting briefly here because it reflects another organizational change that is often overlooked - the establishment of the Army's Air Assault Division. In 1961, Secretary of Defense Robert S. McNamara pushed the Army to expand its conception of the role that helicopters might play in combat. The Secretary accused the Army of moving too slowly to develop the airmobile concept.[37] Believing that the Army's previous efforts to review aviation's potential were too limited, McNamara wrote, "I shall be very disappointed if the Army's re-examination merely produces logistically oriented recommendations to procure more of the same, rather than a plan for employment of fresh and perhaps unorthodox concepts which will give us a significant increase in mobility."[38]

The Army assigned Major General Hamilton H. Howze to serve as the president of the Army's board dedicated to studying the airmobile concept. The board - colloquially known as the Howze Board - recommended the establishment of an air assault division of 450 aircraft under a construct similar to the existing ROAD division structure.[39] In 1961 and 1962, the Army studied the airmobile concept and in February 1963 it established the 11th Air Assault Division (Test) at Fort Benning, Georgia. After two phases of training, the 11th conducted a training operation against the 82nd Airborne Division at Fort Bragg to test the final concept.[40] Given the escalation of the

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[37] John J. Tolson, *Airmobility, 1961-1971* (Superintendent of Documents, US Government Printing Office, Washington, DC, 1973), pp. 22-24. See also John W. Oswalt, "Report on the 'Rogers' Board," *United States Army Aviation Digest* (February 1961): 15-17. Both are cited in Doughty, 1979, p. 28.

[38] Combat Studies Institute, 1999, p. 28.

[39] Doughty, 1979, p. 28. The Howze Board also recommended the establishment of an air cavalry brigade with capabilities similar to the Army's traditional cavalry branch.

[40] For details on the results of the two phases and the operation against the 82nd Airborne Division, see Combat Studies Institute, 1999, p. 29.

Vietnam War and the urgency to modify Army tactics in that environment, the Army tested airmobile concepts in theater and then codified effective practices in doctrine.[41] The road to airmobile operations led to the activation of the 1ˢᵗ Cavalry Division (Airmobile) in July 1965. The concept was put to the test in the 7ᵗʰ Cavalry's battle with approximately 2,000 North Vietnamese soldiers in the Ia Drang Valley[42] - a battle that demonstrates that the Army was deeply engaged in a conventional fight requiring mobility, firepower, air support, and artillery. Helicopters were a major asset for U.S. forces in Vietnam. The Army used helicopters in offensive operations and for the purposes of mobility, reconnaissance, and intelligence. The ability of the Army to develop, field, test, and employ helicopters improved drastically from the Korean War to the Vietnam War and serves as an example of a technology which increased the effectiveness of the Army in profound ways.

Army offensive operations in the Vietnam War were aligned with the 1962 manual and its emphasis on terrain and enemy forces. Search-and-destroy operations - not explicitly covered in the manual - were developed to hunt North Vietnamese conventional forces and Viet Cong guerrillas. A 1965 study on search-and-destroy operations entitled the *Program for the Pacification and Long-Term Development of South Vietnam (PROVN)* revealed considerable inefficiencies in the operation but the Army continued to use it. Eventually, by April 1968, the Army stopped using the term, "search and destroy," because it came with the connotation of purposeless operations that were too heavy-handed on the civilian population.[43]

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[41] Doughty, 1979, p. 29, points out that some of the airmobile tests in combat were limited because of rules of engagement constraints on offensive operations in late 1962 and early 1963.

[42] For a comprehensive account, see Harold G. Moore and Joseph L. Galloway, *We Were Soldiers Once--and Young: Ia Drang, the Battle that Changed the War in Vietnam* (New York: Random House, 1992).

[43] Doughty, 1979, pp. 31-32.

Under the command of General William C. Westmoreland, U.S. Army forces conducted operations against both a conventional force and a guerrilla force.[44] By 1968, Westmoreland executed a strategy of attrition based on finding and defeating Vietcong guerrilla forces and North Vietnamese conventional forces. According to Westmoreland, "[the enemy] had to be pounded with artillery and bombs and eventually brought to battle on the ground if they were not forever to remain a threat."[45] The logic was that once the North Vietnamese forces were destroyed, the South Vietnamese government would be able to police the rest of the country, restore order, and defeat or neutralize any remaining irregular threat. When searching for and fighting guerrilla forces, the Army employed small, portable radar units designed to pick up the smell of human urine, computers programmed to determine the likely time and location of enemy attacks, herbicides to eliminate terrain that the Vietcong might use as cover, Agent Orange to destroy acres of land, and retaliatory bombing against villages suspected of providing safe haven for Vietcong.[46] According to General William DePuy, "The solution in Vietnam is more bombs, more shells, more napalm…till the other side cracks and gives up."[47] The challenge of finding enemy forces plagued the Army throughout the war, leading to constant emphasis on the maxim - "find, fix, and finish" - a phrase still used in the U.S. Army today.

Most Army leaders emphasized the destruction of enemy forces as the primary goal of operations against irregular forces and conventional forces.[48] Such an orientation is not surprising

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[44] The North Vietnamese elements were actually three-fold: (1) local Vietcong guerrillas, (2) North Vietnamese Army forces, and (3) Vietcong elements organized into battalions and regiments (main force Vietcong units). Doughty, 1979, pp. 32-33, explains the three categories well, in addition to explaining how each element fought.

[45] William C. Westmoreland, *A Soldier Reports* (Garden City, NY, 1976), pp. 149-150, as quoted in George C. Herring, A*merica's Longest War: The United States and Vietnam, 1950-1975* (Philadelphia: Temple University Press, 1979), p. 150.

[46] Herring, 1979, p. 151. It is not clear how effective the radar units were at detecting the smell of human urine, but multiple sources confirm that these radar units were employed in the Vietnam War.

[47] Originally quoted in Daniel Ellsberg, *Papers on the War* (New York, 1972), p. 235, cited in Herring, 1979, p. 151.

[48] Birtle, 2006, pp. 376-377.

given the Army's predilection for firepower and given the fact that the Army's doctrine (and most of its training) before the war focused on defeating the Soviets in Europe. The focus on attrition warfare meant that the "body count" was the most measurable way to assess progress. Body counts were unreliable since it was difficult to distinguish between guerrilla fighters and the noncombatant, civilian population.[49] Body count accuracy notwithstanding, the military inflicted tremendous losses on the enemy and this contributed to the erroneous perception that the Americans were winning.[50] One of the clearest examples of the Army's emphasis on attriting the enemy through overwhelming firepower was the concept of "piling-on," whereby units would fix the enemy with direct fire, encircle him, and employ tremendous volleys of artillery and close air support to destroy him.[51]

Westmoreland did not have sufficient forces to defeat the conventional Vietnamese threat while also controlling areas where the Vietcong operated. The enemy could easily hide within the civilian population or seek refuge in Laos, Cambodia, or North Vietnam. In a speech given in 1967, William DePuy, then a Major General, illustrated not only the tremendous challenge of defeating guerrillas but also the heavy-handed approach that units took in counter-guerrilla operations - "it takes a lot of artillery shells, a lot of bombing, a lot of patrolling, a lot of attacking, and a lot of broadcasting, leaflets and talks."[52] It is interesting to note that in this 1967 lecture, DePuy felt as though the tide had turned in the war and his assessment of the prospects for U.S.

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[49] Herring, 1979, p. 153. Herring quotes Philip Caputo, *A Rumor of War* (New York, 1977), p. xviii - "If it's dead and Vietnamese, its VC, was a rule of thumb in the bush." For a discussion of American techniques for measuring military success in the Vietnam War, see Gregory A. Daddis, *No Sure Victory: Measuring U.S. Army Effectiveness and Progress in the Vietnam War* (Oxford: Oxford University Press, 2011).

[50] Herring, 1979, p. 154.

[51] As explained by Doughty, 1979, p. 36. See William L. Houser, "Firepower Battlefield," *Military Review* (October 1971): 21-27 and Zeb B. Bradford Jr., "US Tactics in Vietnam," *Military Review* (February 1972): 63-76.

[52] William DePuy, "Lecture of Opportunity - 'Vietnam,'" located in General DePuy's papers at the TRADOC History Office, Fort Monroe, VA, reprinted in Richard M. Swain, "Selected Papers of General William E. DePuy: First Commander, U.S. Army Training and Doctrine Command," *Combat Studies Institute*, U.S. Army Command and General Staff College, 1973, p. 36.

success was optimistic.[53]   After the Tet Offensive in 1968, the Nixon administration initiated a massive troop buildup in South Vietnam and increased pressure against the North Vietnamese from 1969-1973. After four more years of costly war, the Americans finally reached a peace settlement that enabled their withdrawal in 1973 (with the war ending in 1975).[54]

1968 Field Manual 100-5 Operations of Army Forces in the Field

The publication of the Army's 1968 *Field Manual* 100-5 is barely acknowledged in most accounts of the Army's experience in the Vietnam War. The most detailed exposition of the Army's doctrinal evolution from 1946-1976 doesn't even mention this particular field manual.[55] The absence of focus on the 1968 manual is unsurprising given the consistency of its doctrine with the previously published 1962 *FSR*. According to Kretchik, the primary purpose of the 1968 FM 100-5 was to reassure American allies in Europe that the Army's focus on the Vietnam War was not coming at the expense of its ability to defeat the Soviets on a European front if necessary.[56] While the manual arguably did just that, it is also noteworthy for its name change, an expansion of airmobile operations, and the inclusion of an entire chapter on stability operations (a new name for operations in low-intensity conflict). Additionally, the manual added more refinement to the Army's conception of unconventional warfare and its tendency to view that type of warfare not as a main effort but as a supporting effort.

The most obvious change between the 1968 manual and its predecessors is the doctrine's name change from *Field Service Regulations* to *Operations of Army Forces in the Field*. Kretchik contends that this reflects a transition in the Army from viewing doctrine as regulatory (or

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[53] DePuy reprinted in Swain, 1973, p. 53.
[54] For much greater detail on the war see Herring, 1979.
[55] Doughty, 1979. The author provides a very comprehensive account of Army tactics in the war but he doesn't mention this particular manual.
[56] Kretchik, 2011, p. 190.

authoritarian) to viewing it more as guidance for the conduct of missions or operations. The manual's introduction confirms such an assessment: "This manual is a guide for operations of U.S. Army forces in the field…Military operations are actions, or the carrying out of strategic, tactical, service, training, or administrative military missions."[57] While I don't think this shift in the Army's approach to doctrine represents a revolutionary change, I do think that it indicates the further evolution of the Army's thinking on doctrine's purpose. When it was first established, Army doctrine was prescriptive because Army leaders saw such an approach as necessary to formalize procedures for a new organization, not yet proven on the battlefield.

By the Vietnam War, the Army's imperative to fight effectively across a spectrum of war - cold war, limited war, and general war in the words of the 1962 *FSR* - meant that the organization's ability to prescribe or regulate every type of operation in explicit detail was limited. With the 1968 manual, the Army took another step forward to support the 1914 claim that "Officers and men of all ranks and grades are given a certain independence in the execution of the tasks to which they are assigned and are expected to show initiative in meeting the different situations as they arise."[58] This is different than the explicit regulatory emphasis of the Army's early manuals which included lines like, "To insure[sic] uniformity throughout the Army, all Infantry exercises and maneuvers not embraced in that system are prohibited, and those therein prescribed will be strictly observed."[59] Over time, the number of supporting manuals - non-keystone manuals that focused on specific subject matter (i.e. artillery, engineer operations, etc.) - became more common practice. This gave more flexibility for doctrine writers to focus on big-picture issues in the

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[57] Field Manual 100-5 *Operations of Army Forces in the Field* (Washington, DC: Headquarters, Department of the Army, 1968), p. 1-1. Hereafter, 1968 FM 100-5.

[58] *Field Service Regulations United States Army, Corrected to July 31, 1918 (Changes Nos. 1 to 11)* (Washington, DC: Government Printing Office, 1914), preface, letter from Major General Leonard Wood, Chief of Staff of the Army.

[59] Emory Upton, *A New System of Infantry Tactics Double and Single Rank Adapted to American Topography and Improved Firearms* (New York: D. Appleton & Co., 1868), preface.

keystone manual rather than providing explicit details on the conduct of a variety of different types of operations.

In regard to unconventional warfare, the Army included language in the chapter devoted to the topic which stated that unconventional operations were done "primarily for the purpose of assisting and supporting the conventional military effort."[60] While this language doesn't minimize the importance of unconventional warfare, it clearly establishes it as secondary to the conventional effort. It also reflects the Army's way of dealing with increasing friction between the recently created special warfare elements within the force such as the Special Forces and the more traditional services such as the infantry. This section of the manual is impressive for its cogent articulation of the effect that conventional operations might have on the local civilian population in an unconventional war. The 1962 *FSR* focused on guerrilla warfare as an element of partisan warfare; the 1968 FM 100-5 considered guerrilla warfare in an insurgency environment.[61]

Unique to the 1968 manual was the addition of an entire chapter on stability operations - "internal defense and internal development operation and assistance provided by the Armed Forces to maintain, restore, or establish a climate of order within which responsible government can function effectively and without which progress cannot be achieved."[62] One reason for the use of this new term was to convince members of the Army that counterinsurgency was not just a Special Forces mission or an effort conducted by military advisors, but an operation that affected the entire Army.[63] The manual discouraged individuals in the Army from referring to *counterinsurgency operations*, preferring instead the use of *internal defense and internal development* when

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[60] 1968 FM 100-5, p. 11-1.
[61] Birtle, 2006, p. 445.
[62] 1968 FM 100-5, p. 13-1.
[63] Birtle, 2006, p. 251. The author contends that Army Chief of Staff Johnson coined this term in 1964 to convince the Army that counterinsurgency was a mission that would affect the entire Army organization.

discussing the national effort to defeat an insurgency and *stability operations* when referencing the military component of that national effort.[64] Terminology matters and this articulation of terms demonstrates the Army's awareness of that fact. Kretchik points out that this emphasis on terminology[65] also reflected the Army's attempt to clarify that its efforts were only one component of a much broader national (military and non-military) effort to defeat an insurgency. It is not clear if this is an example of the Army recognizing the tremendous investment of resources necessary to defeat an insurgency such as the one in Vietnam, or if it is an example of the Army hedging its bets in the event that it failed in Vietnam. Kretchik thinks it is evidence of the Army maturing to recognize that it is only one element within a larger joint-service[66] and interagency system, but one might argue instead that it is evidence of the Army's unwillingness to fight in a counterinsurgency based on a preference for more conventional operations.[67]

Birtle, who not only conducted detailed research on the Army's keystone publications, but also analyzed all of the supporting and subordinate field manuals on numerous topics relevant to counterinsurgency, concludes that the 1968 manual is "most remarkable" for "how little it had changed after six years of doctrinal ferment and three years of warfare in Vietnam."[68] Most of the concepts in the manual were exactly the same as those of its predecessor. Birtle notes that though the manual emphasized the importance of balancing combat and internal development operations, it refused to prioritize one over the other, allowing commanders in the field to use their discretion.[69]

While the 1968 manual did not fundamentally change Army doctrine, there were some efforts to change the organization's educational curriculum and its training by 1968. By that year,

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[64] The term stability operations will appear again in Army doctrine in 1990's.
[65] For a helpful discussion on terminology vis-à-vis irregular warfare, see Birtle, 2006, pp. 3-5.
[66] 1968 FM 100-5, p. 13-3.
[67] Kretchik, 2011, p. 191.
[68] Birtle, 2006, p. 446.
[69] Birtle, 2006, p. 446.

almost half of the Infantry Officer Basic Course - a school attended by all newly commissioned infantry lieutenants - focused on subjects related to counterinsurgency.[70] The Command and General Staff College increased its counterinsurgency instruction from 92 hours in 1965 to 200 hours in 1968 and the curriculum focused on newly-created counterinsurgency doctrine, case studies of previous counterinsurgency operations, and current operations in Vietnam. Efforts were also made to ensure that the faculty at the school had experience in counterinsurgency in Vietnam.[71] Military schools played an important role in the inculcation of new doctrine across the Army. In regard to training, Birtle notes that every infantry battalion and armored cavalry squadron had a cadre of four officers and twelve noncommissioned officers who were qualified in jungle warfare to ensure that units trained on the appropriate tasks and to the right standards.[72]

4.1.1.3. The Post-Vietnam War Period

Secretary of the Army Howard H. Callaway and Army Chief of Staff Creighton W. Abrams created the Strategic Assessment Group to review the Army's experience in the Vietnam War and to develop a roadmap for the organization's future. Based on the conclusion that the American public would no longer stomach foreign intervention except in those cases where America's vital interests were at play, the Group concluded that the defense of Europe with conventional forces should be the Army's primary focus. Not only was this a logical assessment, but it also aligned with the institution's organizational preference for this type of warfare. The Army was very willing to jettison many of the initiatives it took during the Vietnam War to conduct more effective counterinsurgency operations.

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[70] Birtle, 2006, pp. 459 and 461.
[71] Ibid.
[72] Ibid., p. 465.

The Army reduced the size of the Special Forces from 13,000 men in 1971 to 3,000 men by 1974. Rather than continuing a program to develop trained advisors known as the Military Assistance Officer Program, the Army subsumed this effort within a new specialist career field known as the Foreign Area Officer. The Army formed two Ranger Battalions, but their purpose was to serve as an elite reaction force trained in mid-intensity operations (not in counter-guerilla operations). Leaders lamented that many officers lacked "experience in conventional, mid-intensity type tactics" and used this claim to justify a renewed emphasis on conventional training.[73] Jungle and counter-guerilla programs were replaced with programs emphasizing conventional drills and maneuvers. Schools eliminated courses on counterinsurgency. Even the Army War College reduced the scope of its curriculum on insurgency and counterinsurgency to two days by 1975.[74]

The 1967 edition of Field Manual 31-16 *Counterguerrilla Operations* remained the Army's sole doctrine on counterinsurgency until 1982 when it was rescinded and not replaced. When the Army published its 1976 FM 100-5, it was General DePuy's intention to produce a slate of subsidiary manuals - one of which was to be devoted to counterguerrilla operations - but this did not happen.[75] In 1981, the Army issued FM 100-20, *Low Intensity Conflict*, but the manual was overshadowed by the Army's transition to AirLand Battle. The Army would not expend significant organizational energy on the topic of counterinsurgency again until 2006 when it found itself engaged in another attempt to quell an insurgency, this time in Iraq.

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[73] USCONARC History, Fiscal Year 1972, p. 482, and Gillespie, *Sergeants Major of the Army*, p. 120, quoted in Birtle, 2006, p. 479.

[74] See Birtle, 2006, pp. 478-481, for an account of the Army's decision to purge itself of counterinsurgency.

[75] Ibid., p. 482.

4.1.1.4. Understanding the Absence of Innovation for Counterinsurgency

Environmental Shifts

When President Kennedy replaced Eisenhower's policy of massive retaliation with flexible response, the Army sensed an opportunity to discard the pentomic innovation not for a new innovation but for a return to a more traditional structure and doctrine. The Army, organized and trained to fight under the pentomic construct, was less prepared to fight conventionally than the pre-pentomic (immediate post-World War II) Army. Apart from an improvement in the Soviet Union's tactical nuclear weapons' capability which played a role in the U.S. transition back to a focus on non-nuclear operations, there was no environmental shock which necessitated a shift in the Army's theory of victory. Even the Vietnam War did not demand a fundamental change in Army doctrine, since the Army saw its primary mission to be the defeat of the Soviet Union on a European battlefield. American casualties in the Vietnam War were horrific, but a stalemate there was not viewed as an existential threat to the United States.

Role of Civilians

President Kennedy's emphasis on counterinsurgency operations and the corresponding pressure that he put on the Army in 1961 and 1962 to change doctrine and structure for those operations is well-documented. Though Kennedy's directive to the Army was clear, Army leaders resisted. On the eve of American involvement in the Vietnam War, the doctrinal preferences of Army elites and civilian elites did not align. Army leaders argued that overhauling doctrine or creating counterinsurgency-specific units would render the organization incapable of conducting conventional operations against the Soviets. Secretly, some leaders worried that a counterinsurgency focus would deprive the organization of the personnel, weapons, and equipment that it believed it needed to defeat a Soviet incursion against NATO allies.

When civilian elites favor doctrinal change but military elites do not, I expect to see evidence of military doctrinal change in anticipation of civilian intervention as a way of warding off civilian influence and preserving the military's first-mover advantage. Rather than major change, I expect to see evolutionary or cosmetic changes to Army doctrine and/or force structure. Army leaders should use formal doctrine as a tool to minimize civilian interference. In the period immediately preceding the Vietnam War, the Army did just that. In addition to the creation of the Special Forces - an innovation in its own right but not one that I cover in-depth here - the Army taught counterinsurgency concepts to its eight stateside combat divisions, it incorporated classes on counterinsurgency into its military school curricula, and it codified doctrine related to irregular warfare and the role of the Special Forces in the 1962 *FSR*.[76] However, the Special Forces branch was small, the doctrine said little about countering irregular enemies, and the updated curricula lacked the depth that could have been achieved if the organization had incorporated lessons learned from the numerous irregular engagements that occurred in its past. As Wilson writes, "When President John F. Kennedy called for an improvement in the army's ability to fight guerrilla wars, the task was given (reluctantly) to a new 'special forces' unit that, owing to strong leadership and presidential support, acquired its own sense of mission but that for many years was treated as a peripheral (and trivial) activity in the army as a whole."[77] The problem with innovation at the periphery in a very large military organization is that it can easily be abandoned or reversed, especially when the innovation only occurred at the behest of civilian actors.

It is beyond the scope of this study to catalog the nature and extent of civilian intervention in Army operations during the Vietnam War itself, but I will focus briefly on civilian involvement

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[76] Bruce Palmer, Jr. and Roy K. Flint, "Counter-Insurgency Training," *Army* 12, no. 11 (June 1962): 32-39. See also, Norman and Spore, 1962, pp. 28, 30.

[77] James Q. Wilson, *Bureaucracy: What Government Agencies Do and Why They Do It* (New York: Basic Books, 1989), p. 225.

with respect to airmobile operations and the design of the Air Assault Division. In the context of interservice competition with the Air Force over the role of helicopters in combat, the Army used Defense Secretary McNamara's interest in airmobility for its own gain. Though some have mischaracterized McNamara's involvement as purely one of pressuring the Army to innovate, Rosen's comprehensive analysis of the innovation demonstrates that the preferences of Army elites and civilian elites regarding air mobility were fairly well aligned. Rosen makes the compelling point that the Army initiated the process of innovation in the 1950s when "there was a conscious effort on the part of a group of senior officers to restructure career paths in army aviation."[78] Rosen argues that rather than causing the innovation, McNamara's statements "helped a group of senior officers win the endgame in their struggle to create combat units utilizing helicopters."[79]

McNamara's intervention did more than pressure the Army to innovate with respect to the employment of helicopters in combat. More importantly, it officially placed airmobile operations under the jurisdictional domain of the Army and it empowered Army leaders to expand ongoing attempts to develop a combat aviation capability. In the Army's official account, the institution notes that without McNamara's interference, the Army would not have been able to overcome competition with the Air Force.[80] Given that airmobile operations straddled the boundary between the jurisdiction of the Army and the Air Force, interservice rivalry played a role in shaping the innovation. McNamara's intervention broke the deadlock between the services, empowering the Army to own the concept.

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[78] Stephen P. Rosen, *Winning the Next War: Innovation and the Modern Military* (Ithaca, NY: Cornell University Press, 1991), p. 87.
[79] Rosen, 1991, p. 91.
[80] Combat Studies Institute, 1999, p. 30.

Interservice Rivalry

Even though the Army was unwilling to innovate to develop a comprehensive counterinsurgency doctrine prior to, during, and after the Vietnam War, it was also unwilling to cede jurisdiction over that type of warfare to another service. The Army fought to gain jurisdiction over counterinsurgency to prevent it from going to the Marine Corps.[81] Jurisdiction over the mission "meant the promise of additional funds, men, and equipment, [and] an increase in the Army at the expense of the other Services."[82] Coming off a decade of interservice rivalry with the Air Force in the post-World War II period, the Army perceived Marine claims of jurisdiction over "small wars" as a threat to Army survival.

Given that the primary mission of the Marines had been amphibious warfare, the Army pointed out that counterinsurgency operations were land-based and therefore firmly within the realm of the service with the responsibility for combat on land - the Army. The Fleet Marine Force (FMF), created in 1933, was trained and equipped for "the seizure or defense of advanced naval bases and for the conduct of limited amphibious or land operations essential to the prosecution of a naval campaign."[83] Though the Marines operated on land extensively throughout the Korean War, it was not difficult for the Army to contend that it was the nation's preeminent organization for ground combat. According to the Secretary of the Army at the time, Cyrus Vance, "…counterinsurgency is in effect a responsibility for which the Army can and should become the tacitly recognized…primary agent…the Army will be the basic source of doctrine, the source of most equipment, the provider of the great bulk of the military know-how and forces, the originator

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[81] Bowman, 1985, p. 186.

[82] Ibid. Bowman's source is "Memorandum for Record, Subject: Chief of Staff Briefing on Priority Application of Resources (Selective Modernization) Study (U)," 17 September 1962, found in the Center for Military History (CMH), Vietnam Studies Group files.

[83] William H Russell, "The Genesis of FMF Doctrine: 1879-1899 (Part I)," *Marine Corps Gazette* (Pre-1994) 35, no. 4 (1951): 52.

of most of the new ideas on equipment, tactics, techniques, and organizations, the source of most of the personnel who occupy key military positions in counterinsurgency worldwide…"[84] For these reasons, and the Army's dogged pursuit of the mission despite an organizational culture predisposed more to conventional operations, counterinsurgency was given to the Army as a secondary mission.

Intraservice Rivalry

Intraservice rivalry during the 1960s was minimal, though it did present itself in the form of friction between the newly created Special Forces and the more traditional branches such as the infantry. While this affected how Army leaders prioritized mission sets in the 1968 FM 100-5, intraservice rivalry did not cause doctrinal innovation. The establishment of the Special Forces branch was a military innovation, but rather than being caused by a competition between different political actors in the Army, the innovation was more of a response to a new mission requirement. That new requirement - irregular warfare - was not one that actors representing the existing branches actually wanted.

Organizational Culture

When Army culture (fear of unpreparedness, emphasis on worst-case scenarios, penchant for deliberate planning, aggressiveness, seizing the initiative, and heterogeneity) intervenes in a doctrinal process, we expect to see doctrines that are offensive, firepower-centric, oriented primarily on the role of the infantry and the armor, and focused on mid-intensity operations.[85] An

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[84] Memorandum for the Chief of Staff, U.S. Army, Subject: Army Responsibilities in Counterinsurgency, September 8, 1962, Washington National Records Center, File 250/15, DCSOPS 1962, 65A 3314/8, 2/65: 05+, as quoted in Bowman, 1985, p. 186.

[85] High-intensity operations are characterized by "the large-scale exchange of strategic nuclear weapons." Mid-intensity operations are "direct force-on-force clash[es] between conventional forces - the organized forces of states." Low-intensity operations are characterized by "social conflict, failed or failing states, and the employment of irregular, militia, or guerrilla forces using terrorist tactics." See *Small Wars Manual*, United States Marine Corps (Washington, D.C.: U.S. Government Printing Office), 1940, cited in Duane R. Worley, *Shaping U.S. Military*

Army culture oriented on centralized operations, large-scale maneuver, and validation through live-fire exercises was particularly well-suited for the ROAD construct - a design focused on conventional operations. The construct was also familiar. According to General Harold K. Johnson in May 1961, "The basic fighting structure to which we are returning is one with which most of us have a reasonable degree of familiarity."[86]

The Army's assessment of the Soviet threat as the most dangerous threat aligned with the Army's cultural preferences for war and its supporting doctrine. Krepinevich argues, this "'worst-case' threat…was also the 'preferred' threat, and it contributed to [the Army's] persistent ignorance of counterinsurgency warfare."[87] While I think Krepinevich's point is a good one, one could argue that the Army's resistance to counterinsurgency might have been born not out of ignorance but out of a rational prioritization of threats. If the adoption of counterinsurgency doctrine would have degraded the Army's ability to defeat the Soviet Union in Europe, it would be hard to contend that the Army should adopt such a doctrine.

4.1.1.5. Conclusion

The Army's hasty termination of the pentomic division and its doctrine in the early 1960s, and its transition to the ROAD organizational construct, did not occur in the context of a shift in the distribution of military power in the system, the nature of the enemy threat, or the availability of military technologies. All three of these environmental conditions were relatively stable and the Soviet threat in Europe was still perceived as the most dangerous threat to the American state. The balance of threat perspective suggests that the Army should have oriented its doctrine on the

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Forces: Revolution or Relevance in a Post-Cold War World (Westport, CT: Praeger Security International, 2006), p. 7.

[86] Harold K. Johnson, "ROAD Briefing, 27 May 1961," U.S. Army Command and General Staff College, 18662.13-G, as quoted in Doughty, 1979, p. 21.

[87] Andrew F. Krepinevich, *The Army and Vietnam* (Baltimore: Johns Hopkins University Press, 1986), p. 5.

most dangerous threat to the state in the absence of any other environmental shifts. In reality, that is what the Army did, but it came at the expense of the organization's preparedness for the counterinsurgency and counterguerrilla operations that it ended up conducting in the Vietnam War.

According to the Army Chief of Staff from 1960-1962, General Decker, securing Europe was critical to the survival of the United States. Decker noted, "we could lose in Asia without losing everything."[88] Even as late as 1968 when the Army was engaged in a critical period of the Vietnam War, Army leaders viewed the defense of allies in Europe as the primary mission.[89] The Soviet invasion of Czechoslovakia in August of that year, the stress on the Army in Vietnam, the withdrawal of France from NATO military activities, and the decrease of U.S. forces in Europe all combined to amplify the Army's concern regarding the security of Europe.

The Army's organizational transition to the Reorganization Objectives Army Division (ROAD) 1965 and the publication of the *1962 Field Service Regulations* FM 100-5 *Operations* were substantial changes to structure and doctrine, but neither were changes that originated with a drastic modification to the Army's theory of victory. The ROAD structure was similar to the Army's division structure in the aftermath of World War II. The 1962 *FSR* retained the Army's focus on conventional war with the Soviets in Europe. For the first time in its history, the Army's keystone manual discussed irregular operations such as guerrilla warfare, but these types of operations were given the Army's lowest priority. Although there was growing interest in counterinsurgency operations in the Army in the early 1960s,[90] Army leaders did not change their

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[88] Birtle, 2006, p. 226.
[89] Kretchik, 2011, p. 190.
[90] Peter P. Campbell, "Military Innovation in the Shadow of Vietnam: Making US Army Doctrine in 1968," unpublished paper disseminated at the International Studies Association annual conference in Atlanta, Georgia in 2016. The author notes that before Kennedy took office, 5% of the Army's journal articles focused on counterinsurgency. This increased to 11% during the Kennedy Administration and to 16% in 1966 under President Johnson.

theory of victory to focus on counterinsurgency. Many senior Army leaders believed that an Army that could successfully conduct conventional operations could also succeed at counterinsurgency.

It is not clear why the Army could not train counterinsurgency-specific forces that could transition back to a conventional orientation if necessary. Giving the counterinsurgency mission to the Marine Corps was a logical option given the extensive experience that the service had in small wars throughout its history. The Marines were also the only service to have developed a counterinsurgency doctrine in its now-famous, *Small Wars Manual*. The option of giving the counterinsurgency mission to the Marine Corps was proposed but dismissed when the Army made a strong claim to jurisdiction over this type of operation.[91] After a decade of interservice rivalry with the Air Force and the Navy under the Eisenhower administration, the Army saw the allocation of the counterinsurgency mission to the Marines as another threat to its own survival. Adding the counterinsurgency mission to its plate would enable the Army to be the recipient of additional funding, men, weapons, and equipment.[92]

While it is easy to criticize the Army's counterinsurgency performance in the Vietnam War, one should recognize the changes the Army did make in less than four years' time to implement Kennedy's vision (particularly given the fact that many senior Army leaders disagreed with that vision). Between 1961-1965, the Army reorganized under ROAD, expanded the Special Forces, and developed an airmobility concept. In the report of the special commission formed by President Johnson in 1965 to review the state of the nation's counterinsurgency program, the Army was commended as "the only agency that had developed a cogent, written doctrine for

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[91] Bowman, 1985, p. 186.
[92] Discussed in Bowman, 1985, p. 186. The source is "Memorandum for Record, Subject: Chief of Staff Briefing on Priority Application of Resources (Selective Modernization) Study (U)," 17 September 1962, Center for Military History, Vietnam Studies Group files.

counterinsurgency."[93]   Additionally, only the Army and the Marine Corps created training programs to distribute counterinsurgency doctrine to their units.

As was the case after every previous war that it fought, the Army faced the challenge of determining what lessons learned in Vietnam should be codified in its doctrine and which lessons should be abandoned. The Army did not have much of an incentive, at least in the short-term, to devote more effort to counterinsurgency in its keystone doctrine. While many analysts have criticized the Army's abandonment of counterinsurgency after the Vietnam War, a close look at the political, social, and military environment in the post-war period suggests that the Army's decision to do so was logical. Potential reasons for moving away from counterinsurgency include: (1) the Army and the nation were weary of the topic, (2) there was a distinct policy shift away from foreign interventions, (3) the Army believed it had already incorporated counterinsurgency lessons learned into the 1968 FM 100-5, and (4) the Army believed that its counterinsurgency doctrine was adequate and not in need of change.[94] However, it is startling that the Army did not conduct a comprehensive review of lessons learned from the Vietnam War, since a review would have captured the Army's historical experience in such a way that it might have been useful for the numerous counterinsurgency and contingency operations that the Army would conduct in the years to follow.[95]

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[93] Birtle, 2006, pp. 277-278. The author cites "Rpt, Counterinsurgency Review Board, 1 December 1965, sub: Report of Committee II (Training)," Maxwell D. Taylor Papers, National Defense University, Fort McNair, Washington, D.C.

[94] Ibid., p. 483.

[95] Harry Summers, "The United States Army's Institutional Response to Vietnam," in ed. Charles Shrader, *Proceedings of the 1982 International Military Symposium: "The Impact of Unsuccessful Military Campaigns on Military Institutions,1860-1980,"* (Washington, D.C.: U.S. Army Center of Military History, 1984), pp. 300-301.

4.1.2. Full-Dimensional Operations and Full-Spectrum Operations

By 1989, the U.S. Army was a modern force organized and trained to defeat the Warsaw Pact in Europe. Compared to its troubled state at the end of the Vietnam War, the Army now had a comprehensive doctrine (AirLand Battle), a new slate of weapons and vehicles (the Big 5), a command responsible for training, education, and doctrine (TRADOC), and two combat training centers where units could be evaluated (the National Training Center and the Joint Readiness Training Center).[96] According to Kretchik, the AirLand Battle doctrine "represented the service's transition from a World War II army to a modern fighting force."[97] The Army purged itself of the drug and discipline problems that pervaded its force during the Vietnam War, and it developed effective methods to attract high-quality recruits under the all-volunteer force.

The collapse of the Soviet Union signaled a transition from a bipolar order to a unipolar order. While the prospects of war against another state were reduced, in its role as the world's only superpower, the U.S. could expect the possibility of crisis response or contingency operations on the lower end of the spectrum of conflict to increase. The Army published new keystone doctrine in 1993 and 2001. Both doctrines retained most of the tenets of AirLand Battle but included a newfound emphasis on crisis response and contingency operations. While the doctrines officially sanctioned operations on the lower end of the spectrum of conflict, they were more of a response to a civilian requirement for Army operations in those types of conflict rather than due to the Army's preference. The purpose of this section is to examine the factors which influenced these two doctrines.

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[96] Zeb Bradford and Frederic Joseph Brown, *The United States Army in Transition* (Beverly Hills, CA: Sage Publications, 1973); Suzanne C. Nielsen, *Preparing for War: The Dynamics of Peacetime Military Reform* (Ph.D. diss. Harvard University, 2003).

[97] Kretchik, 2011, p. 220.

4.1.2.1. The Gulf War

In 1988, Army officers watched the Soviet Union closely as the Mikhail S. Gorbachev regime signaled its intent to unilaterally reduce the size of the Soviet armed forces and to remove certain types of units from eastern Europe. In December 1988, in a speech at the United Nations, Gorbachev announced that he would reduce the Soviet armed forces by 500,000 men and 10,000 tanks.[98] At the time, Army Chief of Staff General Carl E. Vuono knew that the U.S.-Soviet relationship was changing, but he warned, "we should not lose sight of the fact that Soviet capabilities are still improving all the time."[99] Vuono likely said this to keep soldiers focused because it was clear to most that Gorbachev's actions signaled a reduction in Soviet capability by December 1989.[100]

When the Cold War ended and war against the Warsaw Pact was no longer the most significant threat that the Army faced, there was considerable uncertainty among Army officers regarding the organization's future.[101] The AirLand Battle doctrine as published in the 1982 and 1986 Field Manual 100-5 *Operations* remained the Army's keystone doctrine, and that doctrine focused almost entirely on defeating a Warsaw Pact force in Europe. While the Army confronted the question of how the collapse of the Soviet Union would affect its theory of victory (and its doctrine), Saddam Hussein's invasion of Kuwait gave the Army an opportunity to employ AirLand Battle for the first time in combat. In Operations Desert Shield and Desert Storm, under the

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[98] Coincidentally, this was the same month that the Army's professional journal, *Military Review*, devoted its entire issue to an analysis of the Soviet military. See *Military Review*, Vol. LXVIII, no. 12 (December 1988).

[99] Phillip W. Childress, "From the Editor," *Military Review*, Vol. LXVIII, no. 12 (December 1988): preface.

[100] Jacob W. Kipp, "*Perestroyka* and Order: Alternative Futures and Their Impact on the Soviet Military," *Military Review*, Vol. LXIX, no. 11 (December 1989): 3.

[101] For analysis on the Army in the immediate post-Cold War period, see: Colin Jackson, "From Conservatism to Revolutionary Intoxication: The U.S. Army in the Second Interwar Period," in Harvey Sapolsky, Benjamin Friedman, and Brendan Green, eds., *Creation Without Destruction: The Revolution in Military Affairs and the U.S. Military During the Second Interwar Period* (New York: Routledge, 2009); Theo Farrell, Sten Rynning, and Terry Terriff, *Transforming Military Power since the Cold War: Britain, France, and the United States, 1991-2012* (Cambridge: Cambridge University Press, 2013).

command of General H. Norman Schwarzkopf, the Army used bombers, helicopters, and ground attack aircraft to conduct a deep attack to destroy Iraqi air-defense systems and other targets prior to the initiation of a U.S. ground attack.[102] As has been well-documented, it only took U.S. forces one-hundred hours of ground operations to defeat Iraqi forces. As Kretchik notes, "Desert Storm was what the Army's 1986 doctrine had prophesized: a fight against a symmetrical enemy using maneuver and firepower."[103]

For many proponents of AirLand Battle, General Schwarzkopf included, Desert Storm confirmed the effectiveness of the AirLand Battle doctrine. The impressive synchronization of the air and ground effort in Iraq - a central tenet of AirLand Battle - validated the doctrine.[104] The effectiveness of new technologies, weapon systems, and vehicles confirmed the value of the Big 5 acquisition program. Though AirLand Battle was initially designed to defeat the Warsaw Pact in Europe after a Soviet *attack* against Army and NATO forces, the success of the doctrine in Iraq against an enemy that was on the *defensive* confirmed for many that the doctrine was appropriate for future combat even after the end of the Cold War.[105] In other words, AirLand Battle was an effective doctrine for a war involving an attack or a defense of allies abroad. Though the Iraqi military fought with Soviet equipment, it was a third-world force that was untrained and incompetently led.[106] Iraq had the world's fourth largest army but was overmatched by the power of a U.S. force that was bolstered by support from numerous allies. Unfortunately, many analysts overlooked these facts and instead viewed the quick Iraqi defeat as validation of the Army's theory

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[102] Kretchik, 2011, p. 216. See also, Michael R. Gordon and Bernard E. Trainor, *The General's War* (New York: Little, Brown, 1995); Norman Friedman, *Desert Victory: The War for Kuwait* (Annapolis, MD: Naval Institute Press, 1992); Richard M. Swain, "*Lucky War": Third Army in Desert Storm* (Fort Leavenworth, KS: U.S. Army Command and General Staff College Press, 1994); Robert H. Scales, Jr., *Yellow Smoke: The Future of Land Warfare for America's Military* (Lanham, MD: Rowman & Littlefield Publishers, 2003).
[103] Kretchik, 2011, p. 217.
[104] Ibid.
[105] Though Iraq attacked into Kuwait, once there they established a defense with trenches.
[106] Worley, 2006, p. 69.

of victory.   In their eyes, the Persian Gulf War legitimized AirLand Battle as an effective doctrine for conflict between great powers.[107]

In the midst of the Army's hubris in the post-Gulf War period, some Army leaders worried that the overwhelming effectiveness of the air campaign in the war, which instilled a tremendous level of confidence in civilian leaders and the American public regarding the utility of precision bombing, was a threat to the Army's relevance.[108] Air power was critical at the outset of the Gulf War because it provided a "shield" that gave General Schwarzkopf time to buildup combat forces in the Arabian Peninsula.[109] The Gulf War exposed weaknesses in the strategic mobility of the Army since it took weeks to move two Army heavy corps to the region.[110] The 82nd Airborne Division - the only Army unit that got to the region quickly - secured airports while coalition airpower conducted 24-hour defensive air patrols.   In the glow of victory, some observers concluded that the integration of advanced reconnaissance systems and precise munitions signaled a revolution in warfare.[111] As had been the case after the nuclear explosions that ended World War II, the success of airpower led some to question the necessity of a large ground force capability. The American public was fascinated with the effectiveness of the Air Force's precision bombing effort during the Gulf War, and much less aware of the Army's performance on the ground.[112]

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[107] For an analysis of the schools of thought on the U.S. victory in the Gulf War, see Stephen Biddle, "Victory Misunderstood: What the Gulf War Tells Us about the Future of Conflict," *International Security* 21, no. 2 (Fall 1996): 139-179.

[108] Austin Long, 2015, unpublished paper.

[109] Thomas A. Keaney and Eliot A. Cohen, *Gulf War Air Power Survey Summary Report* (Washington, DC, 1993), p. 2, accessed online at http://www.dtic.mil/dtic/tr/fulltext/u2/a273996.pdf.

[110] James Matthews and Cora Holt, *So Many, So Much, So Far, So Fast* (Washington, D.C.: Joint History Office, Office of Chairman, Joint Chiefs of Staff, 1996).

[111] Ashton B. Carter, William J. Perry, and John D. Steinbruner, "A New Concept of Cooperative Security," *Brookings Occasional Paper*, Washington, DC: Brookings Institution, 1992, p. 3. The report by Keaney and Cohen (1993) considers this argument and concludes that Desert Storm did not constitute a revolution in the nature or conduct of war. See p. 251.

[112] Jackson, 2009, p. 46. The Army restricted journalists during the Gulf War while the Air Force embraced them. See also, Douglas A. Macgregor, *Breaking the Phalanx: A New Design for Landpower in the 21st Century* (Westport, CN: Praeger, 1997), p. 19.

These concerns would drive the Army's modernization effort throughout the 1990s, and appear again during the Kosovo War.

At the end of the Cold War and after its experience in the Gulf War, the Army struggled to define a new theory of victory. Army leaders knew that the organization would face budget cuts and force reductions which would be compounded by the United States' new position as a unipole without a well-defined enemy.[113] The Central Front scenario in Europe had been the Army's central focus since the end of the Vietnam War. More than the other American services, the elimination of that scenario caused the Army to face "existential questions about its future roles and missions."[114] Army leaders knew that the budget and force reductions common in post-war periods represented a fundamental threat to unit readiness. These leaders sought to avoid the catastrophic consequences of a lack of readiness for the first battle of the next war.[115]

4.1.2.2. The 1993 FM 100-5 Operations Manual and Full-Dimensional Operations (FDO)

In the early 1990s, in the face of strategic uncertainty and bureaucratic competition for increasingly limited resources, the Army focused on readiness and limited exploration of new technologies to address limitations exposed during the Gulf War.[116] The Army Chief of Staff in 1991, General Gordon R. Sullivan, directed General Frederick M. Franks, the new TRADOC commander, to initiate a revision of the AirLand Battle doctrine. Sullivan wanted a doctrine that would enable the Army to fight in what he viewed as the "post-industrial era."[117] This new era

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[113] John R. Dabrowski, *Oral History - General Gordon R. Sullivan* (Carlisle, PA: U.S. Army Military History Institute, 2012), p. 181.

[114] Jackson, 2009, p. 43.

[115] In a speech in Philadelphia in 1991, Army Chief of Staff General Gordon Sullivan referred to "No More Task Force Smiths," referencing the defeat of Army forces due (in part) to low levels of readiness in the first battle of the Korean War. See Gordon Sullivan, "Speech to Union League of Philadelphia, October 10, 1991," as cited in Gordon R. Sullivan, *The Collective Works (1991-1995) of the 32nd Chief of Staff United States Army, Gordon R. Sullivan* (Washington, DC: US Army Department, 1996), p. 11.

[116] Jackson, 2009, p. 46.

[117] John L. Romjue, *American Army Doctrine for the Post-Cold War* (Fort Monroe, VA: Military History Office, United States Army Training and Doctrine Command, 1996), p. 35.

would be defined by advanced computer technologies rather than by "raw industrial might and manpower-intensive armies."[118] Sullivan believed that a new keystone doctrine would be the engine of change for the Army in the post-Cold War world.[119] The substantial reduction of U.S. Army presence in Europe after the collapse of the Soviet Union meant that the Army would need to be able to project power quickly from the U.S. for the purpose of responding to regional crises. Sullivan saw a need for the Army to be able to function effectively "across the entire continuum of Army operations."[120] AirLand Battle - a linear war-fighting doctrine - needed to be modified for a nonlinear, open battlefield; one in which Army forces could succeed in "war and operations short of war."[121]

Franks assigned the mission to draft the new version of FM 100-5 to the director of the School of Advanced Military Studies (SAMS), Colonel James R. McDonough. McDonough argued that the new doctrine should retain the "ideas, tenets, imperatives and battlefield framework found in current AirLand Battle doctrine," while also incorporating "evolving missions in areas such as stability operations, nation assistance and contraband flow."[122] These "evolving missions" were referred to as either "operations other than war (OOTW)" or "low-intensity conflict (LIC)." Though the Army had recently engaged in two such operations - Panama (1989) and Operation Provide Comfort in Iraq (1991) - some senior Army leaders argued against the incorporation of LIC in FM 100-5.[123] The debate over the degree to which FM 100-5 would focus on these types of operations was a major point of contention in the Army's debate over the new doctrine.

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[118] Romjue, 1996, p. 35.
[119] Ibid., p. 36; Kretchik, 2011, p. 223.
[120] Ibid., p. 32.
[121] Ibid.
[122] James R. McDonough, "Building the New FM 100-5: Process and Product," *Military Review* LXXI, no. 10 (1991): 6 and 8.
[123] Kretchik, 2011, p. 218.

After Colonel McDonough circulated drafts of the new FM 100-5 to Army commanders in the field, he received feedback from some that "the draft manual had shifted too far away from warfare to nonwar operations."[124] An aversion to LIC led Generals Franks and Sullivan to select "operations other than war" as the terminology that would be used in the new manual. The Army's performance in two such operations in 1992 - Hurricanes Andrew and Iniki - led General Sullivan to conclude that "[t]he Army's warfighting focus and robust doctrine provide a sound basis of disaster relief operations."[125] Sullivan convinced skeptical Army commanders that the inclusion of OOTW in the new FM 100-5 would not invalidate the tenets of AirLand Battle which he argued were still relevant for these types of operations.

The Army released the 1993 Field Manual 100-5 *Operations* manual on June 14, 1993, and in December 1993, the Army focused on the new manual in its professional journal, *Military Review.* In the journal, Colonel McDonough noted that the new doctrine, "is no longer just AirLand Battle, a doctrine steeped in the Cold War assumptions of a forward defense…it is now a doctrine of full-dimensional operations for a force-projection Army whose units will normally act in conjunction with air, naval and space assets and seldom be involved in operations outside the United States separate from the forces of allied nations."[126] The phrase "full-dimensional operations" - never actually defined in the manual itself - became shorthand for the 1993 manual.

Rather than representing a transformative doctrinal change, the 1993 manual retained many of the tenets of the 1986 AirLand Battle doctrine. The manual focused on three environmental states - war, conflict, and peacetime - but doctrine writers were clear that the Army's primary

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[124] Kretchik, 2011, p. 224.
[125] Ibid., p. 225, quoting Gordon R. Sullivan, "Hurricane Andrew: An After-Action Report," *Army* 43, no. I (January 1993): 16-22.
[126] James R. McDonough, "Versatility: The Fifth Tenet," *Military Review* 73, no. 12 (December 1993): 11.

purpose was "to win the nation's wars."[127] The most significant change was the inclusion of a separate chapter on OOTW, but that chapter was only eight pages long and lacked detail on the planning and execution of OOTW.[128] Force projection - "the ability to rapidly alert, mobilize, deploy, and operate anywhere in the world" - was a major focus of the manual. That chapter included historical vignettes on the projection of forces in Desert Shield/Storm and the 1950 war in Korea. Finally, the manual recognized the 1986 Goldwater-Nichols Act by emphasizing "stronger joint operations."[129] The manual noted, "A key member of the joint team, the Army serves alongside the Air Force, Navy, and Marine Corps to protect the nation's vital security interests."[130]

The first real test of the 1993 doctrine occurred when the Army deployed to Haiti in 1994. In Haiti, the Army planned for a combat operation to restore Haitian president Jean Bertrand Aristide to power but ended up having to conduct an "operation other than war."[131] According to Kretchik who interviewed many of the commanders involved in the operation, "Conventional forces followed the warfare aspects of FM 100-5, not OOTW….[whereas] Special Forces units…followed the OOTW precepts established within FM 100-5 and FM 100-25, *Doctrine for Army Special Operations Forces*."[132] The phrase "operations other than war" was ambiguous. Army leaders struggled to understand the distinction between war and OOTW. As Kretchik notes, "While some believed that war and OOTW were distinct intellectual constructs, others saw too

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[127] Field Manual 100-5 *Operations* (Washington, DC: Department of the Army, 1993), p. ii. On Page 2-1, the manual includes a figure which depicts three "states of the environment" - war (attack and defend), conflict (strikes, raids, support to insurgency), and peacetime (counter drug, disaster relief, civil support). Confusion over this depiction is a factor that led to the manual's eventual replacement.

[128] Ibid., pp. 13-1 to 13-18.

[129] Ibid., p. ii.

[130] Ibid., p. 1-4.

[131] Kretchik, 2011, pp. 236-239.

[132] Ibid., p. 238.

much commonality among Desert Storm, northern Iraq, Somalia, Rwanda, and Haiti, as all five operations attempted to change an adversary's behavior."[133]

The new Army Chief of Staff, General Dennis J. Reimer, initiated another doctrinal revision process which would eliminate the OOTW terminology, align Army doctrine with ongoing Force XXI initiatives (explained in the next section), and eventually lead to the publication of the 2001 Field Manual 100-5 *Operations* manual. This effort was informed by a 1994 publication named TRADOC Pam 525-5 *Force XXI Operations: A Concept for the Evolution of Full-Dimensional Operations for the Strategic Army of the Early Twenty-First Century*.[134] According to the publication, "the 1993 version FM 100-5 provided the Army a short lead on the future…525-5 [and the 2001 FM 100-5] represents the continuation of change, continuity, and growth, enabling the Army to continue as a relevant, strategic force capable of decisive victory into the twenty-first century."[135]

4.1.2.3. Force XXI and the Army After Next (AAN)

Army Chief of Staff, General Sullivan, initiated a program called Force XXI which aimed to test new information technologies by integrating those technologies into the existing division structure.[136] While this was not a doctrinal or organizational structural innovation, Force XXI, and its successor, the Army After Next (AAN), are important because they were priorities of Army senior leaders and they illustrate the Army's theory of victory in the 1990s. According to Sullivan

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[133] Kretchik, 2011, p. 240. See also, John B. Hunt, "OOTW: A Concept in Flux," *Military Review* 76, no. 5 (September-October 1996): 3-9.

[134] TRADOC Pam 525-5 *Force XXI Operations: A Concept for the Evolution of Full-Dimensional Operations for the Strategic Army of the Early Twenty-First Century* (Washington, DC: Headquarters, Department of the Army, 1994). This manual was preceded by TRADOC Pam 525-5 *AirLand Operations: A Concept for the Evolution of AirLand Battle for the Strategic Army of the 1990s and Beyond* (Washington, DC: Headquarters, Department of the Army, 1991). I don't discuss the 1991 version here.

[135] Ibid., p. i.

[136] Gordon R. Sullivan, "Letter to the Army's General Officers, Force XXI, 5 March 1993" as published in Sullivan, 1996, pp. 316-317.

in June 1992, "a defining characteristic of this new era is the microprocessor's effect on warfare…our ability to exploit the power of the computer will be critical to mobilization and sustainment of forces."[137] A belief in the capacity of new information technologies to enable real-time situational awareness on the battlefield through sensors and networks shaped the Army's theory of victory throughout the 1990s.

General Sullivan introduced the Force XXI concept to the Army at the Association of the United States Army (AUSA) Institute for Land Warfare on January 14, 1994. He outlined three of the program's characteristics: (1) command and control of units based on "shared, real-time situational awareness," (2) "a networked organization," and (3) "connections by electronic means."[138] In layman's terms, Sullivan wanted to connect units on the ground with each other through the use of sophisticated computers. By providing commanders with increased information about their location and status relative to that of other friendly units, commanders would be able to make quicker, more accurate tactical decisions on the battlefield. In 1995, the Army experimented with digitization by fielding and testing digital equipment on the Army's 4th Infantry Division at Fort Hood, Texas.[139] Though there were major challenges with the new digital technologies, the Army believed that the Force XXI experiment was a success because it allowed units to disperse maneuver forces more widely than ever before based on the ability of these forces to see each other "virtually" with the new technologies.[140]

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[137] Gordon R. Sullivan, "All-Capable Readiness - The United States Army in the Post Cold War World," *NATO's Sixteen Nations* (June 1991): 159.

[138] Gordon R. Sullivan, "America's Army - Into the 21st Century," *Association of the United States Army (AUSA) Institute for Land Warfare* (14 January 1994): 239.

[139] Dennis J. Reimer, *Oral History - General Dennis J. Reimer* (Carlisle, PA: U.S. Army Military History Institute, 2000), p. 317. Reorganizing 4th Infantry Division was called an Advanced Warfighting Experiment (AWE).

[140] Combat Studies Institute, 1999, pp. 58-59.

Sullivan's Force XXI concept set the conditions for a more expansive technological program under his successor, General Dennis Reimer. General Reimer initiated the Army After Next (AAN) program to prepare the Army for 2020-2030 through the use of wargaming exercises based on different projected futures.[141] According to Reimer, the purpose of the AAN program was to predict what the Army would be required to do in the future.[142] Reimer assigned the project to Major General Robert Scales.[143] Scales focused on one of the Army's most significant limitations in the Gulf War - strategic mobility.[144] In that war, it took a month after the deployment of the 82nd Airborne Division for the first heavy units from the 24th Infantry Division to arrive. Compared to the Air Force's rapid projection of combat power, the Army's deployment was slow and cumbersome. The Army worried that unless it could build a more rapidly deployable force it would find itself assigned to "constabulary missions and peacekeeping."[145] To build a force that could deploy quicker, Scales focused on smaller, lighter brigades that could be easily transported by air. According to Scales, the Army would replace its historical reliance on heavy armored units with light, high-technology units equipped with sensors and connected through networks. Scales stated, "All advanced ground vehicles would rarely be required to face main battle tanks head on, which makes it possible to limit their weight by reducing the need for heavy armor…They will survive through a combination of speed, agility,…comprehensive situational understanding, terrain masking, deception, and indirect fire."[146]

The AAN program was based on a theory of victory focused on firepower-intensive, limited wars. The next Army Chief of Staff, General Eric Shinseki, continued the implementation

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[141] Long, 2015, unpublished paper.
[142] Reimer, Oral History, 2000, pp. 315-316.
[143] Scales, Jr., 2003, p.5.
[144] Robert Scales and John Parmentola, "The Army After Next: Intertwining Military Art, Science, and Technology out to the Year 2025," *Army RD&A* (May-June 1998).
[145] Jackson, 2009, p. 48.
[146] Scales and Parmentola, 1998, p. 5. Also, quoted in Jackson, 2009, p. 49.

of AAN through "three major initiatives - the Stryker Interim Force, the Future Combat Systems, and modularity."[147] Though outside the case study window of this study, it is interesting to note that this Army theory of victory persisted for a period even after the Army struggled through stability operations in Iraq and Afghanistan. According to Jackson, "The post-9/11 era would be dominated by tension between heavy demand for the Army manpower in counterinsurgency and the service's attachment to a modernization program that provided high technology solutions to future conventional wars."[148]

4.1.2.4. The Army in Bosnia (1995) and Kosovo (1999)

While the 1993 FM 100-5 *Operations* manual included operations other than war (OOTW), the AAN concept under General Reimer envisioned Army participation in short, decisive wars. Long, protracted operations in low-intensity conflict environments or peacekeeping missions were in the Army's keystone manual, but Jackson argues that these types of operations were not aligned with the preferences of Army leaders by the mid-1990s or with the technological components of Force XXI or AAN.[149] However, in 1995, the Army found itself in a peacekeeping operation when it deployed 20,000 troops to Bosnia after the Dayton Peace Accords. Major General Scales believed that "engagements below the threshold of physical violence" - like the peacekeeping mission in Bosnia - would degrade the Army's ability to fight conventional operations.[150] Scales pointed to the ineffectiveness of Army units at the outset of the Korean War. Many of those units endured years of "constabulary service in Japan" prior to fighting in the Korean War.[151]

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[147] Jackson, 2009, p. 54.
[148] Ibid.
[149] Ibid., pp. 50-51.
[150] Scales, 2003, pp. xi-xii. Jackson, 2009, p. 49, also cites Scales.
[151] Ibid., p. xii.

Scales' position conflicted with the official position of the Army as codified in the 1993 doctrine in the chapter on operations other than war. That manual discussed the importance of OOTW, but it viewed those operations as secondary to the primary mission of full-scale combat in wars with well-defined, limited objectives. In Scales' view, an Army unit that could win in a firepower-intensive limited war could easily succeed in "less demanding contingencies" like peacekeeping operations.[152] Scales believed that the Korean War signaled a "new age of warfare" marked by Army participation in limited wars - "wars fought for limited ends with equally limited means…"[153]   Scales argued that the Army's ability to perform well in peacekeeping and other "constabulary missions" was validated in operations in Bosnia, Haiti, and Kosovo. The more pressing concern was that these troops would not be as effective in fighting full-scale wars.

The Army thought it would have a chance to fight a firepower-intensive, limited war in Kosovo in 1999 when NATO initiated operations against Serbia.[154]   General Wesley Clark, the Supreme Allied Commander Europe (SACEUR) and an Army officer, developed two courses of action for the Army in the war. The Army could deploy attack helicopters and long-range missiles to Macedonia,[155] or it could conduct a manpower-intensive, ground invasion. Military leaders across the force resisted both of Clark's plans based on concerns regarding high casualties and the risks of escalation.[156]   Much of the sensitivity regarding American casualties stemmed from the death of eighteen Army Rangers in the 1993 Battle of Mogadishu which led to the withdrawal of

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[152] Scales, 2003., p. xii.

[153] Ibid., p. xi.

[154] For insight on the Army's experience in this war, see Wesley K. Clark, *Waging Modern War: Bosnia, Kosovo, and the Future of Combat* (New York, Public Affairs, 2001), p. 271; Daniel Byman and Matthew Waxman, "Kosovo and the Great Airpower Debate," *International Security* 24, no. 4. (Spring, 2000): 15-16. In this paragraph, I also draw from Long, 2015, unpublished paper, which summarized options for the Army's participation in Kosovo.

[155] Clark, 2001, p. 198 and p. 216.

[156] Ibid., p. 289; Dana Priest, "Risks and Restraint: Why the Apaches Never Flew in Kosovo," *The Washington Post*, A1, December 29, 1999.

U.S. forces from Somalia.[157] President Bill Clinton rejected the use of attack helicopters in Kosovo.[158] The Army task force that was assembled - Task Force Hawk[159] - was a large force consisting of mechanized and armor forces. In the end, the large, ponderous force package was not employed in the NATO campaign. Instead, the Air Force executed an extensive air campaign which was ultimately successful. The Army's participation in the war was minimal. The organization's inability (or unwillingness) to present an effective course of action to policymakers during the war, combined with the Air Force's success, led Army leaders to worry again about perceptions of Army obsolescence.

4.1.2.5. The 2001 FM 100-5 Operations Manual and Full-Spectrum Operations (FSO)

After the Army's experience in Somalia in 1993 and the Balkans in 1995 and 1999, senior Army leaders thought it was necessary to update the 1993 FM 100-5 *Operations* manual to reflect lessons learned from those experiences, to clarify ambiguity regarding military operations other than war (OOTW), and to align Army doctrine with joint doctrine. The primary emphasis in the new 2001 FM 3-0 *Operations* manual was on a concept termed, Full Spectrum Operations.[160] According to the manual, "Full spectrum operations include offensive, defensive, stability, and support operations. Missions in any environment require Army forces prepared to conduct any combination of these operations."[161] Stability operations were those that required "a combination of peacetime developmental, cooperative activities, and coercive actions in response to a crisis."[162] Support operations were those that required "Army forces to assist civil authorities, foreign and

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[157] Scales, 2003, p. 8, discusses the Army's sensitivity to casualties after this failed operation.

[158] Clark, 2001, pp. 319-320.

[159] Ibid., p. 280 and p. 198.

[160] Field Manual 3-0 *Operations* (Washington, DC: Headquarters, Department of the Army, 2001).

[161] Ibid., p. 1-15. Kretchik, 2011, p. 249, notes that the idea of a "spectrum of conflict" actually originated in doctrine discussions as early as 1962.

[162] Ibid., p. 1-15.

domestic, as they prepare for or respond to crisis and relieve suffering."[163]   Rather than

consolidating operations into two distinct categories - war and OOTW - the new manual

emphasized overlap between the categories and acknowledged that the Army would often have to

conduct multiple types of operations in the same conflict (as it had done in Bosnia). Army doctrine

writers would have preferred to leave out the term OOTW entirely in the new manual, but they

couldn't because the phrase still officially existed in joint doctrine.[164]

Participation in conflicts that straddled the border between war and peace throughout the

1990s illuminated confusion on the ground regarding the mechanisms and modalities that Army

forces were expected to employ in those types of operations. After interviewing some of the Army

officers who wrote the 2001 manual, Davidson concluded that the "full-spectrum theory was

intended to rectify the conceptual 'trap' that doctrine writers and military leaders felt the artificially

dichotomous 'war-MOOTW' distinction created."[165] Before the 2001 manual was drafted, one

senior Army leader noted, "Army doctrine…currently addresses conventional operations in Field

Manual (FM) 100-5 - with a focus on the violence of heavy combat - and "operations other than

war" with a focus on the logic of low intensity conflict and peace operations…A revolution in

military doctrine would be one that bridges this dual track into a single unified approach…"[166]

The 2001 Full-Spectrum Operations manual was the Army's attempt to articulate such a unified

approach. For those who bemoaned the lack of a "conceptual bridge" between the Army's

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[163] 2001 FM 3-0, p. 1-16.

[164] Davidson, 2011, p. 145. Synchronizing Army doctrine with joint doctrine became a priority after the 1986 Goldwater-Nichols Act.

[165] Ibid., p. 146.

[166] David Fastabend, *A General Theory of Conflict: Bosnia, Strategy, and the Future* (Hoover Institution, Strategy Research Project, Stanford University, 1996), p. 55, as quoted by Davidson, 2011, p. 146.

keystone warfighting doctrine and peace operations, the 2001 manual provided the link between the two that they wanted.[167]

Published before the 9/11 attacks, the 2001 FM 3-0 *Operations* manual was intended to transition Army doctrine from "a Cold War 'heavy or legacy force' dominated by mechanization to an 'interim force' containing both mechanization and more modernized forces by 2007."[168] The Army's intent was to restructure its organization by 2005 under the new Chief of Staff, General Shinseki's, modularity program (which was an outgrowth of General Reimer's Army After Next program). Two modernization programs - Future Combat Systems (FCS) and the Stryker Interim Force - were integral components of Shinseki's program. The rediscovery and promulgation of counterinsurgency doctrine after 2003 in the wars in Afghanistan and Iraq complicated the Army's modernization efforts. The Army's inability to stabilize both countries after invading is telling in that it suggests that the Army was incapable of conducting the stability operations that were emphasized in both the 1993 and 2001 keystone doctrines. While these developments are outside the scope of this study, I mention them because they help explain the transitional nature of the 2001 manual.

4.1.2.6. Understanding the Sources of FDO and FSO

Environmental Shocks

The Army Chief of Staff in 1992, General Sullivan, argued that the Army needed to change its doctrine due to three changes in the security environment. First, the collapse of the Soviet Union rendered superpower rivalry less relevant in the post-Cold War world. The transition from a bipolar to unipolar order concerned Sullivan because he believed the latter to be less stable and

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[167] Davidson, 2011, p. 147. The author discusses the development of FM 3-07 Stability and Support Operations written by a small-group of officers at the Army's Peacekeeping Institute (PKI) in Carlisle, Pennsylvania. This manual was an outgrowth of the 2001 FM 3-0 *Operations* manual.
[168] Kretchik, 2011, p. 248. For a detailed description of content in the new manual, see pp. 248-255.

more dangerous.[169] Second, though some thought the new world order would be more benign and peaceful, religious, ethnic, and political rivalries persisted in many areas of the world. Third, the collapse of the Warsaw Pact signaled a reduction of U.S. forces in Europe and an associated decline in the resources allocated to national defense.[170] According to Sullivan, "the new military strategy will move the United States from the old focus on forward defense through forward deployments directed against the Soviet Union to a strategy of forward presence and crisis response with a greater concern for contingencies and peacetime activities throughout the world."[171] Sullivan saw three requirements for the Army in the post-Soviet Union world: (1) retain quality people, (2) develop a doctrine that enables a fast response to crisis, and (3) pursue technological solutions that provide high payoff given the constrained budget climate.[172] Sullivan viewed doctrine as the "catalyst for change across the Army."[173]

General Franks, the TRADOC commander responsible for writing the 1993 Full-Dimensional Operations doctrine, identified five stimuli that required the doctrinal change: (1)" threats and unknown dangers," (2) "national military strategy," (3) "history and lessons learned," (4) the "changing nature of warfare," and (5) changing "technology."[174] Fears regarding the proliferation of weapons of mass destruction in the wake of the Soviet Union's collapse, and a new U.S. national military strategy focused on force projection and crisis response were two external shocks that Franks credited with causing the Army to reexamine its theory of victory after the Cold War.

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[169] Gordon R. Sullivan, "Army Imperative in Peacetime: Keep the Edge," *Army Times* (6 January 1992): 88.

[170] Gordon R. Sullivan, "Continuity and Change: Reshaping the U.S. Army for the 1990s," (January 1992): 81-82.

[171] Ibid., p. 83.

[172] Ibid., pp. 84-86.

[173] Sullivan, "Doctrine: A Guide to the Future," *Military Review* (February 1992): 91.

[174] Frederick M. Franks Jr., "Full-Dimensional Operations: A Doctrine for an Era of Change," *Military Review* 73, no. 12 (December 1993): 5-6.

Army leaders in the 1990s also believed that military technology had changed significantly. Scales compared the time period to the interwar years between the world wars when mechanization fundamentally altered the nature of warfare.[175] Although Scales was cognizant of the risks associated with putting too much faith in the capabilities of the precision targeting exhibited in the Gulf War, the Army After Next (AAN) program and its associated exercises and war games were based on sophisticated information technologies that promised to alter the nature of combat.[176] In his book, General Sullivan stated, "We believe that information technologies can enable the Army to achieve quantum improvements in speed and precision - enhancing tempo, lethality, and survivability to new levels."[177]

The catalyst for the doctrinal revision that led to the 2001 Full-Spectrum Operations doctrine was the Army's experiences in Somalia, Bosnia, and Kosovo. Conceptual and practical confusion regarding military operations other than war (OOTW) plagued the Army during those operations. Recognizing this reality and acknowledging the need to continue the transition from a Cold War heavy force to a lighter, rapidly deployable force, Army leaders thought a doctrine revision was necessary.

Role of Civilians

General Sullivan, the proponent behind Full-Dimensional Operations doctrine, aligned the Army's doctrinal revision with the priorities of senior civilians in the national security establishment. In a speech on August 2, 1990, President George H.W. Bush identified four priorities for the national defense strategy: nuclear deterrence, forward presence, crisis response,

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[175] Scales, 2003, p. 9.

[176] Ibid., p. 8. The intent here is not to suggest that General Scales put faith in technology over the soldier. It is to demonstrate the degree to which he believed that technology had changed warfare.

[177] Gordon R. Sullivan and Anthony M. Coroalles, *Seeing the Elephant: Leading America's Army into the Twenty-First Century* (Cambridge, MA: Institute for Foreign Policy Analysis, 1995), p. 13.

and the capability to reconstitute U.S. military forces when necessary.[178] The President's *National Security Strategy* (1993) and the *National Military Strategy* (January 1992), written by the Chairman of the Joint Chiefs of Staff, General Colin L. Powell, both reiterated these priorities.[179]

There is no evidence that civilians intervened directly in the Army's doctrinal revision process between 1989 and 1993. Rather, the preferences of senior Army leaders matched those of senior civilian leaders. There is also no evidence that Army leaders pushed back against civilian directives to reduce the size of the Army. Army leaders recognized that the force would have to downsize. Rather than fight over personnel end-strength, the Army accepted the force structure decrease, focusing energy instead on maintaining the readiness of existing forces.[180] In a letter to the Army's General Officers, Sullivan stated, "we will become a smaller, more predominantly CONUS-based and contingency oriented force…[and we will] achieve greater efficiencies in how we provide resources for the force."[181] In another letter to mid-grade officers at the Command and General Staff College, Sullivan noted, "Our fundamental policy is that we will trade force structure for readiness…Conditions in the world dictate that the nation spend less on defense."[182]

By 1995, in conjunction with the progression of Force XXI and its successor, the Army After Next (AAN), a divergence manifested itself between the operational requirements for the Army demanded by civilian policymakers and the Army's own vision of how and when it should

[178] George H.W. Bush, "Remarks at the Aspen Institute Symposium in Aspen Colorado," August 2, 1990, accessed online at: http://www.presidency.ucsb.edu/ws/?pid=18731.

[179] *National Security Strategy of the United States*, 1993, accessed online at: http://nssarchive.us/NSSR/1993.pdf. See pp. 14-15; *National Military Strategy of the United States*, January 1992, accessed online at: http://history.defense.gov/Portals/70/Documents/nms/nms1992.pdf?ver=2014-06-25-123420-723. See pp. 6-8. General Sullivan referenced these four priorities (or foundations) in numerous speeches and publications in 1991 and 1992.

[180] Gordon R. Sullivan, "Maintaining Continuity While Accommodating Change, *Letter to the Army's General Officers*, 28 June 1991, p. 98. He notes, "Our task is to reshape the Army while maintaining readiness."

[181] Gordon R. Sullivan, "The Army's Strategic Issues," *Letter to the Army's General Officers*, 19 July 1991, p. 98.

[182] Gordon R. Sullivan, "Letter to the CGSOC Class of '93," *Letter to the Army's General Officers*, 18 September 1992, p. 201.

be employed. An Army preference for firepower-intensive wars with limited objectives contrasted with a civilian requirement for Army operations in humanitarian operations, peacekeeping missions, and low-intensity conflict. The Army's deployment to Bosnia in 1995 typified the type of operation that the Army wished to avoid. While there isn't evidence that civilians intervened directly in the process of writing the Full Spectrum Operations doctrine, it is clear that civilian officials pressured Army leaders to be prepared for these other types of wars. In 1999 after the end of the war in Kosovo, Deputy Secretary of Defense, John Hamre, noted "If the Army holds onto nostalgic versions of its grand past, it is going to atrophy and die."[183] The Army modified its keystone doctrine to account for operations in low-intensity conflict in anticipation of civilian intervention.

Interservice Rivalry

Interservice rivalry and concerns regarding organizational survival played a role in shaping the character of Full-Dimensional and Full-Spectrum operations.[184] The prestige of the Air Force surged after the success of the precision bombing campaigns in Desert Shield/Storm and the 1999 war in Kosovo. Though later analysis would reveal limitations in the effectiveness of airpower during those wars, throughout the 1990s many observers perceived precision guided munitions as the preferred military instrument in war. Similar to Army leaders during the atomic era after World War II, Army leaders in the mid- to late-1990s were concerned with maintaining the organization's relevance in the broader national security establishment. While the organization's survival wasn't necessarily in jeopardy, some leaders worried about functional obsolescence. According to General Scales, "If the Army is to remain relevant to the security needs of the nation we must begin

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[183] As quoted in David Jablonsky, "Army Transformation: A Tale of Two Doctrines," *Parameters* (Autumn, 2001): 45; also, quoted in Jackson, 2009, p. 54, and Long, 2015, unpublished paper.
[184] We don't see evidence of intraservice rivalry for the Army during this period.

now to accelerate the speed with which we can project legitimate, powerful, and balanced forces to threatened regions overseas."[185] Crisis response and rapid deployability were concepts that Army leaders emphasized repeatedly after the slow and cumbersome movement of Army forces in the months leading up to combat operations in the Gulf War. Army leaders were cognizant of the fact that had Saddam Hussein escalated the conflict prior to the arrival of Army mechanized and armor forces, the U.S. effort to repel the Iraqi invasion of Kuwait might have been in jeopardy. Only the 82nd Airborne Division - a light, airborne unit - got to the region quickly.

Despite the interest in fixing this problem, the Army experienced similar issues in the Kosovo War in 1999. Task Force Hawk consisted of an initial force package of 1,800 soldiers with helicopters and artillery weapons. By the time Army planners finished their analysis, this force package tripled in size to 5,500 soldiers with tank and mechanized infantry companies.[186] It took forty-four days for Task Force Hawk to reach full operational capability - over a month longer than initially projected.[187] The Army's other course of action - the deployment of a ground invasion force - was heavily resisted by Army leaders who feared a protracted war with high American casualties. Logistical challenges and the protestations of Army leaders rendered both courses of action untenable, and neither was executed. The inability of the Army to quickly deploy a contingency force was exacerbated by the Air Force's ability to execute a successful airpower campaign. The end result was an Army worried about its organizational survival at the turn of the new century. Rather than embracing its singular ability to dominate the jurisdiction of low-

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[185] Robert H. Scales, *Future Wars Anthology* (Carlisle, PA: US Army War College, 1999), p. xiv. This quote is also cited in Jackson, 2009, p. 48.

[186] Clark, 2001, p. 277. Also, cited in Jackson, 2009, p. 53. See also Bruce Nardulli, Walter Perry, Bruce Pirnie, John Gordon, John McGinn, *Disjointed War: Military Operations in Kosovo, 1999* (Santa Monica, CA: RAND Corporation, 2002).

[187] Jackson, 2009, p. 53.

intensity conflict, Army cultural preferences for mid-intensity conflict in decisive, limited wars overpowered concerns related to organizational survival.

Organizational Culture

Though General Sullivan always cautioned against replacing people with technology, his vision of what information technologies could do for the Army was expansive and unique for a senior Army leader. Sullivan believed that information technology could provide commanders with a virtual view of the battlefield, reduce fraternization, improve unit synchronization, and enhance intelligence collection.[188] The digitization of the Army through the Force XXI program (and the Army After Next) was a first-of-its-kind effort to reorganize the entire organization around highly sophisticated technologies, most of which had not yet been tested and validated by units in the field. Although this technological emphasis was deeper than previous Army modernization efforts, I did not find evidence of resistance to Force XXI or the AAN programs based on organizational cultural concerns.

In more recent years, some senior Army leaders have criticized the 1990's focus on digitization. The most prominent example is Lieutenant General H.R. McMaster. In 2008, McMaster noted that the information technology approaches of the 1990s were: "firmly rooted in a widely accepted yet fundamentally flawed conception of future war: the belief that surveillance, communications and information technologies would deliver 'dominant battlespace knowledge' and permit US forces to achieve 'full spectrum dominance' against any opponent mainly through the employment of precision-strike capabilities…Concepts with such labels as network-centric warfare, rapid decisive operations…embraced what increasingly appeared as a faith-based argument that future war would lie mainly in the realm of certainty…"[189] The challenges that the

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[188] Gordon R. Sullivan, "Speech to ROTC Marshall Award Winners," 13 April 1994, p. 252.
[189] H.R. McMaster, "On War: Lessons to be Learned," *Survival* 50, no. 1 (March 2008): 21.

Army faced in Afghanistan (2001-) and Iraq (2003-) illustrated the limitations of many of the information technologies that Generals Sullivan and Reimer promoted in the mid- to late-1990s. Real-time situational awareness had certainly improved, but this capability did little against insurgents who easily blended into local populations.

Where organizational culture played a role was in regard to the organization's preference for mid-intensity, firepower-intensive wars, rather than low-intensity conflict. Throughout the mid- to late-1990s, there was constant tension between the operational requirement to deploy troops to missions that were "below the threshold of physical violence" and the organizational preference for conventional wars with limited, clearly defined aims. As it had in the past after participation in low-intensity conflict, the Army made minor edits to keystone doctrines to reflect lessons learned from these missions, but these edits were cursory and superficial at best. The Army spent considerable organizational energy trying to define low-intensity conflict with terms like military operations other than war (MOOTW) and stability operations. The MOOTW designation is illustrative of the organization's view of peace operations. By labeling these operations as something other than war, the Army not only downgraded their importance, but it also demonstrated the organization's contention that the Army should not be engaging in them.

4.1.2.7. Conclusion

In 1989, the Army viewed itself as a modern fighting force that had moved beyond its troubled post-Vietnam War state. In the uncertain post-Cold War environment when there was no easily-identifiable enemy threat, the Army's theory of victory consisted of two strains of thought that were in tension with each other. Army leaders identified a need to be able to project Army power globally to conduct a wide array of missions along the entire spectrum of conflict. This spawned Full-Dimensional Operations and Full-Spectrum Operations. Both of these doctrines

recognized the necessity for the Army to be able to function effectively in low-, mid-, and high-intensity warfare. Operations on the lower end of the spectrum were secondary in importance to mid-intensity and high-intensity operations, but their inclusion in the manual at least officially sanctioned the Army's requirement to operate in those environments. As the Army learned repeatedly throughout the 1990s, most prominently in Bosnia in 1995, civilian policymakers intended on employing the Army in operations other than war. Ignoring doctrine for these types of operations would have been detrimental to the Army's standing during a time that it sought to demonstrate the continued relevance of ground combat after the Soviet Union's collapse.

In tension with the full-spectrum approach was the idea that Army leaders favored a vision of future warfare that centered on "firepower-intensive, limited war" over "manpower-intensive and firepower-limited, internal war" such as counterinsurgency.[190] Army leaders such as Reimer and Scales and other futurists during the mid- to late-1990s believed that an Army unit competent in mid-intensity warfighting would also be competent in low-intensity operations such as counterinsurgencies or peacekeeping operations. As Jackson points out, these leaders believed that they could apply a theory of victory oriented on firepower-intensive wars to both types of operations.[191] This way of thinking would prove problematic in the Army's deployment to Bosnia in 1995 and in post-invasion operations in Afghanistan (2001-) and Iraq (2003-). Scales published his book after the initial combat operations of those later wars but before the Army engaged in post-invasion stability operations in both countries. His "ten principles for the future" focus on the application of technologies - "stealth, power, and information" - to deliver "killing power"

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[190] Jackson, 2009, p. 50. See also Scales, 2003, p. xi.
[191] Ibid.

quickly and decisively in limited wars.[192] His theory of victory provides little insight on Army

operations when a war's objectives are ambiguous or when they change during the course of a war.

While the 1993 doctrinal manual did address conflict on the lower end of the spectrum,

coverage on these topics was limited and underdeveloped. Army leaders limited coverage on low-

intensity conflict in their doctrine for two reasons. First, Army leaders believed that a theory of

victory oriented on mid-intensity warfare could easily be adopted for low-intensity warfare.

Soldiers trained in the former would do well in the latter. According to these Army leaders, the

reverse did not hold true - soldiers trained in low-intensity conflict would be unprepared for mid-

to high-intensity combat. Second, some leaders hoped that minimal coverage in doctrine would

reduce the likelihood that policymakers would deploy the Army in operations other than war

(OOTW). Voluminous doctrines on methods of fighting in low-intensity conflict could compel

civilian policymakers to employ the Army in this type of conflict more frequently.

In the 2001 manual, the Army took a step forward with regard to operations in low-intensity

environments by providing insight on stability[193] and support operations.[194]   Doing so provided

the institutional support necessary for the development of institutions like the Army's

Peacekeeping Institute (API) and the publication of supporting manuals. However, the extent to

which coverage on these areas went beyond the Army's keystone doctrine to its schools and

education centers is less clear. There is no evidence of these doctrines having substantial influence

on the Army's performance in stability operations in Iraq or Afghanistan.

An institution that embraced AirLand Battle and experienced an overwhelming victory in

Desert Shield/Storm using elements of that doctrine was unwilling to fundamentally overhaul

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[192] Scales, 2003, p. 141.
[193] 2001 FM 3-0 *Operations*, chapter 9.
[194] 2001 FM 3-0 *Operations*, chapter 10.

doctrine in the early 1990s. Sullivan recognized that "new doctrine must accommodate the changing environment," but he eased the concerns of Army leaders by basing the doctrine on "the widely acknowledged strengths of AirLand Battle."[195] Sullivan's approach was practical. He knew that the Army would experience a significant reduction of forces after the Soviet Union's collapse.[196] Fundamentally overhauling doctrine in the early 1990s would have added further turbulence to an Army in the midst of a major drawdown. Instead, Sullivan built on "the battle-tested AirLand Battle doctrine, expanding its scope across the operational continuum and shifting its focus toward power projection from the United States."[197] He viewed the 1993 manual as the stimulus that would transition the Army "from the Cold War to a principally CONUS-based contingency force, prepared to perform a variety of combat operations and operations other than war."[198]

The 2001 FM 3-0 was the next step in the Army's transition from a Cold War force to a lighter, more rapidly deployable force. Like the 1993 manual, it is hard to argue that the establishment of Full-Spectrum Operations represented a doctrinal revolution, but we should not underestimate the magnitude of officially sanctioning operations on the lower end of the spectrum of conflict, particularly given years of resistance to these operations since the Vietnam War. That said, while low-intensity conflict was an element of Full-Spectrum Operations, it is clear that the Army was not prepared to execute operations in that type of conflict when it was required to do so in the operations in Iraq and Afghanistan.

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[195] Sullivan, "Doctrine: A Guide to the Future," *Military Review* (February 1992): 93.

[196] Sullivan, "How the Army Sees a New World: We're Smaller and Non-Nuclear, but Defense is Still Our Mission," *The Washington Post*, 23 February 1992, p. 95. He noted, "The Cold War Army of five corps and 28 divisions will be reduced to four corps and 20 divisions by 1996. We already have eliminated four active divisions form the force structure…"

[197] Gordon R. Sullivan, "Report on Senior Leaders' Warfighting Conference," *Letter to the Army's General Officers*, 22 November 1991, p. 100.

[198] Sullivan and Coroalles, 1995, p. 423.

4.2. Conclusion

The absence of counterinsurgency doctrine prior to, during, and after the Vietnam War, and the Army's half-hearted attempt to develop doctrine for low-intensity conflict in 1993 and 2001, shed light on the sources of Army doctrinal innovation. First, in each case, Army leaders rationalized their decision not to innovate based on a prioritization of security threats. The Army is predisposed to innovate doctrinally to defeat those threats that it perceives as most dangerous to U.S. national security. Irregular warfare does not pose an existential threat to the United States, and therefore, Army doctrine with respect to irregular warfare is always secondary to doctrine for the most dangerous threat. This logic is consistent with the balance of threat perspective of military innovation.

Of course, the problem with only innovating doctrinally for the most dangerous threat is that it leaves the organization less prepared (or entirely unprepared) for wars that are less threatening to American interests, but more likely to actually occur. The central focus on a conventional fight with the Soviets in the late 1950s and early 1960s had a major effect on the Army's unwillingness to develop counterinsurgency doctrine that might have enabled greater effectiveness in the Vietnam War. In the post-Cold War environment, the Army struggled to develop a theory of war in the absence of a clearly identifiable most dangerous enemy threat. FDO and FSO included a secondary focus on doctrine for low-intensity conflict, but it is clear that the institution remained focused on firepower intensive war with limited objectives. Another implication of only focusing on the most dangerous threat is that you will incur substantial costs in terms of life and treasure in wars against secondary threats. If counterinsurgency is always a secondary threat because it is not existential, then you can expect to face mission failure (or at least a stalemate) in those types of operations.

Second, in both cases, Army leaders argued that units capable of conducting mid- to high-intensity warfighting would also be competent in low intensity conflict. A part of this argument is logical; many low-intensity conflicts often involve episodes of mid-intensity combat. For an Army unit to function effectively in a low-intensity conflict, if often does have to be effective at higher levels of violence. But, that is only part of it. That unit must also be skilled at a whole host of other requirements that are not inherent to mid- and high-intensity conflict. Ignorance of this fact can be attributed to one of three causes: hubris on the part of Army leaders, a hesitancy to innovate for low-intensity conflict based on a fear that doing so will sign the Army up for operations which it perceives as outside of its warfighting domain, or a (rational) focus on mid- to high-intensity warfare based on the fact that armies normally experience higher numbers of casualties in that type of warfare.[199]

Some analysts claim that the absence of comprehensive counterinsurgency doctrine stemmed not from the intransigence of Army leaders but instead from the fact that organizing, training, and conducting these operations was tremendously difficult to do in the first place.[200] President Kennedy and his group of counterinsurgency experts - the Special Group (C-I) - developed policies and transmitted them to the Army through the Secretary of Defense and the Joint Chiefs of Staff, but it was still a challenge for Army leaders to rapidly implement new doctrines and organizations given the general absence of recent experience in counterinsurgency operations. It is not clear that different (or improved) doctrine would have led to a different end-state; some argue that failure in the Vietnam War was the result of failed American strategy, not

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[199] It is interesting to note that while Army leaders are unwilling or uninterested in innovating doctrinally for irregular warfare, they are not willing to cede that type of warfare to another service. The Army fought to retain jurisdiction over counterinsurgency during the Vietnam War.

[200] Bowman, 1985, p. 187.

tactics.[201] It is worth considering whether any type of doctrinal innovation for irregular warfare could have ensured Army success in a counterinsurgency.

While the Army's adoption of Full-Dimensional and Full-Spectrum Operations was an incremental doctrinal change, the change was more substantial than any adjustments made with respect to counterinsurgency operations after the Vietnam War. While the Army's negative experience in Vietnam likely played a role, it is also clear that the Army's doctrine-writing apparatus was sufficiently more robust in the 1990s than it was in the post-Vietnam War period. The existence of TRADOC professionalized doctrine creation in the Army. The existence of such an institution compelled doctrinal change even when such change was superficial.

Posen's argument on the necessity of civilian intervention to compel military innovation during periods of high threat is insufficient for explaining the doctrines discussed in this chapter. As his theory predicts, we do see civilian pressure on the Army prior to and during the Vietnam War and in the mid- to late-1990s, but Army leaders anticipate intervention and change doctrine just enough to ward off any further civilian interference. This is not to say that they mislead civilian actors about the organization's priorities, but like any political actor, a military organization seeks to develop its own operating practices without intrusion from external actors. Prior to the Vietnam War, the Army used formal doctrine as a tool to minimize interference. In the 1990s, the Army saw doctrine for firepower-intensive wars as the priority, but civilian requirements for Army operations in peacekeeping missions and low-intensity conflict demanded that the Army account for those types of mission in its keystone doctrine. FDO and FSO expanded the range of operations that the Army expected to operate in, but behind the doctrines there was very little in the way of substantial organizational change to improve competency on the lower end

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[201] For example, see John M. Collins, "Vietnam Postmortem: A Senseless Strategy," *Parameters* 8, no: 1 (March 1979): 8-15. According to Collins (p. 8), "Our forces won every battle, but this country lost the war."

of the conflict spectrum. When civilian elites favor change and military elites do not, we see

evolutionary or cosmetic changes to Army doctrine.

Chapter 5. Doctrinal Change in the U.S. Marine Corps

The analysis of Army doctrine with respect to conventional and irregular warfare in the preceding two chapters produced a series of conclusions on doctrinal innovation. In order to test whether or not those conclusions are applicable to other military organizations, I apply the same theoretical framework to the U.S. Marine Corps. Rather than conducting an analysis of the Marine Corps over the entire period from the end of World War II to 2001, I focus on two doctrinal innovations - the vertical envelopment doctrine of the 1940s and 1950s and the maneuver warfare doctrine of the 1980s.

The vertical envelopment and maneuver warfare innovations occurred during periods of peace following war. Both innovations happened in the context of major challenges to the Marine Corps' organizational survival. The vertical development doctrine was developed in response to the advent of nuclear weapons. Studying this case allows me to assess whether or not the Marine Corps changed in ways similar to the Army when exposed to similar external stimuli. The maneuver warfare doctrine was implemented in the 1980s - right around the same time that the Army established AirLand Battle. This case also allows for a service-to-service comparison.

In the sections that follow, I use a balance of power approach to explore the cause of the doctrinal changes and an organizational approach to understand why the changes happened in the way that they did. I rely heavily on primary source materials located in the Marine Corps Archives in Quantico, Virginia.[1] In the chapter's conclusion, I compare the results to the Army cases and I discuss implications for understanding military doctrinal change.

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[1] This is particularly the case with the vertical envelopment doctrine since very few scholars have written on the subject.

5.1. The Major Doctrines

5.1.1. The Vertical Envelopment Doctrine

The Marine Corps' development of a helicopter-oriented vertical envelopment doctrine in the late 1940s can be attributed to the effect that nuclear weapons had on the Marines' amphibious assault mission. The Corps codified the vertical envelopment doctrine in two formal, doctrinal manuals - one in 1948 called *Amphibious Operations - Employment of Helicopters*[2] and one in 1955 called *Landing Force Bulletin Number 17*.[3] Interservice competition between the Marine Corps and the Army and Air Force played a major role in this doctrinal innovation. The doctrine was also the result of a direct threat to the Marine Corps' existence in the political battle over military unification that led to the 1947 National Security Act.

The vertical envelopment doctrine is interesting on three accounts. First, studying this innovation allows me to analyze how another service responded to the advent of nuclear weapons. This enables comparisons to the Army's pentomic doctrine. It turns out that the Army wasn't the only service that worried deeply about its survival in the post-World War II period. Second, while the vertical envelopment doctrine involved a major technological development in the form of the helicopter, the existence of that technology did not drive the innovation. The requirements of the vertical envelopment doctrine greatly exceeded the existing capabilities of the helicopter. Contrary to the arguments of some that new technology is the cause of new doctrine, in this case, the vertical envelopment doctrine was the concept that drove the acquisition of new technology. Third, vertical envelopment occurred during a time when the Corps had not yet established a formal tradition of keystone doctrine. Though neither the Army nor the Marine Corps had a cohesive doctrine

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[2] *PHIB-31 Amphibious Operations Employment of Helicopters, Tentative* (Quantico, Virginia: Marine Corps Schools, 1947).

[3] *HAF 453 Concept of Future Amphibious Operations Landing Force Bulletin [LFB-17]*, 1955, Marine Corps Archives, Quantico, Virginia.

producing institution in the 1940s and 1950s, the Army published keystone doctrinal manuals on routine intervals since the beginning of the twentieth century. The Marine Corps did not.

5.1.1.1. The Post-World War II Period

Prior to World War II, recognizing increasing friction between the United States and Japan, the Marine Corps determined that in the event of a future war with Japan, the Corps would need the capability to "successively seize island bases and eventually land an expeditionary force in the Japanese home islands in order to achieve a full unqualified victory."[4] In 1915, the Corps published *Landing Force Manual* - the organization's first official doctrine.[5] The Corps continued to refine advanced base doctrine (also known as amphibious assault doctrine), releasing the *Tentative Manual on Landing Operations*[6] in 1935 and the *Landing Operations Doctrine*[7] in 1938. A Marine force dedicated to advanced base operations known as the Fleet Marine Force (FMF) was formed in 1933.[8] The Marine Corps validated amphibious warfare doctrine in the landings at Guadalcanal, Saipan, Guam, Iwo Jima, Okinawa, and North Africa in World War II.

The period immediately following the end of World War II was a challenging time for the Corps. Like the other services, the Corps faced the daunting task of a large-scale demobilization

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[4] Report of the Advanced Research Group, "Project I: Analysis of Marine Corps Concept of Landing Force Aspects of Future Amphibious Operations," 1954-1955, Studies and Reports Box 244 re: Advanced Research Group, 1953-1957, Marine Corps Archives, Quantico, Virginia.

[5] *Landing-Force Manual United States Navy* (Washington: Government Printing Office, 1915). This edition was revised and reissued in 1918, 1920, and 1921.

[6] *Tentative Manual on Landing Operations* United States Navy (Washington: Government Printing Office, 1935).

[7] *Landing Operations Doctrine* United States Navy FTP 167 (Washington: Government Printing Office, 1938). Also, see Stephen P. Rosen, *Winning the Next War: Innovation and the Modern Military* (Ithaca, NY: Cornell University Press, 1991), pp. 80-85 and Williamson Murray and Allan R. Millett, *Military Innovation in the Interwar Period* (New York: Cambridge University Press, 1996), pp. 70-78, for a discussion of the amphibious warfare innovation in the Marine Corps during the interwar period.

[8] Austin Long, *First War Syndrome: Military Culture, Professionalization, and Counterinsurgency Doctrine* (Ph.D. diss. MIT, 2010), p. 166. For details on the evolution of Fleet Marine Force doctrine, see William H. Russell, "The Genesis of FMF Doctrine: 1879-1899 (Part I thru V)" *Marine Corps Gazette* (Pre-1994) 35, numbers 4, 5, 6, 7, 11 (1951): I: 52-59, II: 48-53, III: 50-56, IV: 52-59, V: 14-22.

which was based on a controversial and politically charged point system[9] that determined which

Marines would be sent home from the war and discharged first.[10] The Marine Corps post-war

demobilization reduced the organization's personnel strength from a wartime high of 475,604

Marines in 1944 to 74,279 Marines in 1950 - a major decrease but still one that left the Corps

substantially larger than its pre-war size of 19,432 Marines.[11] Like the Army, the Corps faced

tremendous domestic pressure to demobilize quickly. Though it was done hastily, the Corps

reorganized itself logically into two Fleet Marine Forces - one responsible for the Atlantic and one

for the Pacific - each consisting of one division and an aircraft wing.[12] Amphibious operations,

validated in the Pacific during the war, remained the organization's primary mission.

Aside from demobilization, the Marine Corps' experience in the post-war period was

defined by two events - the dawn of the atomic era and President Harry Truman's effort to unify

the U.S. military. Both events put enormous pressure on the Marine Corps, causing Marine senior

leaders to fight for the organization's survival. While much has been written about the Army's

pentomic doctrine, the Marine Corps' response to nuclear weapons is understudied. In the sections

that follow, I analyze the Corps' response to the advent of nuclear weapons and argue that it led to

a doctrinal innovation known as vertical envelopment by helicopter which was codified in Marine

Corps formal doctrine in 1947.[13] In the helicopter, the Marines saw a way to evolve their historical

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[9] See General Roy Geiger's Personal Papers in the Marine Corps Archives at Quantico, Virginia for letters from parents disputing the discharge point system.

[10] Edwin H. Simmons, *The United States Marines: A History*, 4th ed (Annapolis, MD: Naval Institute Press, 2003), p. 190. The point system was based on a Marine's length of service, time overseas, wounds, and medals.

[11] Personnel end-strengths come from the USMC History Division website at: https://usmcu.edu/historydivision/end-strengths. These numbers differ slightly from Simmons, 2003, p. 190.

[12] Simmons, 2003, p. 190.

[13] PHIB-31 *Amphibious Operations Employment of Helicopters (tentative)* (Quantico, Virginia: Marine Corps Schools, 1947). While this is not a keystone doctrine, the Marine Corps did not have a tradition of keystone doctrinal manuals until the late 1980s. For an official account of the Marine Corps' development of the helicopter, see Eugene W. Rawlins, *Marines and Helicopters, 1946-1962* (Quantico, VA: History and Museums Division, Headquarters, US Marine Corps, 1976). For a detailed description of Marine Corps Aviation, see Peter B. Mersky, *U.S. Marine Corps Aviation: 1912 to the Present* (Annapolis, MD.: Nautical and Aviation Pub. Co. of America, 1983).

amphibious operations mission to one more appropriate for a modern-day, nuclear battlefield. Today we associate helicopter insertions with the Army, but in the context of the threat to organizational survival that it faced in the 1940's and 1950's, the Marines developed the first helicopter doctrine and employed that doctrine in the first-ever airmobile operation in Korea in September 1951.[14]

Previously, I argued that interservice competition between the Army and the Air Force played a major role in shaping the character of the Army's pentomic doctrine. While the Army of the 1950s did have to contend with those who argued that a ground force was obsolete in the atomic age, the Marine Corps' battle for survival was even more intense. The Department of the Navy - the service overall responsible for the Marine Corps - was preoccupied with preserving carrier aviation in the face of the increasing prominence of the Air Force,[15] and so it did little to support the Marines. In its own fight for survival, the Army used the emergence of nuclear weapons as justification for the irrelevance of the Marine Corps in the political battle over military unification. Rather than addressing the advent of nuclear weapons and the battle over unification sequentially, the Marines were forced to contend with both events simultaneously.

5.1.1.2. Marine Corps in the Atomic Era - Innovation and the Helicopter, 1946-1948

While the nuclear explosions at Hiroshima and Nagasaki in 1945 signaled a fundamental reassessment of the nature of warfare for the Corps, it was not until a well-respected Marine officer named Lieutenant General Roy S. Geiger, the Commanding General, Fleet Marine Force, Pacific, viewed a series of atomic bomb tests in the summer of 1946, that the Corps realized the profound effect that nuclear weapons would have on the organization. A month after the World War II

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[14] Robert A. Doughty, "The Evolution of US Army Tactical Doctrine, 1946-76," *Leavenworth Papers, Number 1,* Combat Studies Institute, U.S. Army Command and General Staff College, 1979, p. 4.

[15] Carl. J. Horn, *Military Innovation and the Helicopter: A Comparison of Development in the United States Army and Marine Corps, 1945-1965* (Ph.D. diss., Ohio State, 2003), p. 61.

nuclear attacks, Senator Brien McMahan (D-Conn), asked for an atomic bomb test to identify "the destructive powers of the atomic bomb against naval vessels…"[16] President Truman approved the nuclear test on January 10, 1946. The official purpose of the test was to determine "the effects of atomic explosives against naval vessels in order to appraise the strategic implications of atomic bombs including the results on naval design and tactics."[17]

The atomic test - named Operation Crossroads - was conducted on the island of Bikini Atoll in the Pacific on July 1st and 25th in 1946. The operation consisted of two, 23-kiloton nuclear detonations - one at 520 feet above sea level and one 90 feet underwater. In total, the blasts completely destroyed thirteen U.S. Navy ships.[18] Lieutenant General Geiger, assigned by the Marine Corps Commandant as a "U.S. Navy Non-Participating Observer," witnessed Operation Crossroads and sent a detailed report back to Marine Corps Commandant, General Alexander A. Vandegrift, on August 21 1946.[19] Geiger wrote, "It is quite evident that a small number of atomic bombs could destroy an expeditionary force as now organized, embarked, and landed…I cannot visualize another landing such as was executed at Normandy or Okinawa…[the Marine Corps must] use its most competent officers in finding a solution to develop the technique of conducting

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[16] W. A. Shurcliff, *Bombs at Bikini: The Official Report of Operation Crossroads, Prepared Under the Direction of the Commander of Joint Task Force One* (New York: W. H. Wise, 1947), p. 10, quoting Senator McMahan.

[17] Shurcliff, 1947, p. 14, quoting the Joint Chiefs of Staff directive to the commander of the Joint Task Force assigned to conduct the atomic test.

[18] "Operation Crossroads Fact Sheet," George Austin (COLL/5482) A/5/H/7/1 (Box 1), p. 1., Marine Corps Archives, Quantico, Virginia. Thirteen ships contrasts with Richard S. Hodgson, "The Atom Bomb Comes into Focus," *Marine Corps Gazette* 30, no. 10 (Oct 1946): 23, which states that 8 total ships were destroyed. For a technical analysis of the blasts, see "Historical Report Atomic Bomb Tests Able and Baker, Operation Crossroads," accessed online at: http://www.dtic.mil/dtic/tr/fulltext/u2/a995213.pdf.

[19] Orders to Lieutenant General Roy S. Geiger, Roy Geiger Box 8-9: correspondence, Marine Corps Archives, Quantico, Virginia.

amphibious operations in the Atomic Age."[20] The advent of nuclear weapons was the catalyst for a Marine Corps effort to develop a doctrine to preserve its primary mission.

Though General Geiger was approaching the end of his distinguished career,[21] the Marine Commandant trusted him explicitly because of his wartime success as the commander of III Amphibious Corps in operations in World War II on Guam, Peleliu, Okinawa, and Bougainville.[22] General Vandegrift responded to Geiger's report by establishing what would become known as the Shepherd Board, named after Major General Lemuel C. Shepherd, one of the board's members and a future Marine Commandant.[23] This special board's job was to determine how the advent of nuclear weapons would affect Marine amphibious operations.[24] The mission of the board was "to propose, after thorough research and deliberation, the broad concepts and principles which the Marine Corps should follow, and the major steps which it should take, to fit it to wage successful amphibious warfare at some future date…"[25] The Marine Corps, eager to preserve its primary amphibious assault mission, was determined not to jettison amphibious operations in the atomic era, but to develop a way of conducting them in the face of a nuclear-armed adversary.

Similar to the assessment of the Army in the 1950s, the Marine Corps concluded that dispersion of forces on the battlefield was the most critical element for survivability and success in a nuclear war. The mass of naval cruisers, destroyers, and landing craft involved in the

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[20] Rawlins, 1976, p. 11, quoting Lieutenant General Roy S. Geiger, letter to Commandant, Marine Corps, dated 21 August 1946. It is not clear where Rawlins found this document because it is not in Geiger's Personal Collection at the Marine Corps Archives in Quantico, Virginia.

[21] According to Mersky, 1983, p. 124, Lieutenant General Geiger died in January 1947, a week before his retirement. He was promoted to a four-star General Officer posthumously.

[22] Rawlins, 1976, p. 11.

[23] According to Rawlins, 1976, pp. 11-12, the other board members were Oliver P. Smith and Field Harris. Also, see Horn, 2003, p. 62.

[24] Ronald J. Brown, "WHIRLYBIRDS: U.S. Marine Helicopters in Korea," in Charles R. Smith, ed., *U.S. Marines in the Korean War* (Washington, DC: U.S. Marine Corps History Division, 2007), p. 666.

[25] Rawlins, 1976, p. 12, quoting the Commandant's written instructions to the Shepherd Board. Rawlins, p. 95, cites, "Commandant Marine Corps, letter to Chairman, Special Board, dated 13 September 1946, Subj: Effect of Atomic Explosion on Amphibious Warfare." It is not clear where the author found this report because it is not in the Marine Corps Archives at Quantico, Virginia.

movement and support of Marines in a typical amphibious operation would be particularly vulnerable to nuclear attack. To protect Marines while preserving the element of surprise in an attack, required that the Corps develop "a new mode of assault…as a supplement to the existing amphibious landing craft."[26] Dispersion of forces was the critical element but it needed to be achieved without sacrificing effective command and control of Marine units.[27] The Board considered a number of alternatives to rapidly build-up Marine combat power in an amphibious operation. Methods considered were: the use of gliders, airborne units, transport seaplanes, troop and cargo carrying submarines, and/or helicopters.[28] The Board believed that helicopters were the best option for an assault because they would minimize the exposure of a Marine amphibious task force while also allowing Marines to overcome the challenges of the dispersion of forces.[29]

Though the Marine Corps experimented with helicopters as early as 1932, a comprehensive Marine helicopter program was not initiated until 1946.[30] The 1930's helicopter development effort, which centered around a helicopter called the Pitcairn Autogyro, was cancelled by the Marine Corps because the Pitcairn could only transport a pilot and two passengers.[31] This limited payload provided little capability to the Marines. In order to effectively transport Marines into combat, helicopters needed significantly more capability than existed in the mid-1940s.

By the end of December 1946, General Vandegrift approved the Shepherd Board's recommendation regarding the employment of helicopters for the ship-to-shore movement of Marines in an amphibious operation.[32] However, the Marine Corps needed a comprehensive

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[26] Rawlins, 1976, p. 13.
[27] Simmons, 2003, p. 194.
[28] Rawlins, 1976, p. 13; Mersky, 1983, p. 125. Airborne operations were ruled out because of the challenge of consolidating forces after a parachute operation.
[29] Ibid.
[30] Ibid., pp. 1, 105-106.
[31] Mersky, 1983, p. 124.
[32] Rawlins, 1976, p. 14, notes that the Board also directed the parallel establishment of a program to develop the transport seaplane.

doctrine for helicopter employment, and it needed to remedy the fact that existing helicopters were primitive. General Vandegrift directed the Marine Corps Schools (MCS) to "submit a tentative doctrine for helicopter employment."[33] The Board submitted a request to the most accomplished helicopter developers of the time - Igor I. Sikorsky and Frank Piasecki - for an aircraft capable of carrying a 5,000-pound payload at altitudes of 4,000-15,000-feet for 200-300 miles.[34] Budget constraints in 1947 severely limited the ability of the Corps to establish a robust helicopter program,[35] but the 1949 Navy budget allocated funds for a helicopter designed by Piasecki called the HRP.[36] By 1951, the Marines would also receive the Sikorsky-designed HO3S-1.[37] More importantly, the Marines established an experimental helicopter program to test emerging doctrine called the Marine Helicopter Squadron 1 (HMX-1) in December 1947.[38] HMX-1's primary mission was to test the tactics, techniques, and procedures of the ship-to-shore movement of Marine assault forces in amphibious operations.[39]

Senior Marine Corps leaders recognized that the atom bomb posed a major threat to the execution of traditional amphibious operations because the movement of Marines on the water's surface rendered those Marines especially vulnerable. Movement by helicopter provided a solution. The logic was as follows. An amphibious operation required the ship-to-shore movement of Marines at a particular location on a beachhead. The mass of Marines and the dozens of destroyers, cruisers, and landing craft supporting them - all oriented on the beachhead location -

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[33] Rawlins, 1976, p. 14.

[34] Mersky, 1983, pp. 124-125.

[35] According to Rawlins, 1976, p. 15, the Chief of Naval Officer's Air Planning Group concluded that it was "impracticable to set aside funds in the budget years 1947 and 1948 for the procurement of helicopters for the Marine Corps…"

[36] Mersky, 1983, p. 125.

[37] Rawlins, 1976, p. 105. According to Brown, 2007, p. 666, the HO3S-1 only had a range of 80 miles and a payload lift capability of 1,000 pounds. While this was way below the Shepherd Board's desired specifications, it was a critical first step in the progression of the helicopter.

[38] Brown, 2007, p. 666.

[39] Brown, 2007, p. 666.

rendered Marine units vulnerable to an atomic attack. While a helicopter insertion would still be vulnerable, the Marines believed that a vertical envelopment would enable the insertion of Marine units at a variety of dispersed, *inland* locations simultaneously. In theory, a successful atomic attack on numerous, dispersed units on land would be less likely than one atomic attack on a concentrated group of Marines and landing craft on a beachhead. Before the Corps could fully develop a comprehensive doctrine to support the burgeoning concept, its very own organizational survival was at stake in the political battle over military unification.

5.1.1.3. The Battle Over Military Unification, 1946-1952

While the Marine Corps reacted to the atomic explosions that ended World War II, an intense political battle over military unification presented a real threat to the Marine Corps' existence. Concerns regarding organizational survival had an important effect on the Corps' adoption of the vertical envelopment doctrine. Military unification was the reorganization of the military into three, distinct branches - the Army, Navy, and Air Force - each represented by a chief and under the direction of a single Chief of Staff and a civilian Secretary. As early as 1944, Marine Corps Commandant Lieutenant General Vandegrift expressed his concern that a military unification effort that viewed the services "on the basis of separate air, separate sea, and separate ground forces" would lead to calls for the abolition of the Corps.[40] The Army claimed that the Corps encroached on its wartime jurisdiction during World War II, and it sought to prevent that from happening in the future by either dissolving the Corps or absorbing it.[41] Sensitive to the post-war interest in reducing the size of the military, the Army argued that the Corps was duplicating

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[40] "The Marine Corps - An Essential, Integral Element of the Naval Service," Statement of Lieutenant General A. A. Vandegrift, U.S.M.C., Commandant of the Marine Corps, House Select Committee on Post-War Policy, May 11, 1994, p. 12. Found in Vandegrift Box 17 Re: unification – "Personal Papers, Alexander Vandegrift Collection COLL/3166, Box 17, Row 5, Sec E, Shelf 2, Box 6, Marine Corps Archives, Quantico, Virginia.

[41] Demetrios Caraley, *The Politics of Military Unification: A Study of Conflict and the Policy Process* (New York: Columbia University Press, 1966), p. 69.

the Army's effort. The Army was very uncomfortable with the Marines role as a second land

army.[42]

While the House of Representatives and the Senate worked through three, different

unification bills in 1947, elements of a secret session of the Joint Chiefs of Staff leaked to the

public.[43] A collection of papers entitled the Series 1478 Joint Chiefs of Staff (JCS) papers

(specifically Papers 10 and 11)[44] - provided strong evidence of the Army's desire to eliminate or

absorb the Marine Corps. Though the JCS papers are no longer accessible, the most critical

elements are found in a House report from the 80th Congress in July 1947.[45] The report cites a

memorandum by the Army Chief of Staff, General Dwight Eisenhower, dated May 16, 1946, in

which Eisenhower proposed that the Corps be "maintained solely as an adjunct of the [Navy] fleet"

to operate only "in minor shore combat operations in which the Navy alone is interested."[46]

Eisenhower made the case for Army responsibility for "major amphibious operations in the

future," and argued that the Corps should be capped at "50,000 or 60,000 men."[47] The

commanding general of the Army Air Forces (not yet a separate service), General Carl Spaatz,

concurred with Eisenhower, proposing that the Corps should be reduced in size to "no larger than

a regiment, to project United States interests ashore in foreign countries and to provide interior

guard of naval ships and naval shore establishments."[48] In response, the head of the Navy, Admiral

Chester Nimitz, noted that he viewed the 1478 papers as "a proposal on the part of the Army (a)

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[42] Ironically, the Marine Corps was also uncomfortable with this "second land army characterization because they knew that, if true, the duplication of effort would lead to the Marine Corps' demise. Also, the Army was already troubled by the loss of its air force that occurred with the establishment of a separate, independent Air Force.

[43] Richard Tregaskis, "The Marine Corps Fights for its Life," *Saturday Evening Post*, February 5, 1949, found in Studies and Reports, Box 57, Marine Corps Archives, Quantico, Virginia.

[44] Caraley, 1966, p. 69.

[45] House Report Number 961, Union Calendar No. 499, "National Security Act of 1947," 80th Congress, 1st Session (1947), pp. 12-14. Caraley, 1966, p. 69, quotes this report but I drew directly from the House report, itself.

[46] Ibid., p. 13.

[47] Ibid., pp. 13-14.

[48] H. Rep. No: 961, p. 13.

to eliminate the Marine Corps as an effective combat element, reducing it to the status of a naval police unit with possibly certain ancillary service functions…(b) to abolish an essential component of naval aviation which operates from coastal and island shore bases."[49]

Historically attuned to public opinion and the Congress,[50] the Marine Corps fought back[51] through multiple iterations of testimony to Congress between 1945 and 1947.[52] The Corps repeatedly made the case that the National Security Act include a specification of Marine Corps roles and responsibilities. In an oral presentation to President Truman, General Vandegrift expressed concern over proposals to limit the Marine Corps to "'Ranger type battalions", shore parties, signal detachments and to provisions of crews for landing craft."[53] He wanted the National Security Act to "expressly state the roles and missions which the Corps [was] expected to perform."[54] The Corps felt that in the absence of a clear specification of its authorized functions, other services would "reduce it to a role of military impotence."[55] Though the Secretary of the Navy supported the Marine Corps in this endeavor, his support was half-hearted when compared

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[49] H. Rep. No: 961, p. 13. In testimony, General Eisenhower denied any interest in eliminating the Marine Corps. See Tregaskis, 1949, p. 104.

[50] Austin Long, "The Marine Corps: Sticking to Its Guns," in Harvey M. Sapolsky, Benjamin H. Friedman, and Brendan Rittenhouse Green, eds., *US Military Innovation Since the Cold War: Creation Without Destruction* (New York: Routledge, 2009), p. 120.

[51] Marine Corps Commandant General Vandegrift noted, "The bended knee is not a tradition of our Corps. If the Marine as a fighting man has not made a case for himself after 170 years of service, he must go. But I think you will agree with me that he has earned the right to depart with dignity and honor, not by subjugation to the status of uselessness and servility planned for him by the [Army's] War Department." See: Caraley, 1966, p 135; Tregaskis, 1949, p. 21; Frank Marutollo, *Organizational Behavior in the Marine Corps: Three Interpretations* (Westport, CT: Praeger Publishers, 1990), p. 72.

[52] For a more detailed chronology of military unification and the Marine Corps, see Marutollo, 1990, pp. 70-85 and Caraley, 1966.

[53] "Brief of Oral Presentation to President Truman, Re: Necessity for including an assignment of roles and functions in unification legislation," 9 December 1946, Vandegrift Box 17 Re: unification – "Personal Papers, Alexander Vandegrift Collection COLL/3166, Box 17, Row 5, Sec E, Shelf 2, Box 6, Marine Corps Archives, Quantico, Virginia.

[54] "Statement of General A. A. Vandegrift, Commandant of the Marine Corps, before the Senate Armed Services Committee on S. 758, the National Security Act of 1947," Vandegrift Box 17 Re: unification – "Personal Papers, Alexander Vandegrift Collection COLL/3166, Box 17, Row 5, Sec E, Shelf 2, Box 6, Marine Corps Archives, Quantico, Virginia.

[55] Ibid., Statement.

to the Navy's top priority which was to protect naval, fixed-wing aviation in the face of the establishment of an independent air force.[56]

After the Corps' resistance, President Truman directed that the secretaries of the Army and the Navy meet to resolve their differences. The joint agreement between the civilian secretaries of the Army and the Navy became the National Security Act of 1947.[57] The specification of roles and responsibilities in the Act satisfied the Corps because it made clear that the Marines retained jurisdiction over the amphibious operations mission. However, even after the Act's passage, the Army and the Air Force still took measures to reduce the influence of the Corps in future combat. The Army proposed that the Corps only conduct amphibious operations "in attacks on small islands," and it sought to place a cap on the maximum authorized size of the Corps.[58] In October 1949, the new Commandant of the Marine Corps, General Clifton B. Cates, testified before the House Armed Services Committee that "the Marine Corps believes that the Army General Staff is actively pursuing the three original objectives which it advanced in 1946 as the price of survival of the Marine Corps: that the Marine Corps be reduced in size and effectiveness…excluded from amphibious operations…[and] denied the right to mobilize its strength in time of war."[59]

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[56] Marutollo, 1990, p. 70.

[57] The section pertaining to the Corps read: "The Marine Corps shall be organized, trained, and equipped to provide fleet marine forces of combined arms, together with supporting air components, for service with the fleet in the seizure or defense of advanced naval bases and for the conduct of such land operations as may be essential to the prosecution of a naval campaign. It shall be the duty of the Marine Corps to develop…those phases of amphibious operations which pertain to the tactics, technique and equipment employed by landing forces," as quoted in Marutollo, 1990, p. 70.

[58] Tregaskis, 1949, p. 106.

[59] "Summary of the Marine Corps' Position: Essential Elements of Testimony of General Clifton B. Cates, Commandant U.S. Marine Corps Before the House Armed Services Committee, 17 October 1949," Vandegrift Box 17 Re: unification – "Personal Papers, Alexander Vandegrift Collection COLL/3166, Box 17, Row 5, Sec E, Shelf 2, Box 6, Marine Corps Archives, Quantico, Virginia.

The National Security Act was amended twice - once on August 10, 1949 and again on June 28th, 1952.[60] In its final form, the Act specified the roles and responsibilities of the Marine Corps and locked-in the Corps minimum size. It read "The Marine Corps, within the Department of the Navy, shall be so organized as to include not less than three combat divisions and three air wings…"[61] At the end of the long legislative process, the Corps got what it wanted - affirmation of its roles and missions and the protection of its survival through the establishment of a minimum force structure requirement.[62]

5.1.1.4. Vertical Envelopment Doctrine, Phib-31, and Landing Force Bulletin 17

While the Marine Corps fought for its survival, it paid close attention to another three nuclear weapons tests. Between 1948-1951, Operation Sandstone at Enewetak in 1948, Operation Ranger in Nevada in early 1951, and Operation Greenhouse on three different islands in the Pacific in the spring of 1951, reinforced the lessons General Geiger drew from the Bikini Atoll test.[63] In 1951, the Corps established a Landing Force Tactics and Techniques Board at Marine Corps Schools to study the employment of assault helicopters. The board developed an amphibious operations concept based on the employment of assault helicopters that would eventually become known as vertical envelopment. According to the Board's initial report, the concept enabled "protection against mass-destruction weapons by dispersion of forces [and] emphasis on tactical

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[60] "Proposals for Reorganization of Armed Forces, 1921-1952," Vandegrift Box 17 Re: unification – "Personal Papers, Alexander Vandegrift Collection COLL/3166, Box 17, Row 5, Sec E, Shelf 2, Box 6, Marine Corps Archives, Quantico, Virginia.

[61] Thomas G. Roe, Ernest H. Giust, John H. Johnstone, and Benis M. Frank, "A History of Marine Corps Roles and Missions, 1775-1962," *Marine Corps Historical Reference Series, Number 30*, Historical Branch, G-3 Division, Headquarters, U.S. Marine Corps, Washington, D.C., 1962, p. 1.

[62] See memo from Commandant of the Marine Corps to All General Officers, Subject: Public Law 416 (S.677), 5 July 1952, Vandegrift Box 17 Re: unification – "Personal Papers, Alexander Vandegrift Collection COLL/3166, Box 17, Row 5, Sec E, Shelf 2, Box 6, Marine Corps Archives, Quantico, Virginia.

[63] Operation Greenhouse Fact Sheet, George Austin (COLL/5482) A/5/H/7/1 (Box 1), p. 1, Marine Corps Archives, Quantico, Virginia.

surprise, featuring a vertical envelopment by helicopter in ultimate conjunction with dispersed assaults capable of rapidly penetrating selected points in the beach defenses."[64]

The establishment of the vertical envelopment doctrine was not an instance whereby the existence of a military technology drove a military organization to develop a method of fighting to maximize the use of that technology. Rather, the Marine Corps developed the doctrine before helicopter technology was close to what would be required to employ the doctrine. A February 1951 report from the Landing Force Board noted, "…the number and type of helicopters available to the Marine Corps and the number and type of carriers available to lift the helicopter assault force limit the size of the helicopter-borne troop unit to a regimental landing team. With the delivery of newer improved types of helicopters and with an increase in the number of carriers, the lift capability can be expanded to increase the size of the troop unit to at least a division."[65] The core elements of the vertical envelopment doctrine exceeded the capability of the technology available. The creation of the doctrine was the driving force behind the development of the helicopter technologies needed to support that doctrine.

In 1947 and 1948, two Marine Corps boards led by Colonel Robert E. Hogaboom - the "Hogaboom Board" and the "Helicopter and Transport Seaplane Board" - developed the helicopter capabilities necessary for the new doctrine and the doctrine itself.[66] The boards were informed by a major training event in May 1948 known as Packard II conducted by HMX-1.[67] Though the

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[64] Landing Force Tactics and Techniques Board, Marine Corps Landing Force Development Center, Marine Corps Schools, Quantico, Virginia – "Study on Employment of Assault Transport Helicopters," 5 January, 1951, p.1, Box 10 Tactics and Techniques Board: Unnumbered Projects, 1951-1955: multiple studies on helicopters B/14/H/7/4, Marine Corps Archives, Quantico, Virginia.

[65] Landing Force Tactics and Techniques Board, Marine Corps Landing Force Development Center, Marine Corps Schools, Quantico, Virginia – "Study of the Employment of Marine Helicopter Squadrons in Amphibious Operations," February 1952, p. 2, Box 10 Tactics and Techniques Board: Unnumbered Projects, 1951-1955: multiple studies on helicopters B/14/H/7/4, Marine Corps Archives, Quantico, Virginia.

[66] Mersky, 1983, p. 125; Rawlins, 1976, p. 26; Brown, 2007, p. 668.

[67] Mersky, 1983, p. 125.

training event was limited by the low payload of existing helicopters and the lack of enough helicopters, Packard II consisted of an actual ship-to-shore movement of Marines in conjunction with a broader overall attack plan.[68] By November 1948, the Marines published a formal doctrinal manual named, *Amphibious Operations - Employment of Helicopters (Tentative)* - hereafter, *Phib-31*.[69] The manual noted, "The helicopter…possesses certain distinctive characteristics which, if exploited can enhance greatly the speed and flexibility of the amphibious assault, while at the same time permitting a desirable increase in the dispersion of the attacking naval forces."[70] It went on, "The ability of the helicopter to rise and descend vertically, to hover, and to move rapidly at varying altitudes all qualify it admirably as a supplement or substitute for the slower, more inflexible craft now employed in the ship-to-shore movement."[71]

Phib-31 included a detailed description of the phases of a vertical envelopment operation, the landing schedule by helicopter group, landing diagrams, and the fire and logistical support necessary for the operation. The manual was ambitious because the existing helicopters - the HRP-1 and the HO3S-1 - were not yet capable of executing some of the operations prescribed. The doctrine writers were cognizant of this fact, but they deliberately prevented technological limitations from impeding innovative doctrinal concepts.[72] *Phib-31* was the first doctrine of any service to focus on the critical elements of an assault by helicopter. The Army copied many of the

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[68] Rawlins, 1976, p. 25. The author notes that Lieutenant Colonel Victor H. Krulak - a future Marine Corps Commandant - stated that "the most important objective of the Packard II helicopter element was *to create a state of mind* among students, instructors, the Navy and observers, as to the dramatic tactical horizons of the helicopter."

[69] *PHIB-31 Amphibious Operations Employment of Helicopters, Tentative* (Quantico, Virginia: Marine Corps Schools, 1947). This doctrinal manual was the 31st in a series of Marine Corps publications on amphibious operations. In 1947, the manual was produced in mimeograph form; in 1948, it was printed for use throughout the Corps.

[70] Ibid., p. 1.

[71] *PHIB-31*, 1947, p. 1.

[72] Rawlins, 1976, p. 26, notes that General Krulak acknowledged this years after PHIB-31's publication.

elements of the doctrine in its own doctrinal manuals in the decades following the publication of *Phib-31*.[73]

The Marine Corps' helicopter program and its supporting doctrine accelerated during the Korean War and culminated in the historic, first-ever airmobile operation in Korea in in September 1951.[74] During the first year of the war, Marines in the 1st Provisional Marine Brigade under the command of Brigadier General Edward A. Craig, employed helicopters for "liaison, reconnaissance, evacuation of wounded, rescue of Marine flyers downed in enemy territory, observation, messenger service, guard mail at sea, posting and supply of outwards on dominating terrain features and resupplying of small units by air."[75] The first execution of a vertical envelopment operation did not occur until September 20, 1951, when the Marine Transport Helicopter Squadron (HMR) 161 conducted Operation Summit - an operation in which 10 Sikorsky helicopters transported 224 Marines and 17,772 pounds of supplies for an assault on Hill 884 near Haean, Korea.[76]

While Marines fought in Korea, back at Quantico the Development Center conducted a Marine Corps Atomic Warfare conference to "examine the effects of tactical atomic weapons on the tactics and techniques now in use by the Marine Corps and to determine what changes should be made."[77] Acknowledging likely future Soviet possession of tactical nuclear weapons,[78] the

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[73] Rawlins, 1976, p. 26, unnumbered footnote.

[74] Doughty, 1979, p. 4.

[75] Rawlins, 1976, p. 43. Quote was made by Brigadier General Craig, found in: Special Action Report, 1st Prov. Marine Brigade, 1950, extract in LtGen Edward A. Craig letter to History and Museums Division, dated 7Apr75. Comment file "Developmental History of the Helicopter in the USMC 1946-1972."

[76] Otto Kreisher, "The Rise of the Helicopter During the Korean War," 16 January 2011, accessed at *HistoryNet* online: http://www.historynet.com/the-rise-of-the-helicopter-during-the-korean-war.htm. Haean was nicknamed The Punchbowl by UN forces during the Korean War. Also, see Speech Kit, 1953, p. 11, in Wilburt Brown Box 3, folder 3-4: correspondence re: Marine Corp Provisional Atomic Exercise Brigade, Marine Corps Archives, Quantico, Virginia.

[77] "First Marine Corps Atomic Warfare Conference: Tactics and Techniques Seminar, 5 December 1951," Studies and Reports Box 256, Marine Corps Archives, Quantico, Virginia.

[78] Though it is clear now that the Soviet Union did not possess tactical nuclear weapons in 1951, the Marine report thought it was "fact" that "possible enemy powers have a tactical atomic weapon capability," p. 1.

conference concluded that the Corps needed increased firepower (artillery, air support, and naval gunfire), increased armor (in the form of more tanks available for a landing force), increased mobility (using helicopter lift), and better methods of protective cover (to stop the effects of radiation).[79] Notably, the conference report called for the employment of tactical nuclear weapons under the control of the tactical commander during the landing phase of an amphibious operation. The Marines activated a unit responsible for conducting testing with tactical nuclear weapons called the 2d Marine Corps Provisional Atomic Exercise Brigade (MCPAEB) in February 1953. The MCPAEB executed a training exercise called Desert Rock V in Nevada that involved the detonation of a nuclear explosion followed by the helicopter delivery of a Marine assault force conducting a simulated amphibious assault.[80] Newspaper reports claimed that the Marines deployed to foxholes that were less than 4,000-yards from the atomic blast.[81] By 1955, the Marine Corps developed a plan to use 762-mm rockets (known as Honest John rockets) to deliver atomic munitions on a tactical battlefield.[82]

On December 13, 1955, the Chief of Naval Operations, Admiral Arleigh A. Burke, approved the Marine Corps concept for conducting amphibious operations through vertical envelopment from ship-based helicopters.[83] Marine Corps Schools codified the vertical envelopment concept in a formal doctrinal manual entitled, *Landing Force Bulletin Number 17*

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[79] Ibid - Atomic Warfare Conference. The report also called for mobile logistic support, new types of shipping, and improved command and control techniques.

[80] Memorandum, "Activation of 2d Marine Corps Provisional Atomic Exercise Brigade (MCPAEB)," 27 February 1953, Exercises Box 62: Desert Rock, 1953, Marine Corps Archives, Quantico, Virginia.

[81] "Copters Take Marines Into A-Blast Area," *Times-Herald*, April 19, 1953; "Leathernecks Will Close in on Atomic Blast," *Times-Herald*, April 18, 1953; "Marines Set to Engage in New Atomic Test," *The New York Times*, April 18, 1953. All articles can be found in Wilburt Brown Box 5, Folder 3-4: Desert Rock V, 1953 (Personal Papers, Wilburt S. Brown Collection, COLL/702, Box 5; Row 14, Sec D, Shelf 1, Box 5), Marine Corps Archives, Quantico, Virginia.

[82] For details, see HAF 692 Introduction into the Fleet Marine Force of Additional Capabilities for Delivery of Atomic Munitions (14 September 1955), Marine Corps Archives, Quantico, Virginia. These rockets were also in the Army's inventory.

[83] Rawlins, 1976, p. 65.

(LFB-17).[84] LFB-17 focused on the "employment, with or without nuclear support, of integrated Marine landing forces of ground and supporting air components, organized, trained, and equipped to exploit the speed and flexibility of the helicopter, for the projection of seapower deep ashore at any point on the world littoral without the necessity of direct assault on the intervening shoreline."[85] Vertical envelopment's primary goal was the ship-to-shore movement of Marine assault forces by helicopter to seize dispersed inland objectives. Similar to the Army's dual capability concept,[86] the Marine Corps vertical envelopment doctrine envisioned the execution of amphibious attack operations "under conditions of nuclear or non-nuclear warfare."[87] In nuclear warfare, the Marines intended to disperse forces widely and use their own tactical nuclear weapons to defeat enemy aircraft. In non-nuclear warfare, wide dispersion was no longer necessary; Marines would use their own conventional weapons to provide the firepower necessary to support a helicopter assault. The Corps was so committed to the vertical envelopment concept that LFB-17 noted that once new helicopters attained a greater load capacity, the Corps would completely jettison amphibious operations by beach assault.[88]

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[84] According to Rawlins, 1976, p. 66, two other manuals - *Landing Force Bulletin Number 2* ("Interim Doctrine for the Conduct of Tactical Atomic Warfare") and *Landing Force Manual 24* ("Helicopter Operations") - complemented *Landing Force Bulletin 17*. For the "Interim Doctrine," see HAF 442 "Interim Doctrine for the Conduct of Tactical Atomic Warfare [LFB-2] (1955)," Marine Corps Archives, Quantico, Virginia. Rawlins (p. 66) notes that the first time the phrase "vertical envelopment" appeared in an official Marine Corps publication was in LFB-17.

[85] HAF 453 Concept of Future Amphibious Operations Landing Force Bulletin [LFB-17] (1955), Marine Corps Archives, Quantico, Virginia, p. 1. This concept spawned the Marine Air-Ground Task Force (MAGTF) that is used by the Corps today.

[86] Andrew J. Bacevich, *The Pentomic Era: The U.S. Army Between Korea and Vietnam* (Washington: National Defense University Press, 1986), pp. 136-142.

[87] LFB-17, p. 1.

[88] Ibid., p. 4.

5.1.1.5. Understanding the Sources of the Vertical Envelopment Doctrine

Environmental Shifts

The atomic explosions that ended World War II and the nuclear weapons tests that occurred between 1946 and 1951 - Operations Crossroads, Sandstone, Ranger, and Greenhouse - were the catalysts that drove senior leaders in the Marine Corps to reevaluate their conception of amphibious operations. In the immediate postwar period, a Marine staff study noted, "a single atomic explosion during a ship-to-shore movement such as at Iwo Jima would have destroyed the combat effectiveness of two divisions, inflicting at a single blow casualties many times those actually experienced during the entire campaign."[89] The massing of ships and Marines in traditional amphibious operations was a major vulnerability when facing an enemy with nuclear weapons capability. The Corps recognized this issue as early as 1946 and it was the single biggest factor that influenced the vertical envelopment doctrine that was first employed in the Korean War.

The Marine Corps was cognizant that the United States' most likely next adversary - the Soviet Union - was expanding its own nuclear capability. After witnessing the Bikini Atoll nuclear tests, General Geiger stated, "since our probable future enemy will be in possession of this weapon, it is my opinion that complete review and study of our concept of amphibious operations will have to be made." While Geiger did not think that nuclear weapons had changed the principles of warfare, he believed that nuclear weapons would demand a fundamental change in the methods by which Marines conducted amphibious operations.[90] A Marine Lieutenant who collected General

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[89] Press Booklet, Desert Rock V [2 of 2], Folder - Series 5, 5/4, Wilburt Brown Box 5, Folder 3-4: Desert Rock V, 1953 (Personal Papers, Wilburt S. Brown Collection, COLL/702, Box 5; Row 14, Sec D, Shelf 1, Box 5), p. 2, Marine Corps Archives, Quantico, Virginia.
[90] Hodgson, 1946, pp. 22-23.

Geiger's observations at Bikini Atoll in 1946, noted that the General believed that amphibious operations as they were conducted in World War II needed to be completely overhauled.[91]

Role of Civilians

Besides the limited involvement of Secretary James V. Forrestal - Secretary of the Navy from 1944-1947 and the first Secretary of Defense from 1947-1949 - civilian elites played no role in the Marine Corps' reevaluation of its theory of victory and eventual development of the vertical envelopment doctrine. While Forrestal's main priority was to preserve naval aviation in the face of the establishment of an independent Air Force, Forrestal did express Marine Corps concerns regarding attempts by the Army and the Air Force to use military unification to relegate the Marines to a minor role in future combat. However, while Secretary Forrestal worked with the Secretary of the Army to resolve the two service's differences,[92] Marine leaders felt like they were not being consulted often enough and they were suspicious regarding whether or not the Navy intended to fight for the Corps' survival.[93]

There is no evidence that civilian elites with oversight of the Marine Corps played a role in the vertical envelopment doctrinal innovation. Other than having to overcome budget constraints to pursue the helicopter program, the Marines were not constrained by civilian elites with respect to the development of the new doctrine. Military elites in the Marine Corps drove the doctrinal innovation. The Advanced Research Group (ARG) - a collection of senior officers in the rank of Colonel whose purpose was to conduct research and development "for the purpose of achieving solutions to certain of the Marine Corps' basic problems"[94] - had the most significant

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[91] Hodgson, 1946, p. 23.

[92] Letter from President Truman to Secretaries Patterson and Forrestal, June 15, 1946, Vandegrift Box 17 Re: unification – "Personal Papers, Alexander Vandegrift Collection COLL/3166, Box 17, Row 5, Sec E, Shelf 2, Box 6, Marine Corps Archives, Quantico, Virginia.

[93] Marutollo, 1990, p .76.

[94] Memorandum on "Marine Corps Advanced Research Group," January 19, 1953, Studies and Reports Box 244 re: Advanced Research Group, 1953-1957, Marine Corps Archives, Quantico, Virginia.

influence on the development of the new doctrine. In numerous reports to the Marine Corps Commandant from 1953-1957, the ARG analyzed concepts related to the execution of future amphibious operations. The ARG advanced the concept of vertical envelopment and provided Marine senior leaders with analysis on the employment of tactical nuclear weapons in future operations.

Interservice Rivalry

One cannot overstate the role of interservice competition in the Marine vertical envelopment doctrinal innovation. Given that the Marine Corps preserved its survival in the interwar period in part by establishing jurisdiction over amphibious warfare,[95] any shock that threatened the amphibious mission also threatened the organization's continued existence. Nuclear weapons threatened the amphibious mission and the Corps' existence. In fact, a review of correspondence between Marine leaders in the mid- to late-1940s indicates that those leaders were more concerned with the threat to survival than they were with the threat of Soviet employment of tactual nuclear weapons on a future battlefield.

Friction between the Army and the Marine Corps carried over from World War II when the Army resisted the establishment of the I and V Marine Amphibious Corps.[96] Army leaders resented the steep increase in the size of the Corps during the war and the Marines encroachment on what the Army perceived to be its jurisdiction - ground combat. When a Marine commander relieved an Army General in the battle of Saipan, Army General George Marshall "declared that he would never again tolerate command of Army troops by Marine Officers, rejecting implicitly the whole principle of unity of command in the field."[97] Lieutenant General Robert C. Richardson, a senior

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[95] Murray and Millett, 1996, p. 75.
[96] Caraley, 1966, p. 67.
[97] Caraley, 1966, p. 68, quoting William Frye, *Marshall, Citizen Soldier* (New York: Bobbs-Merrill, 1947), pp. 348-350.

Army commander in the Pacific during the war, stated "You Marines are nothing but a bunch of beach-runners anyway. What do you know about land warfare?"[98] Another Army officer, General F. A. Armstrong, Jr., noted, "Now for the Marines you know what the Marines are, a small bitched-up army talking Navy lingo. We are going to put those Marines in the Regular Army and make efficient soldiers out of them."[99]

Action by the Army and the Air Force to relegate the Corps to a position of irrelevance in combat was the clear and present danger than occupied the minds of Marine leaders. The secret JCS papers were cited often by the Commandant, General Vandegrift, in testimony to Congress. In testimony before the Naval Affairs Committee in 1947 entitled "Army Designs on the Marine Corps," Vandegrift listed ten assertions made by the Army and the Air Force that were designed to "restrict the employment of the Marine Corps."[100] According to General Vandegrift, the Army asserted that the Corps was an unnecessary duplication of the Army's effort, and it proposed that the Corps only be permitted to "provide a limited number of commando type units."[101] The Army also claimed that it should "take over all phases of development, training and conduct of landing operations."[102] Admiral Nimitz of the Navy noted that the Army intended to "eliminate the Marine Corps as an effective combat element, reducing it to the status of a naval police unit…"[103] In General Vandegrift's personal papers, a paper cautioned that, "Since 1829, eight major attempts have been made either to abolish the Marine Corps outright, transferring its personnel to the Army,

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[98] Holland M. Smith and Percy Finch, *Coral and Brass* (New York: Scribner, 1948), p. 177. Also, quoted in Caraley, 1966, p. 68.

[99] Quoted in Caraley, 1966, p. 157 and Marutollo, 1990, p. 73.

[100] "Brief to Accompany Statement, by General Vandegrift, Before Naval Affairs Committee," 1946, Vandegrift Box 17 Re: unification – "Personal Papers, Alexander Vandegrift Collection COLL/3166, Box 17, Row 5, Sec E, Shelf 2, Box 6, Marine Corps Archives, Quantico, Virginia.

[101] Ibid, p. 1.

[102] Ibid.

[103] H. Rep. No: 961, p. 13. In testimony, General Eisenhower denied any interest in eliminating the Marine Corps. See Tregaskis, 1949, p. 104.

or to modify the duties and structure of the Corps to such an extent that it would fall easy prey to eventual destruction."[104] The Corps established the Edson/Thomas Board to "protect the Marine Corps's interest in the proposed unification bill."[105]

Organizational survival concerns during the Marines fight over unification were so powerful that they incentivized Marine leaders to improve their political skills. Marine leaders proved adept at influencing members of Congress to support Marine interests. The codification of the Corps' minimum size was tremendously important in the Marines fight for survival. The Marines remain the only service in the U.S military to have a minimum size and organizational structure codified in law.

Intraservice Rivalry and Organizational Culture

While interservice rivalry (and the threat of organizational extinction) played a major role in the Marines doctrinal innovation, there is no evidence that intraservice rivalry or organizational culture played a role. There was some mild resistance to the vertical envelopment doctrine amongst Marine aviators who "wanted to fly sleek jets and dogfight enemy aces, not manhandle temperamental aircraft to deliver troops and supplies…"[106] However, the primary Marine Corps cultural attributes - versatility, adaptability, and the warrior spirit - aligned with vertical envelopment because the new doctrine was still offensive and infantry-centric.

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[104] "Previous Attempts to Abolish or Radically Modify the Marine Corps," 1946, Vandegrift Box 17 Re: unification – "Personal Papers, Alexander Vandegrift Collection COLL/3166, Box 17, Row 5, Sec E, Shelf 2, Box 6, Marine Corps Archives, Quantico, Virginia.

[105] Marutollo, 1990, pp. 76-77. The group of officers in the Edson/Thomas Board became known as "Chowder," after a comic strip called "Barnaby."

[106] Brown, 2007, p. 668.

5.1.1.6. Conclusion

Like the Army, in the post-World War II period, Marine planners assumed that the next battle would be against the Soviet Union.[107]   While the Corps was confident that the amphibious operations mission would still be relevant in a nuclear world, other senior military leaders disagreed. The first Chairman of the Joint Chiefs of Staff after the passage of the 1947 National Security Act, General Omar Bradley (U.S. Army), told the House Armed Services Committee that "amphibious operations were a dead letter…there would never again be another major amphibious assault."[108]   The Corps perceived the cost of not changing its doctrine to be organizational extinction.[109] If it could not figure out how to conduct an amphibious operation on an atomic battlefield, then arguments to disband or absorb the Corps would be strengthened. After enduring the fight of its life in the battle for military unification, the Corps preserved the amphibious operations mission by innovating doctrinally to develop vertical envelopment.

Vertical envelopment was based on the assumption that the dispersion[110] of Marines inland through insertion by carrier helicopter would render Marine units less vulnerable to tactical nuclear weapons than would a beachhead attack from aboard landing crafts. The board charged with determining how the Corps should respond to atomic weapons concluded that dispersion of forces was the most critical characteristic necessary for effective operations.[111]   In theory, helicopter

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[107] A 1956 Marine report noted, "the latent communist objective of world conquest had been revived as one of the major long term goals of the Soviet Bloc." See: "Advanced Research Group - Project II: Strategic Readiness," 1956-1957, p. 3, Studies and Reports Box 245 re: Advanced Research Group, 1953-1957, Studies and Reports Box 244 re: Advanced Research Group, 1953-1957, Marine Corps Archives, Quantico, Virginia.

[108] Simmons, 2003, p. 194.

[109] More direct costs to the Corps included the research and development necessary to increase the capability of existing helicopters, and the procurement of those helicopters for the Corps at large. In 1947, the Corps estimated that it needed "ten helicopter aircraft carriers and 240 helicopters, each capable of lifting a squad." This request greatly exceeded the helicopter capability at the time. See Simmons, 2003, p. 194.

[110] The Army also concluded that dispersion was critical, but in order to achieve that effect, the Army had to completely redesign the traditional division structure into the pentomic structure. Other than the expansion of Marine aviation to support the aerial movement of personnel in a vertical envelopment operation, the Marine Corps did not have to innovate with respect to organizational structure.

[111] Simmons, 2003, p. 194.

insertion would maximize dispersion because helicopters could deliver Marines to the battlefield to numerous landing zones.

In hindsight, it is not evident that the vertical envelopment doctrine would have succeeded in the face of a Soviet tactical nuclear weapons attack. While inland helicopter insertions to multiple, separate landing zones would indeed result in greater dispersion of Marines than would a standard ship-to-shore amphibious landing, helicopters still would have been vulnerable to tactical nuclear weapons. As we saw in the case of the Army's pentomic structure and doctrine, it is not obvious than any reorganization scheme or innovative doctrine could have preserved the lives of Marines facing an adversary that employed hundreds of nuclear weapons. Regardless of the degree to which vertical envelopment enabled dispersion, it is unlikely that Marine units would have prevailed on a battlefield consisting of nuclear fallout from Soviet nuclear weapons or the Corps' own tactical nuclear weapons.

Unlike the Army which grudgingly acknowledged the transformative role of nuclear weapons, the Marine Corps quickly recognized that the advent of nuclear weapons presented a major disruption for its theory of victory in the post-World War II world.[112] The Marine Commandant and the Marine Corps schools moved promptly after the war to develop a new theory of victory to preserve the amphibious operations mission. Even when its own existence was threatened after World War II, the Army still had a monopoly on the ground combat mission. The Army only had to prove that ground combat was still relevant. The Marines, however, could not claim sole jurisdiction over any of the physical domains of war - land, sea, or air - given the existence of the Army, the Navy, and the newly independent Air Force. Instead, the Marine Corps

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[112] Besides amphibious operations, the small wars mission remained the other element of the Marine Corps arsenal but I did not find any evidence that small wars were a factor in the Marine Corps' theory of victory in the post-World War II period.

had to prove the relevance of a force that operated at the intersection of two physical domains - the sea and the land. Interestingly enough, the Corps did this by developing a doctrine that involved the insertion of Marines in the third domain - the air.

Civilian intervention to compel doctrinal change was not necessary in the Army's pentomic doctrine or the Marines' vertical envelopment doctrine. Military elites in each service initiated the innovation process first in the absence of civilian interference. Interservice competition is the most influential cause of both doctrines. When the introduction of a new military technology threatens the organizational survival of a service, that service will move quickly to preserve its dominance in its domain. The Army's case shows us that when doctrinal innovation is deemed necessary to maintain relevance in a particular domain, that service will innovate doctrinally even if doing so runs counter to the organization's cultural imperatives. Vertical envelopment was deemed so critical to the Corps' survival that the doctrine was published before the organization had the technological capability to employ the doctrine.

Unlike the pentomic structure which was short-lived, the Marine Corps retained the doctrine of vertical envelopment, and helicopter insertions remain a component of Corps doctrine today. The pentomic organizational structure was only relevant on an atomic battlefield. Vertical envelopment doctrine was applicable, in theory, to an atomic battlefield and a nonnuclear battlefield.

Vertical envelopment, though first employed by the Marines in the Korean War in 1951, would end up forming the basis for the Army's airmobile operations concept, used extensively throughout the Vietnam War. Though the Army had initially resisted the use of helicopters for offensive operations based on interservice competition with the Air Force after World War II, it eventually embraced helicopters, not for the purpose of fighting in an atomic war but for moving

soldiers quickly into areas deep in the Vietnam countryside. Marine doctrine on vertical envelopment formed the foundation for Army doctrine on airmobile operations.

5.1.2. Maneuver Warfare Doctrine

The development of the maneuver warfare doctrine that the Corps codified in its first-ever keystone doctrinal manual - *Fleet Marine Force Manual 1 (FMFM 1) Warfighting*[113] - occurred in response to two factors. First, in the 1970s and 1980s, the Corps sought a doctrine that would enable it to succeed in combat against a numerically superior and heavily armored Warsaw Pact force. With pressure from a civilian group of reformers outside of the military chain of command, the Corps developed a maneuver warfare doctrine for that purpose. Second, the Marine Corps viewed maneuver doctrine as a modification to its style of warfare and as an extension of, rather than a replacement for, its traditional amphibious mission. Maneuver warfare doctrine offered the Marine Corps a way to demonstrate its relevance during a time when many argued that the amphibious assault mission was no longer viable. As the analysis in this section will show, the Corps' attempt to reconcile maneuver doctrine with its amphibious assault tradition was a rationalization for a move that was necessary to preserve any role at all for the Corps.

5.1.2.1. Post-Vietnam War Period

The post-Vietnam War period was a difficult time for the Marine Corps. The end of the draft and the 1973 establishment of the All-Volunteer Force led to major recruiting challenges.[114] The Corps experienced problems related to morale, drug use, racism, desertion, and two notorious

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[113] *FMFM 1 Warfighting* (Washington, DC: Headquarters, Department of the Navy, United States Marine Corps, 1989).

[114] Long, 2009, p. 121, notes that the Corps was less affected by the All-Volunteer Force than the Army since the latter had a heavier reliance on the draft in World War II and Vietnam. However, the evidence that I found suggests the opposite. According to Martin Binkin and Jeffrey Record, "'A Few Good Men' in Search of a Beach," *Washington Post*, Nov 9, 1975, p. D-2, "the Marines were suffering higher rates of courts martial, AWOL, and desertion than the other three services combined…"

cases of abuse of recruits in basic training.[115] While the Army established the Strategic Assessment Group to review its experience in the Vietnam War after returning to the States, the Marine Corps established nothing comparable. Some Marine officers studied lessons learned from the war, but as an institution, the Corps deliberately avoided an immediate, comprehensive assessment of its performance.[116] Though the Corps entered Vietnam with a long history of intervention in small wars, any tactical victories that the Marines managed to achieve in Vietnam did not lead to success at the strategic level.

The Marines were the first service to return home to the States, and they did so absent any feeling of mission accomplishment. In World War II, the Corps achieved great renown for effective amphibious assaults. Even then, after the war the advent of nuclear weapons put the amphibious mission in great jeopardy, and caused the Marines to fight for their life in the battle over military unification. After Vietnam, the Corps returned home to an American public that was fed up with that war and the small-wars mission in general.[117] The U.S. shift in focus to the defense of NATO in Europe and the possibility of a combat engagement against the Soviet Union led many to question the Marine Corps' role. Though the 1952 Douglas-Mansfield Act (also known as the Marine Corps Bill), had established a minimum size requirement for the Marine Corps of "three combat divisions and three air wings…"[118], years of fighting on land during the Vietnam War had detached the Corps from its amphibious roots. Once again there were calls for the disestablishment or absorption of the Marine Corps.

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[115] Simmons, 2003, p. 259.

[116] Terry Terriff, "'Innovate or die': Organizational culture and the origins of maneuver warfare in the United States Marine Corps," *Journal of Strategic Studies* 29, no. 3 (June 2006): 485. The author cites the Marine Corps Commandant in 1971 - General Leonard F. Chapman - who noted, "we got defeated and thrown out, the best thing we can do is forget it." This quote is from Michael A. Hennessy, *Strategy in Vietnam: The Marines and Revolutionary Warfare in I Corps, 1965-72* (Westport, CT and London: Praeger, 1997), p. 181.

[117] Long, 2009, p. 121.

[118] Roe, Giust, Johnstone, and Frank, 1962, p. 1. The Marine Corps is the only service whose structure is codified in legislation.

5.1.2.2. The Marine Corps in the 1970s[119]

Neither of the Marine Corps' historical mission sets - amphibious operations or small wars - seemed relevant in the post-Vietnam world of the early 1970's. The primary concern of U.S. policymakers in the Nixon and Ford administrations was the defense of Europe.[120] The Soviet Union was the most likely adversary and few analysts saw a role for maritime operations or the advanced base mission.[121] While the Marine Corps possessed a robust aviation force with a well-honed and combat-proven ability to conduct vertical envelopment, most assumed that the Soviet air defense capability would render helicopters especially vulnerable in any attack on Warsaw Pact forces. The final combat operation involving the employment of Marine helicopters, which also happened to be the last American battle of the Vietnam War - the battle at Koh Tang - illustrated the vulnerability of the Corps' vertical envelopment doctrine.[122] While this doctrine preserved the Marine Corps' existence (and its amphibious operations mission) after World War II, the Corps' reliance on it was now seen as its Achilles heel. Additionally, by the end of the war, the Army was conducting airmobile operations at a much higher frequency than the Marines were conducting vertical envelopment operations.

The other services had an easier time transitioning back to their pre-Vietnam War domain. The Army focused on defending NATO in Europe - a mission which it codified in its 1976 FM 100-5 *Operations* manual with the doctrine of Active Defense. The Air Force returned to its focus on strategic air and the delivery of nuclear weapons, and its ranks were dominated by fighter pilots.

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[119] For a recent history of the Marine Corps after the Vietnam War, see Nathan R. Packard, *"The Marine Corps' Long March": Modernizing the Nation's Expeditionary Forces in the Aftermath of Vietnam, 1970-1991* (Ph.D. diss., Georgetown University, 2014). This section draws from Chapter 3 of Packard's work.

[120] Alan. R. Millett, *Semper Fidelis: The History of the United States Marine Corps* (New York: Free Press, 1980), p. 607.

[121] Packard, 2014, p. 168.

[122] For details on this final battle, see Ralph Wetterhahn, *The Last Battle: The Mayaguez Incident and the End of the Vietnam War* (New York: Carroll & Graf Publishers, Inc., 2001).

The Navy focused on strategic deterrence, naval presence, and sea control.[123] The Marine Corps, however, found itself without a distinct jurisdiction in the early 1970s.[124] High inflation in the 1970s put tremendous pressure on defense budgets, leading policymakers to search for ways to cut defense spending. Critics of the Corps emphasized Marine duplication of functions executed by the other services in the realms of infantry combat divisions, tactical aviation, and ships.[125]

The Corps spent the 1970s searching for a way to preserve the amphibious operations mission during a time when the military expected future warfare to involve heavy, mechanized forces conducting offensive and defensive operations in Europe. Military historian Alan Millett sums up the criticism of the Marine Corps in the 1970s as follows: "(1) U.S. military commitments outside Europe and its surrounding waters were highly unlikely; (2) Marine ground forces did not possess adequate tanks and antitank weapons for European and Mideast warfare; (3) Marine Corps fixed-wing aviation duplicated Air Force and Navy tactical air and starved the ground FMF [Fleet Marine Force] for funds and high-quality personnel; (4) the Corps's dependence on heavy-lift troop-carrying helicopters made its tactical mobility questionable on battlefields affected by bad weather and intense anti-air defenses; and (5) the Navy's diminished interest in gunfire support ships and amphibious lift should prevent the FMF from reaching the battlefield on time and then landing against serious opposition."[126]

Fortunately for the Corps, civilian officials in the chain of command recognized the inadequacies of existing Marine amphibious doctrine, but stopped short of calling for the Corps' demise. On February 5, 1975, Schlesinger noted that, "[Our] amphibious assault force…has not

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[123] Stansfield Turner, "Missions of the U.S. Navy," *Naval War College Review*, Vol. XXVI, no. 5, (Mar-Apr 1974): 2.
[124] Packard, 2014, pp. 164-165.
[125] Millett, 1980, p. 608.
[126] Ibid.

seen anything more demanding than essentially unopposed landings for over 20 years, and…would have grave difficulties in accomplishing the mission of over-the-beach and flanking operations in a high-threat environment."[127] However, Schlesinger went on to express support for "modernized amphibious forces," arguing that the "entire globe is not defended by sophisticated surface-to-air missiles and high-performance fighters."[128] At least in the direct chain of command, senior leaders supported the continued existence of the Marine Corps. However, the Defense Secretary's support notwithstanding, the Marine Corps saw its budget slashed with respect to the other services in 1976. Senators in the Armed Services Committee had effectively argued that the Corps not only lacked the capacity to defeat a Warsaw Pact armored threat, but also that it could not quickly respond to contingencies in the Middle East or Asia.[129]

Outside of government, two analysts at the Brookings Institution - Martin Binkin and Jeffrey Record - wrote critiques of the Corps that played a role in the Corps' eventual adoption of the maneuver doctrine.[130] In 1975, Binkin and Record argued that Marine amphibious operations in developing countries - the "Third World" - were unlikely given "dwindling prospects for direct large-scale U.S. military intervention" in those countries. Furthermore, the authors questioned the utility of Marine operations in "non-amphibious contingencies" such as Europe, given the heavily

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[127] *Report of Secretary of Defense James R. Schlesinger to the Congress on the FY 1976 and Transition Budgets, FY 1977 Authorization Request and FY 1976-1980 Defense Programs* (February 5, 1975), p. III-26. Also, cited in Geoffrey Till, *Maritime Strategy and the Nuclear Age* (London: MacMillan, 1982), p. 199.

[128] Ibid., p. III-26. Packard (2014) and Till (1982) leave out this portion of Schlesinger's testimony. I argue that it is critical because it demonstrates that Schlesinger still supported the existence of amphibious assault forces, even at a time when others argued for their disestablishment.

[129] Packard, 2014, p. 178. See also, "Lawmaker Moves to Study Future of Marine Corps," *The Washington Post*, October 23, 1979, p. A6.

[130] See Martin Binkin and Jeffrey Record, *Where Does the Marine Corps Go From Here?* (Washington: Brookings Institution, 1976); William S. Lind and Jeffrey Record, "Twilight for the Corps," *U.S. Naval Institute Proceedings*, 104 (July 1978): 39-43; Binkin and Record, "'A Few Good Men' in Search of a Beach: Where to for the Marines?" *The Washington Post*, November 9, 1975, pp. D1-D2.

armored nature of Warsaw Pact forces.[131] The authors' analysis, printed in a major, national newspaper, put enormous pressure on the Corps.

In 1976 in a book entitled, *Where Does the Marine Corps Go from Here?* Binkin and Record reinforced their claims and generated a series of recommendations for defense intellectuals with respect to the Marine Corps' future. The authors recommended the retention of one and one-third Marine divisions (and their associated air units), out of a total of three Marine divisions, for the express purpose of conducting amphibious operations Additionally, they argued for a reduction in Marine tactical aviation by eliminating all of the F-4 and A-6 squadrons, and for the disbandment of the Marine Amphibious Force (MAF) reserve.[132] The demobilization of the MAF would shrink the Corps from 196,000 personnel to 111,700 personnel.[133] The authors recognized that this would "transform the Corps from what is now essentially a separate service into an appendage of the Navy…"[134] The remaining one and two-thirds Marine divisions not assigned to the amphibious mission would either be disbanded, assigned to inland combat in Asia, assigned to replace the Army's 82nd Airborne Division as an airborne quick-reaction force, or assigned to Europe to join Army forces tasked with the defense of NATO.[135]

Binkin and Record questioned the necessity of the amphibious mission and the Marines' tactical aircraft program. The authors noted, "The USSR and the People's Republic of China, the two most prominent potential adversaries of the United States, are large comparatively autarkic continentals; while amphibious assaults along coasts controlled by either country cannot be ruled

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[131] Binkin and Record, 1975, p. D1.
[132] Binkin and Record, 1976, pp. 66-68.
[133] Ibid., p. 71.
[134] Ibid.
[135] Binkin and Record, 1976, pp. 68-86.

out, such operations could only marginally influence the outcome of conflict with either nation."[136]
The effectiveness of precision-guided munitions, as illustrated in the 1973 Arab-Israeli War, exposed the vulnerability of amphibious landing craft, transport helicopters, and naval forces supporting a Marine amphibious assault.[137] The Arab-Israeli War also illustrated the inadequacies of the Corps' doctrine in the face of a heavily armored and numerically superior Soviet force.[138] In regard to Marine aviation, the Corps viewed F-4 Phantom fighters as a critical element of an amphibious assault.[139] The F-4's enabled air superiority and provided close air support. Secretary of Defense Harold R. Brown, however, proposed a reduction in F-4 squadrons from twelve to nine.[140] In the midst of the struggle to preserve its fixed wing force, the Corps modified its close air support tactics based on lessons learned from observing the Egyptians' effective use of Soviet anti-air weapons in the Arab-Israeli War.[141]

5.1.2.3. The Northern Flank Mission and the Rapid Deployment Force (RDF)

In 1975, in response to pressure from Congress, the Marine Corps Commandant established the Haynes Board to "develop alternative force structures, concepts of employment, and disposition and deployment of Marine Corps forces through 1985."[142] The Board attempted to preserve the Marines capability to conduct amphibious assault while also "match[ing] its traditional missions to the current strategic context and secur[ing] a role for itself in the defense of

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[136] Binkin and Record, 1976, p. 31. Also, cited by Marutollo, 1990, p. 169, as an example of a "rationalist challenge" to the Marine Corps' existence. Also, see Marutollo, "Preserving the Marine Corps as a Separate Service," *Marine Corps Gazette* 72, no. 6 (June 1988): 70.

[137] Binkin and Record, 1976, p. 31.

[138] For lessons that the Marine Corps took from the 1973 Arab-Israeli War, see William C. Fite, "Some Lessons from the Israelis," *Marine Corps Gazette* (September 1980). I found this article in "Al Gray Box 40 (maneuver warfare)," Marine Corps Archives, Quantico, Virginia.

[139] Millett, 1980, p. 611.

[140] George C. Wilson, "Marines Fighting for Air; Brown's Budget Would Hold Down Planes, Focus on the Ground," *The Washington Post*, September 2, 1977, p. C6.

[141] Millett, 1980, p. 613.

[142] "United States Marine Corps, Mission and Force Structure Study," Studies and Reports, Force Structure Studies, 1971-1975, Marine Corps Archives, Quantico, Virginia, as cited by Packard, 2014, p. 184.

Western Europe."[143] The chief of staff of the Marine Corps, Lieutenant General Lawrence F. Snowden, fought back against contentions that the Corps was no longer relevant. Snowden argued that the Marines provided not only a critical amphibious capability, but also the ability to respond to a "wide variety of possible crisis situations." By emphasizing the ability to respond to crises, the Marine Corps hoped to persuade policymakers that while the amphibious assault mission was their primary mission, the Corps also possessed the capability to serve as a "local force in readiness" for other missions.[144] Snowden noted that the Corps had been especially innovative over its history, developing the first amphibious assault doctrine during the interwar period, the vertical envelopment concept after World War II, and more recently, the development of vertical and/or short take-off and landing (V/STOL).[145] Though he didn't elaborate on its design, Snowden implied that the Corps was in the process of adjusting its doctrine to prepare for the next war.

The 1979 revolution in Iran and the Soviet invasion of Afghanistan strengthened the Corps' argument that "flexibility and strategic mobility should not be sacrificed for NATO-only reinforcement missions."[146] These events also illuminated the strategic and economic importance of the Middle East, reminding U.S. policymakers of the importance of maintaining the military capability to react to contingencies in that region. Secretary of Defense Harold R. Brown proposed a Rapid Deployment Force (RDF) concept that included the prepositioning of equipment, supplies, and ships, and the creation of "air-transportable" military units based in the continental U.S.[147] The Marine Corps supported the RDF concept because it enabled the retention of the amphibious assault mission and it gave the Corps leverage in its argument for relevance in the Cold War. Under

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[143] Packard, 2014, p. 184.
[144] Millett, 1980, p. 611.
[145] Anonymous, 1977, p. 10.
[146] Millett, 1980, p. 609.
[147] Ibid.

the RDF, the Marines planned to train and equip three brigades of 16,500 Marines, each for the purpose of "airlifting to distant trouble spots by 1983."[148] The Marine Corps planning chief at the time, Major General Paul X. Kelly, noted that, "the Marines wanted to brief reporters on the [RDF] because 'some of our friends' had gotten the idea that the corps' mission was being changed…on the contrary, the corps is enthusiastic about its new role."[149] With the RDF, the Corps had found a mission that preserved its relevance, while at the same time aligning with its cultural emphasis on being expeditionary.[150]

With attention focused on the Army's much larger presence in Europe during the mid-1970s, the Marine Corps' shift to Europe during this period is often overlooked. In the mid-1970s, the Corps developed a concept known as the "northern flank scenario," whereby the Marines would provide protection, if necessary, to NATO's north in the event of a Soviet attack on western Europe.[151] Operating as NATO's strategic reserve, the northern flank scenario envisioned a Marine occupation in the event of war of Iceland, Norway, and Denmark to put pressure on the northern flank of the Warsaw Pact.[152] This shift to Europe led the Marines to conduct a series of training events in Norway and Germany in 1975 and a brigade-level training operation in Norway by the end of the 1970s.[153] In total, between 1976 and 1979, the Marine Corps conducted five, multi-week training events in north Norway.[154] Illustrative of the increased threat in the region, in 1978

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[148] George C. Wilson, "Marines to Form Rapid Reaction Force," *The Washington Post*, December 6, 1979, p. A-1.

[149] Wilson, 1979, p. A-1.

[150] The RDF officially became Central Command (CENTCOM) on January 1, 1983.

[151] Long, 2009, p. 121.

[152] Packard, 2014, pp. 191-192.

[153] Long, 2009, p. 121. Long cites Sean M. Maloney, "Fire Brigade or Tocsin? NATO's ACE Mobile Force, Flexible Response, and the Cold War," *Journal of Strategic Studies* 27, no. 4 (December 2004): 606-608.

[154] Jeffrey G. Barlow, "NATO's Northern Flank: The Growing Soviet Threat," *Heritage Foundation Backgrounder*, No. 82 (May 1979): 17. That said, the author was concerned that the U.S. Marines still lacked the cold weather training necessary to operate effectively in the northern region of Norway.

the Soviet Union conducted its own amphibious landing on Osel - a small island in the Baltic Sea.[155]

5.1.2.4. Maneuver Doctrine and Fleet Marine Force Manual 1 Warfighting

The Marine Corps' shift to Europe in the mid-1970s, done reluctantly, was seen as necessary to ensure the organization's survival. The northern flank scenario presented a way for the Corps to contribute to the defense of NATO while also preserving its amphibious character.[156] However, the Corps was cognizant of the fact that its forces could not stand-up to mechanized Warsaw Pact forces in a combat engagement. The Corps faced a dilemma. Increasing the survivability and protection of Marine forces through mechanization and armor would enable Marines to fare better in an engagement against the Soviets, but doing so was thought to be at odds with the amphibious mission, and, more importantly, it risked converting the Marines into a second land army.[157] In 1977, the Marine Commandant stated, "We have no desire to be a second land army."[158] Bolstering the Corps' capability to fight mechanized forces on land in Europe threatened the Corps' existence because redundancy in roles and missions between the Army and the Corps would lead to Congressional calls for reduction or elimination of the Corps - particularly given the constrained budget environment.

The solution to the dilemma emerged by the early 1980s when the Marine Corps developed a new doctrine that centered on maneuver warfare. The rationale for the maneuver doctrine was outlined by future Marine Corps Commandant, General Alfred M. Gray:

> Realizing that many of our potential enemies could bring superior numbers of men and good equipment to bear against us in a distant theater, it would be foolhardy to think about engaging them in fire-attrition duels. Historically, maneuver warfare has been the means by which smaller but more intelligently led forces have achieved victory. It is, therefore,

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[155] Barlow, 1979, p. 1.
[156] Terriff, 2006, p. 484.
[157] Ibid., pp. 491-492.
[158] Richard S. Taber, Sr., "One Reason Why the Marines Should be in NATO," *Marine Corps Gazette* 61, no. 12 (December 1977): 34, cited in Terriff, 2006, p. 492.

my intention to have us improve upon our understanding of the concepts behind maneuver warfare theory and to train our units in their practical application.[159]

While the immediate reason for the maneuver doctrine was a response to the Warsaw Pact's numerical and equipment superiority, the decision to adopt the doctrine and the character of the doctrine itself was affected by the civilian analyst, William S. Lind.[160] As discussed in the section on the Army's AirLand Battle doctrine, Lind was an active member of the 1970s military reform movement[161] who promoted a style of warfare focused on maneuverability, mobility, flexibility, and surprise to disrupt an adversary's cohesion.[162] Lind was surprisingly assertive in his quest to sell maneuver warfare doctrine to a Corps that feared that such a doctrine would be too similar to AirLand Battle.

Lind found an ally in then Major General Alfred Gray, commander of the 2nd Marine Division, FMF, in 1981. In 1981, Lind drafted a booklet on his rationale for why the Corps should adopt a maneuver-centric doctrine (as opposed to its traditional, firepower-centric doctrine), and left a copy of it with Major General Gray's staff secretary, in addition to a rough draft of a questionnaire on maneuver warfare for Gray's battalion and regimental commanders.[163] After appealing to the Marines fondness for the Corps' distinguished history of success in combat, Lind

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[159] Alfred M. Gray, "Maneuver Warfare Newsletter Forward," in Maneuver Warfare Newsletter, Al Gray Box 40 (maneuver warfare), Marine Corps Archives, Quantico, Virginia, p. 1. The newsletter is undated but given that Gray was a Major General when he wrote the forward, I estimate that it was published in June 1981 or 1982 when Gray was the commander of the 2nd Marine Division, FMF.

[160] Terriff, 2006, p. 496, tracks the first use of the phrase "maneuver warfare" to Lind in a letter in the October 1979 *Marine Corps Gazette*. See William S. Lind, "Letters: Only a Beginning," *Marine Corps Gazette* 63, no. 10 (October 1979): 12.

[161] For the key themes of this group, see John M. Oseth, "An Overview of the Defense Reform Debate," in Asa A. Clark IV et al., eds., *The Defense Reform Debate: Issues and Analysis* (Baltimore, MD: Johns Hopkins University Press, 1984), pp. 44-61.

[162] Influential articles by Lind include, "Defining Maneuver Warfare for the Marine Corps," *Marine Corps Gazette* (March 1980): 55-58, and "Tactics in Maneuver Warfare," *Marine Corps Gazette* (September 1981): 36-39. Both articles were included in General Gray's personal papers, Al Gray Box 40 (maneuver warfare), Marine Corps Archives, Quantico, Virginia.

[163] See Al Gray Box 40 (maneuver warfare), Marine Corps Archives, Quantico, Virginia.

compared maneuver warfare to "judo against your larger opponent" and "a way of fighting smart, of out-thinking an opponent you may not be able to over with brute strength."[164]

Maneuver warfare doctrine also drew heavily from a theory of conflict developed by U.S. Air Force Colonel John Boyd. Boyd's theory focused on repeated cycles of observation-orientation-decision-action (OODA) loops between combatants in conflict.[165] According to Lind, the defeat of an enemy through the use of maneuver warfare occurs when that enemy "becomes aware the situation is beyond his control, which is in turn a product of our ability consistently to cut inside the time of his observation-decision-action cycle."[166] Adopting a maneuver warfare doctrine would enable Marines to succeed in battle against numerically superior forces in Europe or the Middle East. Lind, recognizing the Corps' interest in the Middle East based in part on the RDF established under President Carter, argued that "[m]aneuver warfare would offer a Marine amphibious force (MAF) the best chance in assisting Saudi forces" in the event of an Iraqi attack.[167]

In 1981, 2ⁿᵈ Marine Division under Gray was the first Marine Corps unit to adopt the maneuver warfare doctrine. Gray established a Maneuver Warfare Board to "spread the concept throughout the division," and he conducted a series of maneuver training exercises at Fort Pickett, Virginia. Rather than advocating maneuver warfare doctrine as a revolutionary concept, Gray noted that by studying maneuver warfare, the Marines "gained from history and reinforced our current doctrine in order to develop skills applicable to all phases of amphibious operations."[168]

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[164] William S. Lind, "Maneuver Warfare Booklet," Al Gray Box 40 (maneuver warfare), Marine Corps Archives, Quantico, Virginia, p. 3.
[165] Alfred M. Gray, "Study on the History and Modern Application of Maneuver Warfare," introduction, part 3a, Al Gray Box 40 (maneuver warfare), Marine Corps Archives, Quantico, Virginia.
[166] Lind, 1980, p. 57.
[167] Ibid., pp. 57-58.
[168] Alfred M. Gray, Memo, "Maneuver Warfare," Al Gray Box 40 (maneuver warfare), Marine Corps Archives, Quantico, Virginia.

This approach to maneuver doctrine is informative because it illustrates the continual Marine Corps attempt throughout the 1980s to promote the doctrine as an extension of amphibious assault, rather than as a replacement. It is also important to note that maneuver warfare was not a call for the Corps to field heavy, armored units. Rather, the Light Armored Vehicle (LAV) concept was developed to enhance Marine mobility without burdening the Corps with heavier tanks.[169] The intent of the wheeled LAVs was to maximize the Marines' ability to move quickly on the battlefield to better conduct indirect attacks, a critical element of maneuver warfare.

By 1982, though Major General Gray endorsed maneuver warfare, the concept had not yet been embraced by the Marine Corps as an institution. The Marine Corps Commandant from 1979-1983, General Robert H. Barrow, passively supported the development of the maneuver concept but he did nothing to standardize it across the Corps. Complicating the matter, unlike the Army, the Marine Corps did not have an equivalent of TRADOC - the command in the Army overall responsible for developing, publishing, and instituting doctrine. Barrow's replacement, General Paul X. Kelley, frustrated with the extent of the civilian reform movement's involvement in Marine Corps doctrine, is said to have forbidden Marine officers from inviting Lind onto Marine bases.[170] Lind viewed Kelley's reign as "a virtual counter-reformation, led from the top."[171] In 1985, Lind lamented what he perceived to be Kelley's "dismantling" of the progress made by the Corps on maneuver warfare doctrine.[172] The catastrophic bombing of a Marine barracks in Beirut in October

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[169] Unknown, "Maneuver Warfare or Is the Marine Corps Too Light?" Al Gray Box 40 (maneuver warfare), Marine Corps Archives, Quantico, Virginia.

[170] William S. Lind and Jeffrey Record, "The Marine Corps Needs a Few Good Minds," September 1, 1985, Forum 6. I found this article in Al Gray Box 40 (maneuver warfare), Marine Corps Archives, Quantico, Virginia. It is a verbatim reprint of a July 28, 1985 op-ed in *The Washington Post*, written by the same authors. The version in the archives was published in a Sacramento newspaper.

[171] William S. Lind and Jeffrey Record, "The Marines' Brass is Winning its Battle but Losing the Corps," *The Washington Post*, July 28, 1985, cited in Packard, 2014, p. 334.

[172] Ibid., Forum 6. This contrasts with Long, 2009, p. 123. Long notes that Kelley "was a major proponent of the maneuver warfare doctrine," whereas his successor, Alfred Gray was "focused more on low-intensity conflict…"

1983 was a black-eye for the Corps that occupied much of Kelley's reign as Commandant from 1983-1987. In 1985, Marine Corps planners under Kelley developed a framework for amphibious operations in the event of war. Called PHIBSTRIKE 95, the framework focused on "the conventional threat to the MAB [Marine Amphibious Brigade] or MAF [Marine Amphibious Force] amphibious assault against Soviet or [Warsaw] Bloc forces employing Soviet antilanding doctrine."[173] The framework did not incorporate the major tenets of maneuver warfare.

In 1985, Lind published a document that would have a substantial effect on the maneuver doctrine published by the Marine Corps in 1989 - the *Maneuver Handbook*.[174] The Handbook, along with the numerous op-eds published by Lind during the period, emphasized the maneuver warfare concepts that would become the foundation of Marine Corps doctrine. These included speed, mobility, the use of fire to disrupt enemy forces, indirect attacks, orders to subordinate units that maximized subordinate initiative, and decentralized operations.[175] In response to Marine critics[176] who argued that maneuver warfare was more appropriate to a land-centric force like the Army, Lind argued that the Marines' amphibious doctrine aligned well with the principles of maneuver warfare. Lind and another civilian maneuverist, R. Scott Moore, argued that the Marines could conduct amphibious assaults by attacking numerous landing positions, rather than concentrating their effort on a single beachhead. This approach aligned with maneuver warfare

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[173] "PHIBSTRIKE 95," June 1985 – Folder – PC2580, Al Gray Box 41 (maneuver warfare), Marine Corps Archives, Quantico, Virginia.

[174] William S. Lind, *Maneuver Warfare Handbook* (Boulder, Colorado: Westview Press, 1985)

[175] "Maneuver Warfare Key Points," Al Gray Box 40 (maneuver warfare), Marine Corps Archives, Quantico, Virginia.

[176] Packard, 2014, pp. 323-333, provides six Marine counterarguments to maneuver warfare doctrine. Recounting them here is beyond the scope of this research project.

because it exploited the value of surprise, the establishment of main and supporting efforts, and the decentralization of forces.[177]

General Gray, the Marine Corps officer who embraced maneuver doctrine and experimented with it widely as the commander of the 2ᵈ Marine Brigade, promoted the full-scale adoption of the concept during his tenure as the Marine Corps Commandant from 1987-1991. When Gray took over as Commandant, the tenets of maneuver warfare were applied inconsistently across the Corps' units and its military schools. Gray recognized that standardization was necessary. To understand the magnitude of the problem, in 1988 Gray dispatched Lind to Marine units on the west coast of the U.S. to determine the degree to which Marines understood maneuver warfare and incorporated it into their training.[178] Lind reported back, "The transition to maneuver warfare is simply not occurring at Camp Pendleton."[179] Lind recommended the establishment of a "tactical symposium," a "quick course in maneuver warfare and operational art," and "a Marine Corps-wide program to institutionalize maneuver warfare."[180]

It is not entirely clear the degree to which Lind's report affected General Gray, but it is clear that Gray took action to formalize the Corps' approach to maneuver warfare in 1988 and 1989. His efforts mark the birth of Marine Corps formal doctrine equal in scale (though not necessarily in tone) to the Army. In July 1988, a former director of the Marines' Tactics Division at the Amphibious Warfare School, Lieutenant Colonel Michael D. Wyly, commended the Army's FM 100-5 *Operations* manual, and called for a "Marine counterpart…designed to fight the Marine

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[177] Packard, 2014, p. 322. Packard cites Lind, *Maneuver Warfare Handbook*, pp. 37-40 and Richard S. Moore, "Blitzkrieg from the Sea: Maneuver Warfare and Amphibious Operations," May 2, 1983, Paper written for the Naval War College, Newport, RI, pp. 2-7.

[178] William S. Lind, "Report on West Coast Trip," Lind to Commandant Marine Corps, 26 May 1988 Report on Maneuver Warfare, Studies and Reports, Box 315, Marine Corps Archives, Quantico, Virginia.

[179] Ibid., p. 6.

[180] Lind Report, pp. 6-7. On a humorous note, Gray wrote in the margins of page 2 next to a critique by Lind of Marine Corps recruit training, "what a great observation from a marshmallow."

air-ground task force…"[181] In response, General Gray directed Captain John F. Schmitt to write a maneuver warfare manual.[182] Gray "wanted a 'keystone' document, a general statement of commander's guidance that would reflect combat and leadership philosophy and serve as a foundation for other, more detailed doctrinal publications - and ultimately as a guidebook for all Marine Corps endeavors."[183]

Drawing primarily from Clausewitz, Sun Tzu, and Boyd, Schmitt worked with proponents of maneuver warfare such as Lind to draft a version of *Fleet Marine Force Manual 1 Warfighting* in March 1989. The Commandant accepted the draft and authorized its immediate publication and release throughout the Corps.[184] According to Gray, *Warfighting*, "describes my philosophy on warfighting. It is the Marine Corps' doctrine and, as such, provides the authoritative basis for how we fight and how we prepare to fight."[185] Discussing maneuver warfare, the manual noted:

> …warfare by maneuver stems from a desire to circumvent a problem and attack it from a position of advantage rather than meet it straight on. The goal is the application of strength against selected enemy weakness. By definition, maneuver relies on speed and surprise, for without either we cannot concentrate strength against enemy weakness. Tempo is itself a weapon often the most important. The need for speed in turn requires decentralized control. While attrition operates principally in the physical realm of war, the results of maneuver are both physical and moral. The object of maneuver is not so much to destroy physically as it is to shatter the enemy's cohesion, organization, command, and psychological balance.[186]

In addition to FMFM 1, under Gray the Marines published a *Marine Corps Campaign Plan (MCCP)*, a *Marine Air-Ground Task Force Master Plan*, and a *Marine Corps Long-Range Plan*

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[181] Michael D. Wyly, "Operational Handbook 6-1, Ground Combat Operations," *Marine Corps Gazette* 72, no. 7 (July 1988): 31. Fideleon Damian, *The Road to FMFM 1: The United States Marine Corps and Maneuver Warfare Doctrine, 1979-1989* (Master's thesis Kansas State University, 2001), p. 102, incorrectly cites this quote, attributing it to a *Marine Corps Gazette* written in 1981.

[182] Packard, 2014, p. 359.

[183] Cited in Damian, 2001, p. 103. He attributes this quote to Colonel John Greenwood, "FMFM 1: The Line of Departure," *United States Naval Institute Proceedings* (1990): 155, and John F. Schmitt, E-mail to Damian, 20 September 2006.

[184] Packard, 2014, p. 360; Damian, 2001, p. 104.

[185] FMFM 1 *Warfighting* (Washington, DC: Headquarters, Department of the Navy, United States Marine Corps, 1989), Foreword.

[186] FMFM 1 *Warfighting*, p. 29.

(MCLP). He initiated a robust doctrine-writing program that consisted of Operational Handbooks (OH's), Fleet Marine Force Reference Publications (FMFRP's), and Fleet Marine Force Manuals (FMFM's).[187] The Marine Corps finally had a doctrine-producing apparatus that matched the Army's.

5.1.2.5. Understanding the Sources of the Maneuver Warfare Doctrine

Environmental Shifts

Like the other services, the Marine Corps recognized that if the U.S. went to war against Warsaw Pact forces, it would be outmatched numerically. Unlike the Army, in the 1970s the Marines did not possess a significant armored capability that could defeat the heavily armored and highly mobile Soviet forces. The 1973 Arab-Israeli War illustrated the increased lethality of Soviet weapons systems. Given that the Soviet Union was the most likely adversary, the Marine Corps recognized that it needed to change its doctrine if it was to have a role in the defense of NATO in Europe. Though the Corps had a robust aviation force and a combat-proven vertical envelopment doctrine, the Marines assumed that the Soviet surface-to-air missile capability would render Marine aviation extremely vulnerable. The Marines could no longer count on vertical envelopment to remain relevant as they had after the advent of nuclear weapons in the 1950s.

The 1979 revolution in Iran and the Soviet invasion of Afghanistan were events that validated the necessity for a Rapid Deployment Force (RDF) that could respond to contingencies in the Middle East. The Marine Corps recognized the RDF as an opportunity for relevance, but Marine leaders were cognizant of the fact that they would be numerically inferior in a combat engagement in that region as well. These factors put pressure on the Marine Corps to innovate doctrinally.

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[187] "Marine Corps Bulletin 5600, Marine Corps Warfighting Publications Status," 17 November 1989, Al Gray Box 41 (maneuver warfare), Marine Corps Archives, Quantico, Virginia.

Role of Civilians

Civilians played a role in the adoption of maneuver warfare doctrine, but not in the way that the existing literature on doctrinal innovation predicts. The civilians who affected the Marine Corps' development of the maneuver warfare doctrine were not in the chain of command. Rather, civilians like retired Air Force officer John Boyd and William Lind were intellectuals outside of the chain who had access to Marine officers and published articles in Marine publications. According to Packard, these civilians made two contributions. First, since proposing major doctrinal changes could be detrimental to a Marine officer's career, civilian involvement could ease some of that pressure. These civilians did not have the authority to promote innovative officers - the mechanism necessary for innovation in Rosen's theory - but by exploiting their position as respected intellectuals and theorists of war, the civilians bolstered arguments made by mid-level Marine officers. Second, these civilians had more time to devote to theory development than the Marines.[188] Senior Marine officers like General Gray were able to outsource thinking on maneuver warfare to civilians like Lind whose detachment from the Corps gave them room to study and think creatively.

Some scholars have argued that the Marine Corps' development of the maneuver warfare doctrine was, instead, a bottom-up innovation that derived from the ingenuity of junior Marine officers.[189] While it is clear that a handful of Marine officers helped the Corps develop the details of maneuver doctrine, it is not clear that these officers were the impetus behind the Corps' decision to develop the doctrine. Captain Stephen Miller wrote four articles in the *Marine Corps Gazette* on the topics of mechanization and maneuver.[190] Calling for the mechanization of Marine

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[188] Packard, 2014, p. 308.

[189] See Terriff, 2006, pp. 495-496; Damian, 2001; Packard, 2014.

[190] Stephen W. Miller, "It's Time to Mechanize Amphibious Forces," *Marine Corps Gazette* vol. 62, no. 6 (June 1978); Miller, "Letters: Defining Mechanization," *Marine Corps Gazette*, vol. 63, no. 2 (Feb 1979); Miller,

amphibious forces in 1978, Miller argued that the Corps, "configured as a high mobility mechanized force with a substantial anti armor and antiair capability, used in a high speed amphibious assault could have a pronounced effect on [the European] battlefield."[191] In two articles the next year, Miller outlined how the Marine Corps could defeat a numerically superior Soviet force and how it could defend against a Soviet counterattack. In both articles, Miller included many of the elements of maneuver warfare that would eventually find their way into the Corps' doctrinal manual. According to Miller, a Marine amphibious force could defeat Soviet forces "Through the high tempo of operations, constant shifting of forces and fluid, flexible action by ground and air elements working in close harmony…"[192] This will cause "the Soviet-styled enemy [to] rapidly lose control, cohesion and momentum."[193]

Miller's articles definitely increased the salience of maneuver warfare in the Marine Corps in 1978 and 1979, but I did not uncover any evidence in the personal papers of Marine leaders at the time that these junior officers had much of an effect on their thinking regarding maneuver doctrine. It is clear, however, that the civilian maneuverists, led by Lind, were in the minds of senior Marine leaders throughout the 1970s and 1980s. Damian uncovers evidence that Lind met with a group of Marine officers at his home in Arlington and in one of the officer's quarters on Quantico.[194] Lind met these officers after he gave a presentation at a Marine tactics class in the Amphibious Warfare School (AWS) in the 1980-1981 academic year.[195] It is possible that during

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"Winning Through Maneuver: Part I - Countering the Offense," *Marine Corps Gazette* 63, no. 10 (Oct 1979); Miller, "Winning Through Maneuver Conclusion - Countering the Defense," *Marine Corps Gazette* 63, no. 12 (Dec 1979). Captain Miller didn't write anymore after 1979; Terriff, 2006, suspects that he left active-duty.

[191] Miller, 1978, p. 39. This quote is also cited in Terriff, 2006, p. 496.
[192] Miller, Oct 1979, p. 36.
[193] Ibid.
[194] Damian, 2001, p. 35. Captain Miller was not part of this group.
[195] Ibid., p. 34.

these meetings, the Marine officers influenced how Lind engaged with senior Marine officers on the doctrine, but I did not find evidence to that effect.

Interservice Rivalry and Organizational Survival

The Marine Corps' search for a new doctrine was deeply affected by its anxiety over its survival. Terriff argues that paranoia[196] is a predominant aspect of the Marines organizational culture. He argues, "The Marine Corps sense of organizational paranoia is not only firmly fixed in its organizational culture, a critical aspect of its identity, it arguably is one of the, if not the, dominant organizational cultural artifact that exerts an influence on other key organizational cultural attributes of the Corps."[197] Much of this paranoia can be attributed to the fact that the Corps' functional requirements often overlap with the jurisdiction of other services, particularly the Army and the Air Force.[198] The Corps also cannot match its jurisdiction with the jurisdiction of its adversaries. Most other militaries do not have a separate service responsible for amphibious assault operations. This explains the Marine Corps' fear that its ability to fight on land - demonstrated throughout the Vietnam War - would lead to the perception of the Corps as a second land army. During periods of budgetary famine, the second land army would be the first one on the chopping block because its function(s) would be viewed as redundant. When President Carter created the Rapid Deployment Force concept in 1979, the Corps recognized it as an opportunity to carve out a unique jurisdiction in a way that aligned with its cultural emphasis on being expeditionary.

In his assessment of organizational behavior in the Marine Corps, Marutollo developed four types of challenges to the Corps' existence - *economic* (arguments to eliminate the Corps

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[196] Though Terriff uses this word, it is an exaggeration because it implies that there was no basis for concern. The Marines had a basis for concern.
[197] Terriff, 2006, p. 483.
[198] Ibid., p. 482.

based on economic efficiency), *rationalist* (arguments to eliminate the Corps based on a "cost benefit, mission-oriented analysis"), *emotivist* ("primordial emotive reactions against an unacceptable rival"), and *incrementalist* (the simultaneous occurrence of each of the first three arguments).[199] In the 1970s and 1980s, arguments in favor of reducing the size of the Marine Corps or eliminating it entirely were primarily economic and rationalist. Economic arguments focused on redundancy of Marine Corps roles with respect to the Army (ground combat) and the Air Force (fixed wing fighter capability). Rationalist arguments questioned the viability of the amphibious assault mission in the Cold War environment.

Harvey Sapolsky - a political scientist at MIT who is a proponent of the interservice rivalry theory of military innovation - wrote an article in the *Wall Street Journal* in 1987 that illustrates the pressure on the Marine Corps in the 1980's. His argument aligns with Marutollo's rationalist category. Sapolsky noted, "The status of the Marine Corps would not be problematic if its main mission and size were not so questionable. Since the 1920s the Corps has focused its training on amphibious assault. But modern weapons make amphibious assaults extraordinarily hazardous…And yet we maintain a Corps of 200,000 geared primarily to that mission…"[200] Sapolsky argued that Soviet tank and artillery units would "overwhelm" Marine forces.[201]

Marutollo correctly notes that a shortcoming of the rationalist approach is that it is based on assumptions about future warfare that, if incorrect, would invalidate the entire argument. The assumption that the Marine Corps was no longer necessary because amphibious warfare was no longer viable was based on the belief that the U.S. focus on the primarily land-locked Soviet Union would endure. Of course, the turmoil in the Middle East in 1979 demonstrated that the Corps

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[199] Marutollo, 1990, pp. 61-62.
[200] Harvey M. Sapolsky, "The Real Marine Scandal," *Wall Street Journal*, April 23, 1987, p. 32. Also, cited in Marutollo, 1990, p. 169.
[201] Ibid.

could play an important role in that region as a "force in readiness."[202] The rationalist challenge to eliminate the Marine Corps also couldn't envision a world without the Soviet Union.

5.1.2.6. Conclusion

In the decade or so that followed the Marine Corps' return home from the Vietnam War and the establishment of its maneuver warfare doctrine, the Corps struggled to reconcile a theory of victory that centered on amphibious assault during a period when the amphibious mission seemed increasingly unlikely. Even the Corps' other historical domain - intervention in developing countries (labeled the small wars mission) - seemed untenable given the American public's aversion to that mission set after the failure in Vietnam. While the Marine Corps should have been assured of its survival given that its minimum size was protected by legislation, years of fighting on land as a quasi-second army led to familiar calls for the Marine Corps' disestablishment.

Maneuver warfare doctrine was driven by a Marine Corps assumption that Marines would be outmatched numerically and inferior with respect to armored capability in the initial tactical battles of a war in Europe or the Middle East. Cognizant that there was a higher probability of combat in the Middle East given the Army's dominance in western Europe, the Corps focused initially on potential combat with Iran or Iraq. Both countries' militaries held a quantitative edge over the Corps. Winning a battle of attrition through the application of overwhelming firepower would not be possible.[203] Maneuver warfare offered a way to create fluidity on the battlefield that would be highly disruptive to Iranian or Iraqi militaries that operated in symmetrical formations incapable of fighting in a decentralized manner. Marines envisioned a theory of victory whereby

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[202] Marutollo, 1990, p. 171.

[203] Fleet Marine Force Manual 1 *Warfighting* noted (p. 30), "Because we have long enjoyed vast numerical and technological superiority, the United States has traditionally waged war by attrition. However, Marine Corps doctrine today is based on warfare by maneuver…" It went on (p. 37), "an expeditionary force in particular must be prepared to win quickly, with minimal casualties and limited external support, against a physically superior foe. This requirement mandates a doctrine of maneuver warfare."

they would use speed, surprise, decentralized command, and combined arms to defeat a numerically superior foe. The Marines envisioned that this same approach would enable them to defeat the numerically superior Warsaw Pact forces on NATO's northern flank if activated to fight the Soviets as part of NATO's strategic reserve.

Marine assumptions regarding the nature of future war were divorced from the fact that war with an adversary in the Middle East or against NATO in Europe would surely be met by the entire weight of the U.S. military. Assuming that Marines would always be overmatched and inferior was a superficial assumption that the Corps employed to rationalize the transition to a maneuver doctrine. Though Marine senior leaders presented maneuver doctrine as an extension of the amphibious mission, in reality, the new doctrine was necessary for the Corps to maintain any role at all in the 1970s and 1980s. The Corps was unwilling to place its fate entirely on the small wars mission. Marine leaders were determined to preserve both "strains" of Marine Corps culture - amphibious assault and expeditionary interventions in the form of small wars[204] - with an emphasis on the former.

The absence of a centralized doctrine center similar to the Army's Training and Doctrine Command (TRADOC), limited the Corps' ability to develop doctrine in a coherent manner. This is one reason why maneuver warfare doctrine emerged from individuals outside of the formal, bureaucratic channels of the Corps.[205] The establishment of a Doctrine Center under the Marine Corps Development and Education Center (MCDEC) at Quantico in 1983, placed the development of doctrine under a single headquarters.[206] According to the Corps, the "motivating force for this change was recognition that doctrinal development has not been a dynamic activity in the Corps

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[204] Duane R. Worley, *Shaping U.S. Military Forces: Revolution or Relevance in a Post-Cold War World* (Westport, CT: Praeger Security International, 2006), p. 176.
[205] Damian, 2001, p. 38.
[206] Ibid.

in recent years…Many believe the effort has not been well coordinated, and it has not kept pace with the rapidly changing demands of the modern battlefield."[207]

Four years later in 1987, the establishment of the Marine Corps Combat Development Command (MCCDC) linked doctrine with the development of Marine training and equipment. Both the Doctrine Center under the MCDEC and the MCCDC centralized doctrinal processes, putting the Marine Corps on equal footing with the Army in terms of the ability to develop and publish doctrinal manuals. FMFM-1 *Warfighting* was the first comprehensive, keystone doctrine in the Corps history, and its publication occurred within two years of the establishment of MCCDC. The numerous doctrinal publications instituted by General Gray during his reign as Commandant was a manifestation of the formalization of Marine doctrinal institutions and a general fascination with maneuver warfare.

5.2. Conclusion

The two doctrines studied in this chapter - vertical envelopment and maneuver warfare - were developed after environmental shocks that shifted the balance of threat. Both shocks thrust the Marine Corps into battles for its organizational survival. As was the case for the U.S. Army in the 1940s and 1950s, nuclear weapons initially appeared to render ground combat irrelevant. In response, the Corps developed a vertical envelopment doctrine that enabled it to make a case for the continued relevance of amphibious assault operations. Like the pentomic organizational structure and doctrine, the effectiveness of assaults by helicopter in the wake of a tactical nuclear weapons attack is highly debatable. Fortunately for the Corps, the doctrine was never put to the test.

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[207] Anonymous, "Doctrine Center Established at MCDEC," *Marine Corps Gazette* 67, no. 2 (Feb 1983): 10. Damian, 2001, p. 38, speculates that the establishment of the Doctrine Center was also a reaction to "the success enjoyed by [the] Army and its TRADOC in developing *AirLand Battle*, which appeared the previous year."

The maneuver warfare doctrine developed in the post-Vietnam War period, was a response to the increased lethality of Soviet weapons systems and the inferiority of the Corps with respect to heavily armored and highly mobile Soviet forces. Again, with the small wars mission in question after the failure of such operations in Vietnam, the Corps sensed its existence in jeopardy. Maneuver warfare doctrine was the lifeline that the Marine Corps embraced to ensure continued relevance for future combat.

Like the Army cases of doctrinal innovation, Posen's argument that intervention by civilian officials is necessary to compel doctrinal change is not relevant for both Marine Corps doctrines. Instead, we observe a dynamic not accounted for by any theory of military innovation - the intervention of civilian academics and theorists outside of the chain of command. Like the Army with respect to AirLand Battle, the Marine Corps adopted ideas on maneuver from defense reformers and intellectuals. Doing so provided reinforcement for the plans of senior Marine leaders and allowed those leaders to outsource difficult problem sets to intellectuals with credibility in defense circles. Like the Army cases, Marine leaders are attuned to the interests of civilian officials, and when they detect the possibility of intervention, they act in anticipation of that intervention to preserve first-mover advantage. With regard to the doctrines in this chapter, Marine leaders recognized the familiar calls for Marine Corps extinction and they innovated. When fears of extinction were so great that Marine leaders developed doctrines that were at odds with the Corps' amphibious tradition, those leaders did their best to link the new doctrines to the amphibious operations mission.

Rivalry between the Army and the Marine Corps also affected the development of vertical envelopment and maneuver warfare. There are two key takeaways. First, military organizations strive to establish a monopoly over warfare in a particular jurisdictional domain - land, sea, or air.

Second, military organizations seek to establish responsibility over a specific set of functions within that domain. When you have responsibility over a unique set of functions, it is easier to promote the necessity of your organization to the overall defense effort. The key here is that the duplication of functions between two services is dangerous for both services. This is why we see resistance from both the Marine Corps and the Army to the idea that the former has the capacity to serve as a second land army.[208] A service that duplicates the functions of another service renders itself vulnerable to budget cuts when civilian policymakers look for justification to cut or reduce programs. This concept manifested itself in the Corps' maneuver warfare doctrine.

Interservice rivalry is always threatening, but it is particularly threatening when one service is much smaller than the other. Organizational survival concerns are amplified for the smaller service. Also, not only did the Corps have to worry about arguments in favor of extinction, it also had to deal with arguments that Corps' functions should be absorbed by the Army. Even when its minimum size was codified into law, the Marine Corps still worried about its survival when it witnessed the other services establish domination over a physical domain of warfare. This helps explain why the Marine Corps is traditionally more politically savvy than the other services. The Corps' standing in the eyes of members of Congress who fund the defense enterprise is a mechanism that the Corps uses to protect itself from those who view the service as irrelevant. Doctrinal innovation is a tool that a military organization uses to demonstrate adaptability when the international security landscape changes. The Marine Corps uses evidence of doctrinal innovation to shore up political support for the organization to ensure its long-term survival.

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[208] The Marine Corps has a long history of fighting on land either in support of the Army as additional ground forces or independently. Marines first fought as infantry troops on land when a battalion of Marines supported General Washington's army in 1776. Marines also fought in the Creek and Seminole Wars (1836-1842), in the Mexican War with Winfield Scott, in the First Battle of Bull Run in the American Civil War, with the American Expeditionary Force (AEF) in France in World War I, and in battles at Bataan and Corregidor in World War II. See Roe, Giust, Johnstone, and Frank, 1962, pp. 6, 13-14.

A major difference between the Army and the Marine Corps was the absence of a tradition of formal doctrine for the latter. The Army's first keystone doctrinal manual in the modern era was published at the dawn of the twentieth century. Though the Corps published a few important manuals prior to 1989, the publication of FMFM 1 *Warfighting* that year was the Marines' first keystone manual. The Army's tradition of formal doctrine accelerated with the establishment of TRADOC in 1973. The Marines did not establish MCDEC until 1983 and MCCDC (the Marine equivalent to TRADOC) until 1987. It is not coincidental that we don't see a keystone doctrinal manual in the Marine Corps until 1989. The establishment of formal doctrinal institutions is associated with an increase in a military's formal doctrine.

As was the case for the Army, both Marine Corps doctrinal innovations occurred during periods of peace after war. Conflict was not necessary to compel change. Rosen's theory on intraservice competition is not relevant for these innovations. His theory rests on the promotion of innovative officers at the low- and mid-levels of the organization. Marine Corps innovations were primarily top-down and the intervening defense reformers did not have the authority to influence promotion at junior levels.

Given the Army's predisposition to innovate doctrinally to defeat the threats that it perceived as most dangerous to U.S. national security at the expense of doctrine for the most likely threats, it is surprising that the Marine Corps has not recognized the opportunity to establish a monopoly over the small wars mission - a mission well-aligned with its expeditionary ethos. It is curious that the Marine Corps has not seized the opportunity to innovate doctrinally for irregular warfare given the Army's unwillingness to do so. Instead, we see the Corps go to great lengths to preserve the amphibious operations mission with the vertical envelopment doctrine and the maneuver warfare doctrine. Long speculates that a preference for amphibious operations is due in

part to the tight link with the Department of the Navy required for the execution of these types of operations. Aligning Marine operations with the Navy is another technique that the Corps uses to guarantee its survival.

Chapter 6. Conclusion

The purpose of this study was to determine why military organizations innovate doctrinally given the conventional wisdom of hidebound bureaucratic organizations. The U.S. Army's frequent doctrinal innovation during peacetime served as a puzzling case given political science literature that suggests that militaries strive to avoid the uncertainty that comes with change. A secondary purpose of this study was to examine why different military organizations change in different ways and at different intensity levels or frequencies when faced with relatively similar threat environments, availability of technology, and estimates of the geography of future battlefields. Understanding military doctrinal change is important because international relations scholars have long ignored the influence of nonmaterial factors - leadership, morale, doctrine, and tactics - by making the assumption that states employ military power optimally. Force employment, and the doctrine that explains that employment, is integral to a state's power.

To answer these questions, I employed a levels of analysis approach using a theoretical framework that I devised to analyze doctrinal change. The source of a levels of analysis approach is Kenneth Waltz.[1] Waltz's three images of war were termed levels of analysis by David Singer.[2] The theoretical framework used in this study follows Jack Levy and William Thompson who used a levels of analysis approach "for classifying the different causal factors influencing the policies and actions of states and of other actors" that led to war.[3] I adopted their approach to the study of military doctrine. Rather than examining causation at the system, state and societal, and decision-making levels of analysis like Levy and Thompson, I examined causation at the system, organizational, and interservice levels of analysis. There are three limitations to this approach.

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[1] Kenneth N. Waltz, *Man, The State, and War* (New York: Columbia University Press, 1959).
[2] David J. Singer, "The Levels of Analysis Problem in International Relations," *World Politics* 14, no. 1 (1961): 77-92.
[3] Jack S. Levy and William R. Thompson, *Causes of War* (West Sussex, U.K.: Wiley-Blackwell, 2010), p. 14.

First, causal factors that are present in one level are not always exclusive to that particular level. Second, a levels of analysis approach will leave readers who expect a monocausal explanation for military doctrinal change unsatisfied. Finally, the levels of analysis framework is better at classifying variables than classifying theories, since theories often employ variables from one or more levels.[4]

In general, systemic-level shifts had the greatest effect on military doctrinal change, particularly when those shifts threatened a military organization's survival or its monopoly over a jurisdictional domain. Military organizations are attuned to shifts in the balance of threat and to the interests of civilian policymakers. However, civilian intervention to compel change is unlikely because military organizations seek to maintain first-mover advantage; they will initiate change processes in advance of civilian intervention. While the organizational level of analysis illuminated the mediating influence of culture on change, interservice factors played a more important role.

6.1. Major Findings

Below, I summarize the seven, major findings from the comparative case study analysis in the preceding chapters. These findings have important implications for the study of political science, security studies, and military innovation.

First, the systemic-level causes of military doctrinal innovation are better described by balance of threat than balance of power theory. The balance of power approach which argues that states change their military doctrine in response to changes in the distribution of power in the system, fails to explain why the U.S. Army changed its doctrine three times from 1945 to 1982 when the bipolar order of the U.S. and the Soviet Union remained constant. Applied to military

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[4] Levy and Thompson, 2010, p. 207.

innovation, balance of threat theory argues that militaries will develop doctrine in response to shifts in the threat. Shifts in the power of potential adversaries and/or the capabilities and intentions of those adversaries, leads militaries to evaluate their theory of victory and increases the chances that those militaries will innovate.

Balance of threat theory helps us understand why militaries innovate for some types of conflict and not others. The unwillingness of the Army to innovate doctrinally with respect to irregular warfare in the 1960s and again in the 1990s, is in part explained by the Army's tendency to treat the most menacing threat to the state as the top priority in the doctrine development process. Though fighting an irregular war might be the policy preference of senior civilian policymakers, a military organization is inclined to spend less time preparing for such a war given the organization's inclination to prioritize the highest intensity threats. Army culture values offensive, firepower-centric doctrines that emphasize mid- to high-intensity operations.

There is general consensus that militaries optimized for low-intensity conflict are likely to fail in mid- to high-intensity wars. However, military personnel are less willing to acknowledge that a military optimized for mid- to high-intensity combat will not succeed in irregular war. Planning purely for mid- to high-intensity war that is done without consideration for the probability of that type of war can leave a military unprepared for low-intensity conflict. This helps explain the U.S. military's history of poor performance in irregular war. Also, if a military organization has an aversion to a certain type of war, it might be biased in the way that it characterizes the intensity and/or probability of that type of war. Threat intensity and probability are inherently subjective.

Complicating the problem is the unproven assertion by U.S. military leaders that militaries trained for conventional war will be adequately prepared for irregular war.[5] Time and time again, this argument has proven to be specious for the U.S. military. Optimization for the highest intensity war does not mean optimization for war at lower intensity levels. While conventional warfare is normally an important element of irregular war, success in the latter requires competency in different areas such as security sector reform, economic development, the training of host nation security forces, population security, and establishment of the rule of law. The organizational structure of modern-day ground combat forces, optimized for success in conventional war, might preclude success in irregular war. The U.S. Army's recent establishment of Security Force Assistance Brigades - units designed to train other state's militaries - might be a positive step forward with respect to reorganizing and developing a doctrine for irregular warfare, but time will tell whether these units will operate under a doctrine for irregular war or whether they are merely skeleton structures for the Army's future expansion. A rising China and an increasingly menacing Russia have already given Army leaders a reason to jettison lessons learned from fifteen years of irregular warfare in Iraq and Afghanistan for a renewed focus on the high-intensity operations that would define a confrontation with either superpower.

Second, civilian intervention is not a necessary or sufficient cause of doctrinal innovation. In most of the innovations analyzed in this study, civilian intervention played little role in causing the innovation.[6] The most significant example of civilian influence occurred in the case of the Army's AirLand Battle and the Marines' maneuver warfare doctrine, when both organizations

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[5] We see a similar claim in the 1950s when the Army asserted that optimization for an atomic battlefield would also enable success on a non-atomic battlefield. I find no evidence that confirms this assertion.

[6] Jensen, 2016, p. 147, also finds little evidence of civilian intervention. However, it is difficult to reconcile this finding with his contention that advocacy networks consisting of "defense and *civilian* officials" (emphasis mine) caused doctrinal change.

outsourced the intellectual development of doctrine to civilian defense reformers who were outside the chain of command. Rather than serving as confirmation of the necessity for civilian intervention to force military change, these cases are evidence of the sophistication with which militaries will approach doctrinal change when the doctrine in question aligns with organizational preferences. Militaries will leverage civilian expertise to bolster the rationale that military leaders use to support efforts to change their organization's doctrine.

When militaries sense civilian intervention to compel change, they will act in anticipation of that intervention to preserve first-mover advantage. This is most likely when there is civilian preference for a doctrinal innovation for irregular warfare. First, the civil elements of irregular warfare are seen by military leaders as outside the military's core purpose. Minimal coverage of irregular warfare in doctrine reduces the odds that the organization will be employed in such warfare. Second, the military's poor historical record of performance in irregular war makes participation in such war less desirable. As such, militaries are not inclined to innovate for irregular war on their own. When militaries perceive possible civilian intervention to compel change, we will see evolutionary or cosmetic changes to doctrine that are promoted as major changes. This was the case with respect to counterinsurgency doctrine before, during, and after the Vietnam War, and doctrine for stability operations in the 1990s. The Army branded the 1990s doctrine with the Full-Spectrum Operations slogan to emphasize the organization's embrace for warfare across the spectrum of conflict, down to and including irregular war. However, the changes to doctrine that were made for irregular war were superficial and limited. Doctrine was a tool that the Army used to minimize civilian interference. Peripheral changes like these can easily be abandoned or reversed in the future, especially when they occurred at the prompting of civilian actors.

Third, military organizations constantly strive to establish a monopoly over warfare in a particular jurisdictional domain. The most common physical domains are land, sea, and air. Establishing dominance over a domain is integral to the organization's survival, as long as it can be shown that the possibility for future combat in that domain exists. Claims regarding the irrelevance of ground combat in a nuclear world put the Army's organizational survival in jeopardy. If combat in the land domain was no longer a possibility, the Army could no longer justify its existence. The Marine Corps has always operated at the seams of the three domains. This helps explain why the Corps perceived its organizational survival to be in jeopardy on numerous occasions throughout its history. With amphibious warfare operations, the Marine Corps found an area within which it had a semi-monopoly. When those operations were threatened in the nuclear era, the Corps innovated to develop vertical envelopment.

As the behavior of the Marine Corps and the Army after the advent of nuclear weapons shows, military organizations will innovate doctrinally to justify their relevance even if the innovations are unlikely to work or are in tension with the organization's culture. The Army's pentomic structure and doctrine would not have made the Army viable in the face of hundreds of nuclear detonations in combat. Similarly, it is not clear that the Marines' insertion by helicopter would have made Marine units less vulnerable to a tactical nuclear weapons attack than an amphibious operation. Neither doctrinal innovation aligned well with organizational culture, but the Army and the Marine Corps were willing to change in order to preserve their organizational survival.

In addition to establishing jurisdiction over a particular domain, military organizations are sensitive to duplicating the functions of another service (or having their functions duplicated by another service). As James Q. Wilson notes, organizations pursue "a distinctive area of

competence, clearly demarcated clientele or membership, and undisputed jurisdiction over a function, service, goal, issue, or cause."[7] Responsibility for a unique set of functions helps a military organization justify the necessity of its role in the broader defense establishment. Duplication of functions between services risks civilian intervention and/or reduction in a service's budget. This is why the Marine Corps has been loath to embrace the unofficial designation of America's second land army, even though it has demonstrated its ability to fight on land consistently over its history. With respect to maneuver warfare doctrine, Marine leaders feared that the doctrine would be too similar to the Army's AirLand Battle. The fact that maneuver warfare doctrine was indeed the basis for AirLand Battle made Marine leaders uncomfortable and they sought ways to distinguish the Marine approach from the Army approach.

If dominance of and functional specificity within a domain is indeed a dynamic that influences doctrinal innovation, then the recent addition of two new domains - space and cyberspace - should serve as the impetus for change. In fact, there are indications that the services are already competing for relevance in these domains. The U.S. Army recently unveiled a concept[8] called Multi-Domain Battle. According to the current commander of TRADOC, "Multi-Domain Battle is an emerging concept between the Army and Marine Corps, in concert with the Joint Force, to help maintain American military dominance in all five domains - land, air, maritime, space, and cyberspace, and across the electromagnetic spectrum."[9]   While the description implies concerted effort between services, it is not clear that the other services have subscribed to Multi-Domain

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[7] Anthony Downs, *Inside Bureaucracy* (Boston: Little, Brown, 1967), p. 8, quoting P.B. Clark and J.Q. Wilson, "Incentive Systems: A Theory of Organizations," *Administrative Science Quarterly* (1961): 129-166.

[8] Today, the Army defines a *concept* as how the Army may operate in the mid- to far-term future based on anticipated future operational environments. This contrasts with *doctrine* which defines how the Army fights today.

[9] See http://www.tradoc.army.mil/multidomainbattle/.

Battle which envisions the Army and the Marine Corps operating in multiple jurisdictional domains simultaneously.

Interservice competition does not explain all of the innovations in this study. While the pentomic innovation occurred in the context of rivalry between the Army and the Air Force, the root cause of that rivalry was the increased prominence of the Air Force in the eyes of civilian policymakers in the aftermath of the advent of nuclear weapons. This was also the case for the Army in the 1990s when many claimed that the Air Force's ability to deliver precision guided munitions in the 1991 Gulf War was proof of the irrelevance of ground combat. Active Defense and AirLand Battle were influenced not by competition between the Army and the Air Force; these doctrines were shaped by *cooperation* between the two services. While the two services still competed with each other for resources, they ensured that there was a careful delineation of responsibilities in the new doctrines which were separated between the land and air domains. The doctrines were acceptable to both services because they ensured the services' continued dominance of their respective domains. Finally, the Army might have been determined not to cede jurisdiction over counterinsurgency to the Marine Corps in the 1960s, but its determination was not substantial enough to lead to doctrinal innovation.

Interservice rivalry can amplify concerns related to organizational survival. The Marine Corps sees itself engaged in a perpetual competition for resources with the other services, and, therefore, is always worried about its survival. As the military's smallest service, the Marine Corps operates at a relative disadvantage in terms of resources. Over time, the Marine Corps has become the military's most sophisticated service with respect to engaging with the U.S. Congress. Interservice rivalry not only improves civilian control of the military. It can also increase the

strength of the individual services.[10] Doctrinal innovation, particularly as it relates to the acquisition of weapons and equipment, is a tool that the Marine Corps employs to shore up political support to maintain its survival. It is difficult to understand why the Marine Corps continued to worry about its survival even after its minimum size was codified into law. I did not uncover a clear rationale for this, but I suspect that it is because it is difficult to shed concerns over organizational survival after such a long history in which that survival was in jeopardy. Even in the absence of a threat to survival, it is normal for a military organization to be sensitive to any encroachments on its domain which risk the organization's prestige within the broader military.

Fourth, the frequency of military doctrinal change is a function of the complexity of the strategic problem that doctrine is designed to solve. Insoluble strategic problems can lead to frequent doctrinal changes as a military organization attempts to develop new methods of fighting to solve those problems. However, innovative doctrines cannot ensure military success when the strategic problem-set is insuperable. The military organization will perceive innovation as necessary to maintain the prestige of the organization and its survival, but the insolubility of the strategic problem will render military solutions to it impracticable. Too much change risks damaging organizational efficiency, coherence, and readiness and wasting scarce resources.

The clearest example of this dynamic is seen in the U.S. military's response to the emergence of nuclear weapons after World War II. The Army and the Marine Corps developed doctrines designed to enable tactical success on a nuclear battlefield, but these doctrines could not overcome the fundamental problem - how to preserve the viability of a large ground-combat unit in the face of hundreds of nuclear detonations. The abandonment of the pentomic and vertical envelopment doctrines was in part a recognition of their unfeasibility. Similarly, the intractability

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[10] Samuel P. Huntington, "Interservice Competition and the Political Roles of the Armed Services," *The American Political Science Review* 55, no. 1 (March, 1961): 40-52.

of the counterinsurgency problem helps explain the schizophrenic behavior of military organizations with respect to doctrinal innovation for irregular warfare.

Fifth, the complexity of the cases studied supports the argument that monocausal explanations of military doctrinal innovation are insufficient because they fail to account for the interaction effect that occurs between independent variables. Of the seven doctrines studied across two services, no single, independent variable stands out as the most causative factor for innovation. This is why future studies of military doctrine (or military innovation more broadly), should be conducted through the lens of a levels of analysis approach. Though it doesn't result in a parsimonious theory of doctrinal change, such an approach broadens the researcher's understanding of what is often a very nuanced innovation process.[11] The field of military innovation studies would be wise to move away from the seemingly perpetual debate over Posen versus Rosen. While both scholars made tremendous contributions to the literature, attempts to pit one theory against the other oversimplify the causes of innovation and prevent recognition of potential for the explanations to be complementary. The recent interservice approach to innovation based on the work of Sapolsky et al. was a major contribution to the literature, but competition between services is also not, on its own, sufficient for explaining doctrinal change.

Sixth, military doctrinal innovation during peacetime is *not* anomalous because military organizations constantly revise their theories of victory as threats change in the external environment. Counterintuitively, military organizations are uncomfortable with periods of peace because their leaders are forced to make assumptions about the character of future war, but are not afforded an opportunity to confirm or deny those assumptions in war. As Posen notes, "[d]octrine must lend some utility and coherence to the necessarily disjointed and partial peacetime

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[11] Similar to the way in which Levy and Thompson, 2010, do with respect to the causes of war.

simulations of the rigors of war."[12] As General Ridgway stated, "[i]t is not the dangerous days of battle which most strongly test the soldier's resolution, but the years of peace, when many voices, offering many counsels, bewilder and confound him."[13] Since doctrinal change during war is even more difficult, militaries are apt to initiate change processes during peace. As Donald Rumsfeld infamously stated, "you go to war with the army you have, not the army you might want or wish to have at a later time."[14]

Wilson tells us that when an organization is distressed, the incentives for accurate problem identification go up, and the organization is willing to devote more of its limited resources to problem solving. A military organization is most stressed when it is in combat. However, organizational distress is not exclusive to combat. Distress in peacetime manifests itself in the form of reduced budgets, uncertainty regarding the capability and intentions of adversaries, angst over the suitability of existing modes of fighting, and the continuous desire to prevent encroachment of your jurisdictional domain by other services. This distress compels military organizations to initiate processes of doctrinal change. When fear of stagnation during peace motivates military officers to promote change, there is always potential for change that is not necessary or prudent.

Finally, the existence of a doctrinal institution with purview over doctrine creation, publication, and distribution, will increase the volume of doctrine that a service produces and it will create a norm for a reliance on formal doctrine. While obvious, this point is important because it sheds light on why the Army has a longer tradition of formal doctrine than the Marine Corps.

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[12] Barry R. Posen, "Foreword: Military Doctrine and the Management of Uncertainty," *The Journal of Strategic Studies* 39, no. 2 (2016): 167.

[13] Matthew B. Ridgway, *Soldier: The Memoirs of Matthew B. Ridgway* (New York: Harper & Brothers, 1956), p. 286.

[14] See: http://www.nytimes.com/2004/12/08/international/middleeast/iraqbound-troops-confront-rumsfeld-over-lack-of.html.

More importantly, it helps explain why the Army has consistently strived to reinvent itself doctrinally since the establishment of TRADOC in 1973. Today, TRADOC's stated purpose is to "change the Army for the future."[15] The fact that the organization exists to change the Army suggests that change is necessary and continual.

It's worth considering whether or not the proliferation of keystone doctrines and their rollout through comprehensive branding campaigns is indicative of too much change in the Army. Bacevich illustrates the concern best: "The fitfulness of recent American military thought stands in contrast to the orderly and consistent evolution of Soviet doctrine. Consistency, especially if it implies stagnation, may not be a virtue. On the other hand, neither is continuous change masquerading as reform. At some point, the frequency with which the leadership steps off in a new direction outstrips the institution's ability to follow. However well intentioned, such change leads to disorientation and confusion rather than improvement."[16] Doctrinal schizophrenia might be more harmful for a military organization than doctrinal stasis.

6.2. Recommendations for Future Research

The study of military doctrine is important for political science and the state. Besides serving as useful guidance to a military on how to fight, doctrine orients the military organization on "the preparation for possible battles that are critical to the success of a state's foreign policy," it informs society about "what the organization does," and it reassures civilians that the military is not a threat to the state.[17] Military doctrine is important for reasons that go beyond its practical purpose inside the military organization. Militaries use doctrine to deal with uncertainty, and much of that uncertainty stems from the international political environment. Doctrine specifies the

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[15] See http://www.tradoc.army.mil/SitewideContent_TRADOC/Docs/TRADOC_Priorities.pdf.
[16] Andrew J. Bacevich, *The Pentomic Era: The U.S. Army Between Korea and Vietnam* (Washington: National Defense University Press, 1986), pp. 143-144.
[17] Posen, 2016, p. 160.

means that a military intends to employ, and those means cannot be divorced from political and strategic objectives. Also, as we see in the cases in this study, the doctrine in a military's formal manuals, at least in the case of the U.S. military, is not boilerplate. Formal doctrines have a significant effect on military training and education, they develop cohesion among soldiers, and they provide a much-needed framework for how militaries plan on fighting in war. This is not to suggest that some doctrines are not more influential on the workings of a military organization than others. As we see in the case of the U.S. Army, doctrines purported to emphasize operations for irregular warfare were underdeveloped and inconsequential for military operations in war.

Farrell and Terriff argue that focusing on doctrine is problematic because: (1) not all militaries have a doctrinal tradition, (2) doctrine means different things in different national contexts, (3) changes to doctrine are unimportant if they don't come with changes to the central functions of the organization, and (4) doctrine might serve political ends as much as they might serve strategic or operational ends.[18] I concede the first point - comprehensive doctrines are not the norm in most non-western militaries. The authors' second and third points illustrate the importance of precisely defining doctrine and ensuring that you only label a doctrinal change as a major one if it comes with changes to the central functions of the military organization. Finally, I don't dispute the authors' claim that doctrine might also serve political ends, but this is precisely the reason that we should study it.

Further research on military doctrine should focus on four areas.

First, the influence of defense budget authorizations on military doctrine and doctrinal change is understudied. Asa A. Clark IV provides the most comprehensive theoretical account of

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[18] Theo Farrell and Terry Terriff, "The Sources of Military Change," in Farrell and Terriff, eds. *The Sources of Military Change: Culture, Politics, Technology (*Boulder, CO: Lynne Rienner Publishers, 2002), pp. 4-5.

the effect of defense budgets on military doctrine formulation.[19] Clark hypothesizes that during

periods of increasing budgets (budgetary feast), military organizations are inclined to retain

existing status quo doctrines and rarely innovate. During periods of decreasing budgets (budgetary

famine), military organizations are inclined to innovate doctrinally to attain their own "doctrinally-

sanctioned domains" within which they can assure an autonomy of roles and missions.[20] This

theory is counterintuitive. I considered the influence of budget authorizations on doctrine in this

study, but a quantitative analysis might be a more effective way to do so. The challenge for the

researcher is to account for the possibility that changes in the allocation of the budget might already

take into account upcoming changes to doctrine. There is significant room here for future research.

Second, we still know very little about the influence of the senior military leader on

doctrinal innovation. Collins makes a significant contribution in this area. He finds that senior

leaders play a significant role in the adoption of military innovations but "in order for innovation

to occur, the senior military leader must also employ the right influence tactics throughout the

innovation process."[21] Collins only focuses on one doctrinal innovation - the adoption of

counterinsurgency doctrine under General David Petraeus in the 2003 Iraq War. My research on

Active Defense illuminated DePuy's influence on the Army's Active Defense doctrine, but it is

not clear if the Army would have developed the same defense-oriented doctrine in the absence of

DePuy. Better understanding of the role of military leaders on doctrinal innovation would

contribute to individual-level theories of international relations. It also has implications for the

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[19] A. A. Clark, "Interservice Rivalry and Military Reform," in Asa A. Clark, Peter W. Chiarelli, J.S. McKitrick, and J.W. Reed, eds., *The Defense Reform Debate: Issues and Analysis* (Baltimore: Johns Hopkins University Press, 1984), pp. 250-271.

[20] Ibid., p. 259.

[21] Liam S. Collins, *The Criticality of the Senior Military Leader* (Ph.D. diss, Princeton University, 2014), p. 313.

state, given that military leaders are nominated and confirmed by civilians in the political establishment.

Third, scholars would be wise to study the inconsistency between learning from past wars and estimating the character of future wars.[22] To what extent should militaries consider lessons learned from previous wars to develop doctrine and methods of fighting future wars? Is the U.S. military's record of poor performance in counterinsurgency due to a failure (or unwillingness) to learn from past engagements in irregular warfare, or are the prospects for success in counterinsurgency operations dismal regardless of the character of doctrine?

Finally, future research might consider the effect of allied preferences on a state's military doctrine. The Army's Active Defense doctrine drew heavily from Germany's forward defense concept. The preferences of leaders in the German High Command as they related to the defense of NATO Europe appeared to influence the military doctrine developed by the U.S. Army. Future research might examine how the strategic objectives of an ally affect a state's military doctrine.

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[22] Magnus Petersson, Thomas Slensvik, and Palle Ydstebo, "Introduction," *The Journal of Strategic Studies* 39, no. 2 (2016): 183.

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