

We've Been Here Before: The US Army's Transition to Large Scale Ground Combat After Vietnam

A Monograph

by

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Abstract

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Currently, the Army is undergoing a major transformation away from limited contingencies in Iraq and Afghanistan and relearning how to conduct Large Scale Ground Combat Operations (LSGCO). While this marks a fundamental divergence in the Army's concentration over the last 17 years, a modern historical example of this transition exists. From 1974-1991, the Army underwent a comprehensive restructuring that turned the attention from limited contingency operations in Vietnam to fighting a major land war in Europe.

To understand this transformation, this study examines changes in doctrine and division-level organizations and how the Army validated those changes from the end of Vietnam through the Gulf War. This monograph uses a structured and focused approach to assess this transition. Eight focused research questions frame the inquiry around one detailed case study. Additionally, three tenets from the Army's Operating Concept provide the focus of the paper: lethality, innovation, and adaptability.

The empirical evidence collected supports the study's thesis that transformations in doctrine and organizations, validated in training and operations, enabled the Army to become a lethal, adaptable, and innovative force during its transition to LSGCO after the Vietnam War.

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Acronyms

ACC	Army Capstone Concept
ACAB	Air Cavalry Attack Brigade
AHB	Attack Helicopter Battalion
AOC	Army Operating Concept
AOE	Army of Excellence
ARVN	Army of the Republic of Vietnam
AVF	All Volunteer Force
CAB	Combat Aviation Battalion
CAS	Close Air Support
CONARC	Continental Army Command
DIVARTY	Division Artillery
DRS	Division Redesign Study
FM	Field Manual
FoF	Force on Force
FORSCOM	US Army Forces Command
JRTC	Joint Readiness Training Center
LID	Light Infantry Division
LFX	Live Fire Exercise
LSGCO	Large Scale Ground Combat Operations
NTC	National Training Center
OPFOR	Opposition Force
PDF	Panama Defense Forces
ROAD	Reorganization Objective, Army Division
TRADOC	US Army Training and Doctrine Command

Introduction

The 2017 edition of *Field Manual (FM) 3-0, Operations* states that large-scale ground combat against a peer-threat remains the most significant readiness requirement for the US Army.¹ However, operations in Iraq and Afghanistan have preoccupied the Army and prevented it from focusing on adversaries who pose a threat on the right side of the conflict continuum. The Army has begun to address this problem by transitioning away from limited contingencies and relearning how to fight Large Scale Ground Combat Operations (LSGCO). While this marks a fundamental divergence in the concentration over the last seventeen years, a recent historical example of this transition exists. Between 1974-1991, the Army underwent a comprehensive restructuring process that turned the attention away from limited contingency operations in Vietnam and towards large-scale combat operations in Europe.

The purpose of this study is to examine how the US Army transitioned to LSGCO following the Vietnam War. To understand this transformation, the following case study examines changes in doctrine and division-level organizations and how the Army validated those changes from the end of Vietnam through the Gulf War. Ultimately, this study posits that transformations in doctrine and organizations, validated in training and operations, enabled the Army to become a lethal, adaptable, and innovative force during its transition to LSGCO after Vietnam.

This study is significant to both military practitioners and historians. The National Defense Strategy, the US Army Operating Concept (AOC), and FM 3-0 (2017) reemphasizes the importance of preparing to fight and win against peer competitors. Military practitioners can apply the lessons from the post-Vietnam transformation to the Army's current shift towards LSGCO. Further, the military historian will gain a better understanding of how the Army restructured the force in the decades following Vietnam. While an abundance of primary and

¹ US Department of the Army, *Field Manual (FM) 3-0, Operations* (Washington, DC: Government Printing Office, 2017), ix.

secondary sources exists on the post-Vietnam Army, this study specifically concentrates on the process used to refocus on large-scale combat. Finally, this study will inform historians who are interested in studying the actions of the US military at the end of the Cold War.

This study measures the significance of the transition to LSGCO after Vietnam using three tenets of Army operations found in the AOC. These tenets allow commanders to align multiple efforts to achieve campaign objectives and enable forces to achieve, retain, and exploit the initiative.² The three tenets are lethality, adaptability, and innovation. Defining these terms is essential for establishing a common understanding throughout the study. Lethality is the ability to defeat or destroy enemy forces through overmatch and the application of superior firepower. The combination of skill, training, and availability of superior weapons enable forces to defeat or destroy an enemy. Adaptability is the ability to respond to emergent needs or changes without a loss of functionality. Adaptable leaders thrive in ambiguity, accept prudent risk, and remain mentally agile when confronting problems. Innovation is the result of critical and creative thinking and the ability to convert new ideas into valued outcomes. It drives the development of new ways and means to anticipate, stay ahead of competitors, and achieve mission accomplishment.³ Finally, since the Army does not specifically define LSGCO, this monograph will create a common understanding based on descriptions of large-scale combat found in FM 3-0 (2017). LSGCOs occur in the form of major operations and campaigns aimed at defeating an enemy's armed forces and warfighting capabilities. LSGCO occur on the far end of the conflict continuum and are characterized by intensity, lethality, complexity, and uncertainty.⁴

This study argues that transformations in doctrine and organizations, validated in training and operations, enabled the Army to become a lethal, adaptable, and innovative force during its

² US Department of the Army, *TRADOC Pamphlet 525-3-1, The US Army Operating Concept* (Washington, DC: Government Printing Office, 2014), 20.

³ *Ibid.*, 21-22.

⁴ US Army, *FM 3-0*, (2017), 1-1 through 1-2.

transition to LSGCO after Vietnam. The study uses three hypotheses to test this thesis. The first hypothesis is: Changes in doctrine and organizations, validated in training and operations, enabled the Army to become more lethal during its transition to LSGCO. The second hypothesis is: Changes in doctrine and organizations, validated in training and operations, enabled the Army to become more adaptable during its transition to LSGCO. The third hypothesis is: Changes in doctrine and organizations, validated in training and operations, enabled the Army to become more innovative during its transition to LSGCO.

Eight focused research questions guide the study. The first question is: What factors drove changes in Army doctrine following the Vietnam War? The second question is: What doctrinal changes did the Army implement to refocus on LSGCO? The third question is: How did changes in doctrine impact the Army's transition to LSGCO? The fourth question is: What factors drove organizational change in the Army following Vietnam? The fifth question is: How did the Army reorganize its divisions following Vietnam? The sixth question is: How did the Army's organizational structure impact the transition to LSGCO? The seventh question is: How did the Army validate doctrinal and organizational changes following Vietnam? The eighth question is: What were the operational tests of the Army's doctrinal and organizational changes after Vietnam?

The study attempts to answer the above questions with the following limitations. First, this study only uses unclassified documents, reports, and sources, limiting the depth of analysis. Second, data collection is limited to existing research and available documentation and does not include interviews with individuals who participated in the transition. Finally, the study is limited to the period between the development of the Training and Doctrine Command (TRADOC) in 1973-1974 to the end of the Gulf War in 1991.

Due to the abundance of available research on the Army's post-Vietnam transformation, this study only focuses on changes relating to the transition to LSGCO. Even the available research on this topic exceeds the capacity of one study. Therefore, analysis of doctrine,

organizations, and validation are limited in scope. The doctrinal section only includes analysis of the 1976 and 1982 versions of FM 100-5 *Operations*. The organization section focuses on three divisional redesigns and does not scrutinize echelons above division. Validation in training is limited to the National Training Center (NTC) and the Joint Readiness Training Center (JRTC), and the examination of operational tests are constrained to Operation Just Cause and Operation Desert Shield/Storm.

This monograph is organized into six sections. Section one is the introduction. This section introduced the problem and presented the purpose and significance of the study. Additionally, this section included the hypotheses, and subsequent research questions. Section two is the literature review, which provides a thorough discussion of the theoretical and conceptual literature surrounding the need to maintaining an army prepared for LSGCO. Further, section two includes a description of the central primary and secondary sources used throughout the case study to gather empirical evidence. Section three is the research methodology. Section four presents the historical case study of the Army's transition to LSGCO after Vietnam. This monograph relies on one case study broken down into three sections: doctrine, organizations, and validation. Section five is the findings and analysis section and section six concludes the monograph with a summary of the study and recommendations for further research.

Literature Review

The purpose of this literature review is to introduce the theoretical, conceptual, and empirical research examining the Army's transition to LSGCO. The first section addresses the theory of preparing armies for war using the writings of three prominent military theorists: Carl von Clausewitz, Antoine-Henri Jomini, and Helmuth von Moltke. The next section addresses the conceptual and doctrinal lens the Army currently uses to prepare for LSGCO. This section includes the review of the Army Capstone Concept (ACC), the AOC, and the 2017 version of FM 3-0 *Operations*. Finally, the empirical section introduces primary and secondary sources

specifically focused on the Army's transition to LSGCO after the Vietnam War. Given that an abundance of sources exists on this topic, this study only focuses on the transformational elements of doctrine, organizations, and validation.

Carl von Clausewitz addresses the relationships between preparation and war. Clausewitz categorizes preparation for war and war itself into two specific and distinct classes. War preparation includes the creation, discipline, and maintenance of a force.⁵ The art of war encompasses the creation of forces, arming and equipping soldiers, and exercising units. Clausewitz believed that training remained the necessary condition to prepare for combat and the effort leaders and units placed in training and preparation served as a means to victory.⁶ In his discussion on the friction of war, Clausewitz highlights the importance of training an army during peace. He postulates that soldiers must develop habits to address the friction, danger, and physical exertion of war. Without combat experience, peacetime maneuvers testing the judgement and reaction of soldiers in an environment that best replicates combat creates habits and provides a distinct advantage over armies that drill and train mechanically.⁷

Antoine-Henri Jomini establishes a connection between military preparedness and the success of the state. He argues that the government has a responsibility to maintain a strong army, capable of prosecuting short and decisive wars.⁸ Jomini contends that both the statesman and the commander must consider the fundamental value of their soldiers, maintain fighting spirit by not placing unneeded requirements on the army, and prevent inertia by not containing soldiers and units inside garrisons.⁹ Jomini posits that in order to maintain a marked advantage during prolonged periods of peace, armies must participate in relevant maneuvers and exercises. Further,

⁵ Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (New York: Alfred A. Knopf, 1993), 131-132.

⁶ Ibid., 127-129, 187.

⁷ Ibid., 122.

⁸ Antoine de Jomini, *The Art of War* (London: Greenhill Books, 1996), 45-47, 49.

⁹ Ibid., 42, 63.

he accentuates the need of the army to develop a good organization and emphasizes the importance of drilling and officer education. Finally, Jomini references the importance of an army maintaining superior armament with a general staff capable of applying them effectively in battle.¹⁰

Helmuth von Moltke wrote about the relationship between maintaining peace and the military. He viewed the army as the nucleus of foreign policy. Moltke links a nation's ability to advance a policy of peace to maintaining a strong and capable army prepared for war. The army remained ready to intervene on behalf of its nation if diplomacy failed to achieve policy objectives.¹¹ Moltke understood the necessity of maintaining a strong and cohesive army to meet policy goals. He argued that a nation could not piece together an army in times of crisis. Conversely, an army required continuity and years of training, where soldiers acquire valuable experience through continued service. Permanency and stability formed the army's foundation.¹² Additionally, Moltke posited, "no plan of operations extends with certainty beyond the first encounter with the enemy's main strength."¹³ To remain adaptable, an army trained for numerous contingencies, with the proper equipment, under conditions that best replicate the combat it is most likely to encounter.¹⁴

Since 2001, the focus on counterinsurgency and limited contingency operations created an opportunity for adversaries to close the competitive gap with the US Army. In order to address this disparity, the Army changed how it confronts threats across the conflict continuum.¹⁵ Three key documents outline the Army's current migration back to LSGCO.

¹⁰ Jomini, *The Art of War*, 43-44, 47.

¹¹ Daniel Hughes, *Moltke On the Art of War, Selected Writings* (New York: Random House, 1993), 28.

¹² Ibid., 35.

¹³ Hughes, *Moltke On the Art of War*, 45.

¹⁴ Ibid., 259.

¹⁵ Michael D. Lundy, "Foreword," *Military Review* 98, no. 5 (September-October 2018): 1.

In 2012, the ACC established the precedence for the shift away from counterinsurgency. The ACC outlines the vision for the future operational environment and the Army's success criteria within the mid-term timeframe. The ACC describes how the future Army will operate in complex environments characterized by increased tempo and technologically progressive adversaries.¹⁶ The ACC stresses the importance of providing a decisive and operationally adaptable land power to the joint force.¹⁷ With the proliferation of potential adversaries, units must train for a diversity of operations against realistic threats.¹⁸ To deter or dominate on the future battlefield, the Army must equip forces with the appropriate technology to either discourage competition or enable overmatch.¹⁹

The 2014 version of the AOC provides the intellectual structure to reframe how the Army prepares to address threats beyond 2025.²⁰ The AOC diverges from the singular focus on limited contingency operations, presenting a requirement for the Army to focus on adversaries posing a conventional threat to the United States. With the inclusion of peer adversaries capable of challenging the United States in LSGCO, the AOC presents recommendations on how the Army operates and prepares the force to succeed on the future battlefield. To counter the myriad of threats envisioned in the future operating environment, the AOC advances seven core competencies for the Army centered on leader development, force design, and unit training.²¹

Finally, the 2017 version of FM 3-0 is the Army's most significant move towards LSGCO to date. FM 3-0 (2017) codifies the concepts introduced in the ACC and AOC and establishes the doctrinal foundation for how Army forces conduct LSGCO. The manual refocuses

¹⁶ US Department of the Army, *TRADOC Pamphlet 525-3-0, The US Army Capstone Concept* (Washington, DC: Government Printing Office, 2012), 4.

¹⁷ *Ibid.*, 11.

¹⁸ *Ibid.*, 20, 32.

¹⁹ *Ibid.*, 12.

²⁰ US Army, *TRADOC PAM 525-3-0*, (2012), i.

²¹ *Ibid.*, 22.

the Army for LSGCO by describing how the Army will defeat enemy forces in close combat in the most demanding operating environments.²² FM 3-0 (2017) breaks LSGCO into three types of operations: offensive, defensive, and the consolidation of gains, and describes how formations train for large-scale combat. Further, the manual highlights a fundamental shift for the Army by reintroducing the corps and division headquarters as combat formations.²³

The restructuring of FM 100-5, *Operations* catalyzed doctrinal change after Vietnam. Two versions of FM 100-5 (1976 and 1982) demonstrated the Army's migration towards LSGCO. FM 100-5 (1976) introduced the Active Defense concept and was the Army's first attempt to break away from the Vietnam mindset. FM 100-5 (1982) germinated from the force-wide criticism of Active Defense and built on the foundation established in the 1976 edition. FM 100-5 (1982) introduced the AirLand Battle concept which was offensive-centric and centered on the operational level of war and the deep attack.²⁴ Three additional sources provide insight into evolution of FM 100-5. Benjamin M. Jensen's *Forging the Sword: Doctrinal Changes in the U.S. Army* focuses on the evolution of Army doctrine and specifically addresses the variations and progression of the Army's operations manual since 1945. Paul H. Herbert's *Deciding What Has to Be Done: General William DePuy and the 1976 Edition of FM 100-5 Operations* explores the development of the Active Defense doctrine and its influence on the Army after Vietnam. John L. Romjue's *From Active Defense to AirLand Battle: The Development of Army Doctrine 1973-1982* examines both major revisions of FM 100-5 and provides the historical background of each concept.

Following the war in Vietnam, the Army underwent three significant divisional redesigns: The Division Redesign Study (DRS), Division-86, and the Army of Excellence (AOE)

²² US Army, *FM 3-0*, (2017), 5-3.

²³ *Ibid.*, ix, xi.

²⁴ John L. Romjue, *From Active Defense to AirLand Battle: The Development of Doctrine 1973-1982*, TRADOC Historical Monograph Series (Fort Monroe, VA: US Army Training and Doctrine Command, 1984), 67.

initiative. John B. Wilson's *Maneuver and Fire Power: The Evolution of Divisions and Separate Brigades* traces the evolution of Army divisions to the Revolutionary War and provides an assessment of the three divisional redesigns pertinent to this study. John L. Romjue's *The Army of Excellence: The Development of the 1980s Army* addresses the redesign of the Army's heavy division and the introduction of the standard light division in the 1980s force. Further, Romjue's work examines the relationship between the heavy and light formations inside the AirLand Battle construct. John L. Romjue also traced the origins and development of the Army's contemporary heavy and light divisions in *A History of Army 86, Volumes I and II*. In the *United States Army Force Structure and Force Design Initiatives, 1939-1989*, Glen R. Hawkins details each force design initiative, providing details on the composition of each divisional structure since the World War Two. Finally, Timothy B. Hassell's *Army of Excellence Report, Volumes II and III* describes the modifications to both the heavy and light divisions during the transition to the AOE initiative and how the structures differ from the Divison-86 designs.

Anne W. Chapman's *The Origins and Development of the National Training Center 1976-1984* explores the factors that led to the Army's decision to start training battalions and brigades at NTC. The study links the development of NTC to the post-Vietnam doctrinal shift towards LSGCO.²⁵ Further, Chapman's follow up study, *The National Training Center Matures 1985-1993* examines the progression and modernization of the training center through the Gulf War and the end of the Cold War. Thomas Macia's "Light Force National Training Center Concept" outlines the original model for the infrastructure, training, and personnel requirements for JRTC. Rodler F. Morris' "A History of the Joint Readiness Training Center, Volume I: Creating a Blueprint for The Original Institution, 1973-1987" provides the historical background

²⁵ Anne W. Chapman, *The Origins and Development of the National Training Center 1976-1984* (Fort Monroe, VA: Office of the Command Historian, US Army Training and Doctrine Command, 1992), 13-17.

for the early years of JRTC, offering a comprehensive analysis from conceptualization through implementation of the new training center.

Lawrence A. Yates' *The U.S. Military Intervention in Panama* details the US military's planning, execution, and post-hostility operations in Panama. *Operation Just Cause: The Storming of Panama* by Thomas Donnelly, Margaret Roth, and Caleb Baker supplement the work by Yates but focuses primarily on the role of the US Army. Together, these sources cover the strategic, operational, and tactical actions during Just Cause. Finally, to gain an appreciation of the Army's performance during Desert Storm, this study relied on three sources that narrowed the focus from Army-level actions to corps-level operations: Robert H. Scales' *Certain Victory: The U.S. Army in the Gulf War*, Richard M. Swain's *Lucky War: Third Army in Desert Storm*, and Stephen Bourque's *Jayhawk!: The VII Corps in the Persian Gulf War*.

Finally, because this monograph focuses on three distinct elements, a handful of sources informed multiple sections. James F. Dunnigan and Raymond M. Macedonia's *Getting It Right* evaluates the US military's comprehensive reform movement after the Vietnam War. Second, Henry G. Gole's biography *General William E. DePuy: Preparing the Army for Modernization* provides detailed insights into one of the central figures who spearheaded the Army's post-Vietnam transformation. The *Selected Papers of General William E. DePuy* compiled by Richard M. Swain supplement the biography and provides a first-hand account of General DePuy's articles and correspondence as the commander of Training and Doctrine Command (TRADOC).

The literature review section introduced the theoretical, conceptual, and empirical literature used to understand the Army's transition to LSGCO after the Vietnam War. Specifically, the existing literature provide a foundation for understanding the changes in doctrine and organizations and how those changes were validated during the Army's transition to large-scale combat.

Methodology

This monograph uses a structured and focused case study approach to assess the US Army's transition to LSGCO after the Vietnam War. Eight focused research questions structure the inquiry around one detailed case study. Additionally, three tenets from the AOC provide the focus of the paper: lethality, innovation, and adaptability. The choice of one case study allows the researcher to thoroughly analyze three specific elements inside the more comprehensive reform effort from 1974 through 1991. While each of the elements can serve as stand-alone cases, the combination of the three sections provides a complete examination of the Army's shift to LSGCO after Vietnam. Although combining the elements into one case study sacrifices the breadth of the study, it increases the detail of analysis. Further, the single study allows the monograph to remain focused on reforms as they pertain to LSGCO. The three elements used in this case study are doctrine, organizations, and validation.

The overarching research focus is on how the Army transitioned to LSGCO following Vietnam. As previously stated, the Army's holistic transformation encompasses a variety of areas. However, the eight research questions in this monograph concentrate on reforms as they relate to LSGCO. The first three questions focus on the doctrinal changes the Army implemented after Vietnam. These questions examine the external and internal dynamics that steered the Army back to large-scale combat. Further, these questions address the creation, evolution, implementation, and impact of Active Defense and AirLand Battle introduced into the force from 1976 through 1982. Question one: What factors drove changes in Army doctrine following Vietnam? Question two: What doctrinal changes did the Army implement that enabled the force to transition to LSGCO? Question three: How did changes in doctrine impact the Army's transition to LSGCO?

The next questions address three major organizational studies the Army implemented in the post-Vietnam era. This section evaluates changes to the division-level organizations from the mid-1970s through the mid-1980s, examining the transformation of the heavy division and the

introduction of the light division into the Active Defense and AirLand Battle concepts. Question four: What factors drove organizational change in the Army following Vietnam? Question five: How did the Army reorganize its divisions following Vietnam? Questions six: How did changes in the Army's organizational structure impact the transition to LSGCO?

The final two questions address validation and examine both training and operations. Question seven: How did the Army validate doctrinal and organizational changes following Vietnam? Question eight: What were the operational tests of the Army's doctrinal and organizational changes after Vietnam? This section focuses on the innovations and adaptations the Army implemented after Vietnam to train units for LSGCO in Europe and subsequently demonstrates how changes were applied in real-world operations. Finally, the eight research questions attempt to validate the monograph's thesis: The transformations in doctrine, organizations, and training enabled the Army to become a more lethal, adaptable, and innovative force as it transitioned to LSGCO.

The following case study follows four consecutive steps. First, is the collection of empirical data (both primary and secondary) as it relates to the core subjects of doctrine, organizations, and validation. Next, is the analysis and synthesis of the research using lethality, adaptability, and innovation as the measurements of success. Finally, the information from the case study will attempt to validate the three hypotheses presented in the introduction before moving to the conclusion.

The methodology section outlined the process for assessing the Army's transition to LSGCO. Further, this section introduced the eight research questions used to guide the study. The following case study uses this methodology to determine the role of doctrine, organizations, and validation in the Army's migration to LSGCO from 1974-1991.

Case Study

Having completed the theoretical, conceptual, and empirical review, this monograph now turns to the case study. The following section uses one comprehensive case to examine the US Army transition to LSGCO. Because the shift to large-scale combat is only one part of the Army's transformation after Vietnam, this study only emphasizes doctrine, organizations, and validation.

The Vietnam War fundamentally changed the Army. In 1955, the United States began training and advising the Army of the Republic of Vietnam (ARVN) in its fight against North Vietnam. By 1964, over 4,000 American service members were in South Vietnam, participating in the expanding conflict.²⁶ In early 1965, the United States deployed its first major units to South Vietnam to protect key bases and attempt to deter North Vietnamese and Vietcong aggression.²⁷ The war continued to escalate, and by 1969, almost 500,000 soldiers and Marines were in South Vietnam. That same year, President Nixon shifted the US strategy away from major combat operations and towards "Vietnamization" or the gradual handover of operations to the ARVN.²⁸ With the change in strategy came the decision to begin withdrawing troops from Southeast Asia. The first units rotated back to the United States in the summer of 1969, and by early 1973, all ground forces were out of South Vietnam.²⁹

For nearly a decade, the conflict in Southeast Asia consumed the Army. Frustrations mounted as tactical victories on the battlefield failed to slow the North Vietnamese commitment to the war. The reliance on draftees exacerbated the problem by preventing the Army from retaining experience. Further, as American casualties increased and the domestic support for the

²⁶ Shelby L. Stanton, *Rise and Fall of An American Army: US Ground Forces in Vietnam 1965-1973* (Novato, CA: Presidio Press, 1985), 5, 10.

²⁷ Ibid., 20-21, 31.

²⁸ Ibid., 284, 283.

²⁹ Ibid., 363.

war waned, the desire to fight diminished. As the Army looked to transition to LSGCO, it did so with a force worn out from its experience in Southeast Asia.

Militarily, the conflict in South Vietnam distracted the Army from focusing on the Soviet Union. The need to increase troop levels in Southeast Asia required the Army to sacrifice personnel strength in Europe. By 1969, American divisions in Germany were short thousands of troops.³⁰ The longer the Army fought in Vietnam, the more its skills in maneuver warfare atrophied.³¹ While the US and NATO committed significant military resources to Southeast Asia, the Soviet Union focused on modernizing its military.³² Starting in 1974, the US Army addressed this deficiency through a comprehensive transformation in doctrine and organizations, and validated by training and operations through the Gulf War.

Doctrine

What factors drove changes in Army doctrine following Vietnam?

Starting in 1965, the USSR increased its offensive capabilities, created new tank divisions, and moved its forces closer to the NATO border.³³ As the United States focused on Vietnam, the Soviet Union enjoyed a decade of unrivaled defense upgrades.³⁴ When the United States withdrew from Vietnam, the Army shifted its attention back to NATO.³⁵ The choice to refocus on Europe provided the Army with the foundation to rebuild. The strategic focus of the Army transitioned away from limited contingencies and back to fighting conventional wars.³⁶

³⁰ James F. Dunnigan and Raymond M. Macedonia, *Getting it Right: American Military Reforms After Vietnam to the Gulf War and Beyond* (New York: William Morrow, 1993), 92.

³¹ Stanton, *Rise and Fall of An American Army*, 366.

³² Dunnigan and Macedonia, *Getting it Right*, 108.

³³ *Ibid.*, 108-109.

³⁴ *Ibid.*, 114.

³⁵ Richard Lock-Pullan, "An Inward Looking Time": The United States Army, 1973-1976, *The Journal of Military History* 67, no. 2 (April 2003): 486.

³⁶ *Ibid.*, 486, 488.

Restructuring the Army after Vietnam required comprehensive overhaul.³⁷ As the Army's senior leadership contemplated how to build a modern force, the 1973 Arab-Israeli War provided the harbinger for change. Arab forces inflicted heavy losses on the Israelis using Soviet doctrine and weapon systems.³⁸ The conflict in the Middle East validated the speed, lethality, and complexity of the modern battlefield. The war provided the United States with a focus for its modernization efforts and the rationale for reform.³⁹

A significant element of the Army's doctrinal transformation after Vietnam was the restructuring of the Continental Army Command (CONARC). Developed in 1955, CONARC had the responsibility for all the active component units in the Continental United States (CONUS), the training centers and schools, and served as the proponent for doctrine.⁴⁰ After Vietnam, the Army's senior leadership addressed the organizational challenges of CONARC by splitting it into two commands.⁴¹ US Army Forces Command (FORSCOM) assumed responsibility for all the units within CONUS, while TRADOC took control of the Army's training, schools, combat development, and doctrine.⁴² The creation of TRADOC centralized the Army's ability to conceptualize, formulate, and implement doctrine. TRADOC became the organization to develop new ways to approach warfare, and it served as the underpinning for the Army's transition back to LSGCO.⁴³ TRADOC's inaugural command went to General William DePuy, an instrumental

³⁷ For a comprehensive report on the Army's transition after the Vietnam War see: Susanne C. Nielsen's study *An Army Transformed: The U.S. Army's Post-Vietnam Recovery and the Dynamics of Change in Military Organizations*, Letort Papers (Carlisle Barracks, PA: Strategic Studies Institute, 2010).

³⁸ Dunnigan and Macedonia, *Getting it Right*, 115.

³⁹ Lock-Pullan, "An Inward Looking Time," 498, 500.

⁴⁰ Benjamin King, *Victory Starts Here: A 35-year History of the US Army Training and Doctrine Command* (Fort Leavenworth, KS: Combat Studies Institute Press, 2008), 1.

⁴¹ Benjamin M. Jensen, *Forging the Sword: Doctrinal Changes In The U.S. Army* (Stanford, CA: Stanford University Press, 2016), 31.

⁴² King, *Victory Starts Here*, 2.

⁴³ Jensen, *Forging the Sword*, 32, 48, 53.

leader in the Army's post-Vietnam transformation effort.⁴⁴ Throughout the 1970s, General DePuy developed a vision for the future of the Army, codified in the 1976 publication of the Army's capstone manual, FM 100-5.⁴⁵

What doctrinal changes did the Army implement to refocus on LSGCO?

Starting in 1974, the Army reinvented how it fought, leading to the overhaul of its operations manual in 1976 and the subsequent edition in 1982. The 1976 version of FM 100-5 changed the trajectory of the Army. If dismounted infantry operations defined the Vietnam-era Army, mechanized operations defined the future force.⁴⁶ In the early 1970s, the United States shifted its strategic focus back to NATO.⁴⁷ By 1976, General DePuy introduced a new version of the Army's capstone field manual, constituting a momentous change in the Army's tactical doctrine. The introduction of the new operations manual changed the way leaders thought about warfare.⁴⁸

Using lessons from the Arab-Israeli War, FM 100-5 (1976) emphasized fighting outnumbered.⁴⁹ The manual addressed lethality of modern weapons, the enemy's ability to employ them with great efficiency, the expectation of sustained casualties, and advanced the importance of winning the first battle in a future war.⁵⁰ The Army's central problem was

⁴⁴ Henry G. Gole, *General William DePuy: Preparing the Army for Modern War* (Lexington: The University of Kentucky Press, 2008), 230-231.

⁴⁵ Ibid., 235, 239.

⁴⁶ William E. DePuy, "Letter to General Frederick C. Weyand Dated 29 April 1975" in *Selected Papers of General William E. DePuy*, compiled by Richard M. Swain (Fort Leavenworth, KS: Combat Studies Institute, 1994), 161.

⁴⁷ Roger J Spiller, "In The Shadow of The Dragon: Doctrine and the US Army After Vietnam," *The RUSI Journal* 142, no. 6 (December 1997): 43.

⁴⁸ Paul H. Herbert, *Deciding What Has to Be Done: General William E. DePuy and the 1976 Edition of FM 100-5, Operations*, Leavenworth Papers no. 16 (Fort Leavenworth, KS: Combat Studies Institute, 1988), 7.

⁴⁹ Dunnigan and Macedonia, *Getting it Right*, 119.

⁵⁰ US Department of the Army, *Field Manual (FM) 100-5, Operations* (Washington, DC: Government Printing Office, 1976), 1-1.

confronting a numerically superior enemy on an armored battlefield in Europe.⁵¹ The manual centered on the defense of NATO as the first-priority by introducing the “Active Defense” concept. Germany did not provide a significant amount of geography for a defense in depth, so defending West Germany required NATO forces to position forward of the inter-German border against a numerically superior force.⁵² The ability to win the first fight without retrograding inside West Germany became vital, as losing one battle could result in the loss of Europe.⁵³

FM 100-5 (1976) served as the instrument for a small group of senior leaders to posit a new theory on how the Army fights.⁵⁴ Active Defense focused the Army on NATO and stressed combined arms maneuver (CAM), fighting outnumbered, increasing lethality through firepower, and actively defending Europe. While the reintroduction of FM 100-5 stimulated strategic and tactical debate, it did so with controversy.⁵⁵ From 1977 to 1981, the Army reviewed the Active Defense concept and replaced it in 1982.

The transition to AirLand Battle marked the Army’s second significant doctrinal shift following Vietnam. The Army developed AirLand Battle in response to feedback and perceived limitations of the 1976 manual. While numerous factors contributed to the revision, three main elements describe the Army’s decision to replace its capstone doctrine within a six-year period.⁵⁶ First, FM 100-5 (1976) focused on Central Europe and largely ignored contingencies outside of NATO. Second, the 1976 version developed a reputation for being too defensive. Finally, the

⁵¹ Romjue, *From Active Defense to AirLand Battle*, 5.

⁵² Herbert, *Deciding What Has to Be Done*, 9.

⁵³ Dunnigan and Macedonia, *Getting it Right*, 120.

⁵⁴ Jensen, *Forging the Sword*, 53.

⁵⁵ Dunnigan and Macedonia, *Getting it Right*, 129.

⁵⁶ For a detailed study of the Army’s transition to AirLand Battle, see: Romjue, *From Active Defense to AirLand Battle*.

concept of defeating the Soviet's second-echelon required the Army to develop the ability to fight in-depth across an extended battlefield.⁵⁷

With the release of FM 100-5 (1982), the Army expanded its aperture to address a variety of potential adversaries. By the early 1980s, senior leaders in TRADOC believed that Active Defense placed too much emphasis on a high risk, low probability threat scenario in Germany and ignored potential threats in other parts of the world.⁵⁸ While fighting the Warsaw Pact armies remained the priority, FM 100-5 (1982) required the force to prepare for an extended range of contingency operations as well.

How did changes in doctrine impact the Army's transition to LSGCO?

Transitioning the focus to LSGCO required the Army to change how it fought. Within FM 100-5 (1976), the tank became the decisive weapon and could only survive through combined arms integration.⁵⁹ Massing firepower became an integral part of how the Army would defeat Soviet penetrations and prevent potential breakthroughs.⁶⁰ Further, tanks – with infantry and artillery support – provided the commander with the best option to penetrate enemy defenses and disrupt rear echelons and command and control (C2) nodes.⁶¹ FM 100-5 (1976) centered on mechanized warfare defining the future battlefield.⁶² Since the US would fight outnumbered, the manual presented offensive and defensive concepts emphasizing firepower as the counterbalance to numerical inferiority.⁶³ The manual acknowledged that the “outcome of combat derives from

⁵⁷ Romjue, *From Active Defense to AirLand Battle*, 31-32; Jensen, *Forging the Sword*, 68, 70.

⁵⁸ Jensen, *Forging the Sword*, 65.

⁵⁹ Herbert, *Deciding What Has to Be Done*, 7-8.

⁶⁰ Jensen, *Forging the Sword*, 45-46.

⁶¹ Herbert, *Deciding What Has to Be Done*, 34.

⁶² Jensen, *Forging the Sword*, 47.

⁶³ Romjue, *From Active Defense to AirLand Battle*, 8.

the results of offensive operations.”⁶⁴ However, with the focus on Central Europe, FM 100-5 emphasized the defense.

The discussion of combined arms included the Air Force’s role in LSGCO. Fighting a war defined by speed and depth required fixed-wing air support. FM 100-5 (1976) concentrated on the relationship between the two services and introduced five main categories of air-ground integration: air-to-air interdiction, reconnaissance and intelligence collection, battlefield interdiction, close air support (CAS), and tactical airlift.⁶⁵

Defense on the mechanized battlefield was active, with US forces confronting a numerically superior enemy with concentrated firepower.⁶⁶ Combined arms teams maximized direct and indirect fires to prevent enemy forces from mutually supporting defensive positions across the depth of the battlefield.⁶⁷ Operations within Active Defense involved five principles. First, Army leaders studied Soviet doctrine and how the Warsaw Pact armies fought. Second, commanders leveraged assets to see the entire battlefield in order to make quick and accurate decisions. Third, senior commanders decided when and where to concentrate forces through rapid mobility to maintain a 1:3 defending to attacking ratio. Fourth, the Army fought as combined arms teams to take advantage of direct fire weapon systems, indirect fires, and aviation. Finally, units exploited the advantage of the defense by maximizing cover and concealment, terrain, battle positions and obstacles.⁶⁸ Although the defense of Central Europe compelled the writers of FM 100-5 to concentrate on defensive operations, the manual did not ignore the offense.

Offensive operations within FM 100-5 (1976) included six principles and emphasized combined arms warfare. Seeing the battlefield and concentrating overwhelming combat power

⁶⁴ US Army, *FM 100-5*, (1976), 5-2.

⁶⁵ *Ibid.*, 8-2.

⁶⁶ DePuy, “Active Defense” in *Selected Papers of General William E. DePuy*, 141.

⁶⁷ *Ibid.*

⁶⁸ US Army, *FM 100-5*, (1976), 5-2 through 5-3, 5-7.

were the first two. These principles remained significant for a numerically inferior force to understand where to mass combat power along a narrow front based on the enemy's vulnerabilities.⁶⁹ The next three principles focused on destroying the enemy's air defense assets, destroying the enemy's main body, and attacking the rear area. These principles required the synchronization of maneuver forces, indirect fires, and CAS from tactical air forces.⁷⁰ Further, attacking the rear area achieved depth and disrupted the enemy's support elements and C2 nodes.

The expansion of the AirLand Battle concept reinforced offensive operations.⁷¹ FM 100-5 (1982) posited that the complexity, depth, and non-linearity of the future battlefield required the Army to fight with the other services.⁷² It expanded on the importance of airpower in the combined arms fight. The 1982 manual described in more detail how the Army would strike deep, maneuver, and disrupt enemy operations.⁷³ Army forces conducting operations with AirLand Battle "retained the initiative and, with deep attack and decisive maneuver, destroyed its opponent's abilities to fight and organize in depth."⁷⁴

Introducing the operational level of war into coincided with the expansion of AirLand Battle. The intermediate level of war provided the Army with the construct to understand how to operate in depth. Moving past the explanation of engaging and destroying enemy forces, AirLand Battle described how the Army conducted campaigns and operations in pursuit of victory and

⁶⁹ US Army, *FM 100-5*, (1976), 4-3 through 4-4.

⁷⁰ *Ibid.*, 4-5, 4-7.

⁷¹ Romjue, *From Active Defense to AirLand Battle*, 68.

⁷² US Department of the Army, *Field Manual (FM) 100-5, Operations* (Washington, DC: Government Printing Office, 1982), 1-5.

⁷³ Jensen, *Forging the Sword*, 86.

⁷⁴ US Army, *FM 100-5*, (1982), 1-5, 2-3. AirLand Battle included four tenets: initiative, depth, agility, and synchronization. Initiative required Army forces to maintain an offensive mindset. Commanders had to understand the depth of their area of operations and how to array and allocate resources to mass effects on the enemy. Agile commanders were flexible and able to make decisions before the enemy could concentrate its strength. Finally, forces achieved maximum combat power by synchronizing combined arms and exploiting successes created by tactical victories.

defined the operational level of war as the theory of large unit operations.⁷⁵ To plan campaigns and win battles, divisions and corps maximized available resources to defeat enemy forces.⁷⁶

Divisions were the most effective level of command to concentrate combat power and commanders achieved surprise by attacking away from enemy strength. Combined arms forces maintained speed to exploit penetrations and carry the attack into the enemy's rear area, while subordinate leaders remained flexible to take advantage of emerging opportunities.⁷⁷ The operational concepts for the defense concentrated on seizing the initiative. Defensive operations aimed at preventing and destroying the enemy's ability to synchronize and concentrate combat power while buying time for friendly forces to react. Units in the defense gained tactical initiative, before shifting to violent and rapid offensive operations.⁷⁸

Organizations

What factors drove organizational change in the Army following Vietnam?

Starting in the early 1960s, the Army transitioned from the Pentomic Division, to the Reorganization Objective, Army Division (ROAD) construct. The ROAD concept moved the Army away from the nuclear battlefield and provided the "flexible response" capability to address varying threats.⁷⁹ The ROAD initiative returned the Army to the triangle division concept, centered on the armored division combat commands.⁸⁰ However, the Army maximized flexibility by standardizing the division and maneuver combat battalions.⁸¹ This standardization enabled

⁷⁵ Herbert, *Deciding What Has to Be Done*, 98; US Army, *FM 100-5*, (1982), 2-3.

⁷⁶ US Army, *FM 100-5*, (1982), 2-3.

⁷⁷ *Ibid.*, 8-5 through 8-7.

⁷⁸ *Ibid.*, 10-3 through 10-4.

⁷⁹ John B. Wilson, *Maneuver and Fire Power: The Evolution of Divisions and Separate Brigades* (Washington, DC: US Army Center of Military History, 1998), 291.

⁸⁰ Richard W. Kedzior, *Evolution and Endurance: The U.S. Army Division in the Twentieth Century* (Santa Monica, CA: RAND, 2000), 29.

⁸¹ Glen R. Hawkins, *United States Army Force Structure and Force Design Initiatives, 1939-1989* (Washington, DC: US Army Center of Military History, 1989), 45.

commanders to task organize three different types of combat battalions – infantry, mechanized infantry, and tank – to address different threats.⁸²

Although the ROAD structure enabled the Army to better respond to various contingencies, the concept still revolved around attritional warfare in Central Europe.⁸³ Nevertheless, when the United States committed ground forces to Vietnam, it did so under the armored-centric ROAD concept. While the flexibility of the ROAD division allowed the Army to adapt to the fight in Southeast Asia, the ability to fight the Warsaw Pact armies diminished and the ROAD division never solved the problem of how to operate in Vietnam and Germany simultaneously.⁸⁴

The renewed focus on the USSR and the results of the Arab-Israeli War exasperated the requirement to modernize the Army. General DePuy ordered the rewriting of new tactical doctrine influenced by the lessons of that war.⁸⁵ Further, Vietnam prevented the Army from pacing the USSR, so the decade following the war saw a rapid increase in procurement of new weapon systems.⁸⁶ As the All-Volunteer Force (AVF) replaced the conscripted army of the Vietnam-era, readiness became the Army's concept for deterring aggression in Europe.⁸⁷ An Army focused on LSGCO had to be agile, employ modern weapon systems effectively, and heavy enough to survive on a modern battlefield.⁸⁸

⁸² Wilson, *Maneuver and Fire Power*, 296.

⁸³ Kedzior, *Evolution and Endurance*, 33.

⁸⁴ Ingo Trauschweizer, *The Cold War U.S. Army: Building Deterrence for Limited Wars* (Lawrence: University Press of Kansas, 2008), 180, 173.

⁸⁵ William E. DePuy, "Implications of the Middle East War on U.S. Army Tactics, Doctrine and Systems," in *Selected Papers of General William E. DePuy*, 78.

⁸⁶ Hawkins, *United States Army Force Structure and Force Design Initiatives, 1939-1989*, 54-55.

⁸⁷ Wilson, *Maneuver and Fire Power*, 367.

⁸⁸ Kedzior, *Evolution and Endurance*, 35.

How did the Army reorganize its divisions following Vietnam?

Starting in 1976, the Army underwent three organizational reforms to its combat divisions: The Division Restructuring Study (DRS), Division-86, and the Army of Excellence (AOE). These redesigns coincided with the Army's modernization efforts and the evolution of doctrine. Further, the changes to the division structure allowed the Army to address the threat in Europe and later expand to other adversaries.

TRADOC initiated the DRS in 1976 to determine the capacity of the ROAD division to meet the challenges of the modern battlefield.⁸⁹ Further, General DePuy believed that the ROAD division was not heavy enough for a mechanized war in Europe.⁹⁰ The DRS focused on optimizing anti-armor capabilities, while maximizing emergent weapon systems. The DRS produced the concept of the first heavy division by merging the mechanized and armored divisions.⁹¹ Additionally, the DRS concept changed how the Army organized combat formations. Following the recommendation of General DePuy, divisions would no longer make new weapon systems fit into existing units. Instead, weapon systems would now define the organization.⁹²

The heavy division concept supported Active Defense. Divisions retained the three-brigade construct under the ROAD organization. However, each brigade commanded three armored and two mechanized battalions.⁹³ While this concept increased the number of combat battalions, the Army reduced the size of the units to meet manning requirements. The smaller battalions increased maneuverability and the ability to mass direct fires. Further, the battalion

⁸⁹ Charles Kirkpatrick, *Building The Army For Desert Storm*, Land Warfare Paper no. 9 (Arlington, VA: US Army Institute of Land Warfare, November 1991), 10.

⁹⁰ Trauschweizer, *The Cold War U.S. Army*, 199.

⁹¹ Wilson, *Maneuver and Fire Power*, 380.

⁹² William E. DePuy, "Letter to General Frederick C. Weyand Dated 18 February 1976," in *Selected Papers of General William E. DePuy*, 180.

⁹³ Hawkins, *United States Army Force Structure and Force Design Initiatives, 1939-1989*, 59.

became the lowest level of combining arms and the integrating headquarters for anti-armor, fires, and aviation.⁹⁴

The Army never implemented the DRS division. When General Don Starry assumed command of TRADOC, he voiced two concerns with the process in which the Army attempted to implement the DRS. First, he believed the research and testing occurred too rapidly, with minimal input from the force.⁹⁵ After extending the testing of the DRS concept, General Starry concluded that it did not adequately prepare the Army to defeat the Soviets.⁹⁶ Second, General Starry concentrated on the depth of the future battlefield and the idea of the central battle concept, where maneuver and firepower converged.⁹⁷ He believed that units had to “see deep to find the following echelon, then move fast to concentrate forces, strike quickly to attack before the enemy can break our defense, and finish the fight quickly before the second echelon closes.”⁹⁸

TRADOC initiated the Division-86 study in 1978 to address the shortcomings of the DRS and better organize divisions to operate across the depth of the battlefield. Division-86 centered on the heavy division and built on the existing DRS design.⁹⁹ Unlike the truncated DRS study, the approach to Division-86 was meticulous. Under the Division-86 concept, the heavy division increased the capability to fight high intensity warfare, accounted for the pace of modern operations, and reduced the dependence on enablers outside of the organization.¹⁰⁰

⁹⁴ Patrick Ford and Edwin H. Burba Jr., *Review of Division Structure Initiatives* (Alexandria, VA: US Army Research Institute for Behavioral and Social Sciences, 1994), 9.

⁹⁵ John L. Romjue, *A History of Army 86, Vol I, Division 86: The Development of the Heavy Division, September 1978-October 1979* (Fort Monroe, VA: US Army Training and Doctrine Command, 1984), 11.

⁹⁶ Glen R. Hawkins and James Jay Carafano, *Prelude to Army XXI: U.S. Army Division Design Initiatives and Experiments 1917-1995* (Washington, DC: Center of Military History, 1997), 20.

⁹⁷ Romjue, *Army 86, Vol I*, 12.

⁹⁸ Donn Starry, “Briefing on the Battlefield Development Plan to the British Army Convention on 24 September 1980,” in *Press On! Selected Works of General Donn A. Starry*, 2 vols., Lewis Sorley, ed. (Fort Leavenworth, KS: Combat Studies Institute, US Army Combined Arms Center, 2009), 197.

⁹⁹ Hawkins, *United States Army Force Structure and Force Design Initiatives, 1939-1989*, 63.

¹⁰⁰ Kedzior, *Evolution and Endurance*, 36.

The Division-86 heavy division supported AirLand Battle and focused on the tactical and operational-levels of war. The armored and mechanized divisions built on the foundation established by the DRS. However, the total personnel in both organizations exceeded 19,000, an increase of approximately 2,000 soldiers from the DRS concept. Each division still included three maneuver brigades. The composition of the Division-86 armored division included six armored battalions and four mechanized infantry battalions, while the mechanized division included a ratio of five armored and mechanized infantry battalions.¹⁰¹ Unlike the DRS, Division-86 included an air cavalry attack brigade (ACAB) to serve as the fourth maneuver element.¹⁰² The inclusion of the ACAB addressed the division's need to challenge second echelon forces and reduced the reliance on corps assets across the extended battlefield.

Division-86 considered the light infantry division (LID) as well. With the sole focus on Europe, the Army contemplated mechanizing nearly every divisions through 1979.¹⁰³ However, as the military considered new contingencies, it became apparent that the Army required a rapidly deployable force, capable of operating in austere environments.¹⁰⁴ The Chief of Staff, US Army (CSA), General Edward C. Meyer, directed the light division remain under 14,000 soldiers and capable of deploying on aircraft no larger than the C-141.¹⁰⁵ Additionally, the light division had to be capable of reinforcing NATO, which required the use of improved anti-tank technology.¹⁰⁶ Although TRADOC made four attempts to design a LID under the Division-86 requirements, none were approved until the transitioned to the AOE in 1983.

¹⁰¹ John L. Romjue, *A History of Army 86, Vol II, Division 86: The Development of the Light Division, the Corps, and Echelons Above Corps, November 1979-December 1980* (Fort Monroe, VA: US Army Training and Doctrine Command, 1984), 10.

¹⁰² Hawkins, *United States Army Force Structure and Force Design Initiatives, 1939-1989*, 65.

¹⁰³ Romjue, *The Army of Excellence*, 15.

¹⁰⁴ Kedzior, *Evolution and Endurance*, 39.

¹⁰⁵ Hawkins and Carafano, *Prelude to Army XXI*, 22.

¹⁰⁶ Romjue, *Army 86, Vol II*, 25.

The heavy division modifications within AOE focused on maintaining the combat capabilities of Division-86 while simultaneously reducing end strength.¹⁰⁷ The heavy division maintained ten maneuver battalions, but reduced personnel in other areas across the division. The ability to field new weapon systems remained an important concept of the AOE division. However, with the detail put into the heavy division during Division-86, changes to the force structure were minimal.¹⁰⁸ By 1986, developers reduced the end strength of the AOE heavy divisions by approximately 2,000 soldiers without significant modifications to the design.¹⁰⁹

The development of the LID was the most significant aspect of the AOE study. The concept for the LID focused on providing a force capable of rapidly deploying and fighting in low and mid-intensity combat.¹¹⁰ The CSA set the force cap at roughly 10,000 soldiers with the requirement that the LID deploy on 400-500 aircraft. Further, infantrymen had to comprise half of the LID and the division had to operate off minimal support.¹¹¹ In addition to responding to worldwide contingencies, the LID construct also fit into LSGCO in Europe. The inclusion of an LID allowed the Army to rapidly secure a base of operation to facilitate the flow of forces into theater. Further, the LID could exploit terrain, block avenues of approach, and defeat dismounted troops.¹¹² Primary defensive tasks included retaining terrain and protecting key infrastructure.

¹⁰⁷ Timothy B. Hassell, *Army of Excellence Final Report, Volume III: The Heavy Division* (Fort Leavenworth, KS: US Army Combined Arms Combat Development Activity, 1 September 1984), 1-4, 3-4 through 3-5. To reduce the size of the organizations, reductions in the tank battalions were limited to the Headquarters and Headquarters Companies, while mechanized divisions dropped the size of the infantry squads by one soldier.

¹⁰⁸ Hawkins and Carafano, *Prelude to Army XXI*, 26.

¹⁰⁹ John L. Romjue, *The Army of Excellence: The Development of the 1980s Army* (Fort Monroe, VA: Office of the Command Historian, US Army Training and Doctrine Command, 1993), 90.

¹¹⁰ Romjue, *The Army of Excellence*, 45.

¹¹¹ Timothy B. Hassell, *Army of Excellence Final Report, Volume II: The Light Infantry Division* (Fort Leavenworth, KS: US Army Combined Arms Combat Development Activity, 29 June 1984), 1.

¹¹² Romjue, *The Army of Excellence*, 46.

Light infantry battalions were capable of defending against armored forces in close terrain when augmented with appropriate anti-armor capabilities.¹¹³

Standardizing the organizational structure and equipment across the LIDs was another element of the AOE concept.¹¹⁴ The final end strength of the LID was just under 11,000 soldiers with the number of aircraft sorties required for deployment raised to 550.¹¹⁵ By 1988, the Army created four LIDs in the active force and one in the reserve.¹¹⁶ Further, the unique characteristics of the 101st Air Assault Division and the 82nd Airborne Division enabled the LID to fit into the requirements of AirLand Battle.¹¹⁷

How did changes in the Army's organizational structure impact the transition to LSGCO?

The Army's ten armored and five mechanized divisions converted to the AOE heavy division concept and provided the force capable of fighting LSGCO.¹¹⁸ Both the armored and mechanized divisions included three maneuver brigades. Each armored division incorporated six tank battalions and four mechanized infantry battalions, while each mechanized division included five battalions of tank and mechanized infantry.¹¹⁹ The Combat Aviation Brigade (CAB) within both constructs acted as a fourth maneuver brigade. The CAB included two attack helicopter battalions (AHB), one reconnaissance squadron, and one assault helicopter company.¹²⁰ The Division Artillery (DIVARTY) comprised of three direct support battalions of 155mm self-propelled howitzers and one battery of Multiple Launch Rocket Systems.¹²¹ The Air Defense

¹¹³ Hassell, *Army of Excellence Final Report, Volume II*, 3-1.

¹¹⁴ Ford and Burba, *Review of Division Structure Initiatives*, 15.

¹¹⁵ Romjue, *The Army of Excellence*, 63.

¹¹⁶ Michael J. Mazarr, *Light Forces and the Future of U.S. Military Strategy* (Washington, DC: Brassy's Inc., 1990), 37-38.

¹¹⁷ Romjue, *The Army of Excellence*, 46.

¹¹⁸ *Ibid.*, 89-90.

¹¹⁹ Hassell, *Army of Excellence Final Report, Volume III*, 1-7.

¹²⁰ *Ibid.*, 3-8.

¹²¹ Romjue, *The Army of Excellence*, 91.

Artillery (ADA) battalion included three dedicated batteries of Stinger missile systems, with fifty-seven additional systems disperse throughout the division. The Division Support Command provided three forward support battalions for the maneuver brigades, with all additional division support consolidated within the Main Support Battalion.¹²²

The LID envisioned during the AOE study added flexibility to the Army's warfighting capability. The Army activated two new LIDs in 1985 and 1986, bring the number of standard, LIDs to five.¹²³ Each LID consisted of three maneuver brigades with three infantry battalions. The Army designed the LID battalion to transport all organic assets on UH-60s and survive for forty-eight hours without resupply. Wheeled vehicle assets were limited to the HMMWV and each infantry battalion included an organic anti-armor platoon. The CAB in the LID served a similar purpose as the CAB in the heavy division with fewer capabilities. The AHB provided anti-armor assets lacking in the maneuver brigades. The reconnaissance squadron incorporated both ground and aerial reconnaissance assets and the two combat aviation companies could transport one infantry battalion per lift.¹²⁴ The DIVARTY comprised of three direct support battalions of 105mm howitzers transportable on both the HMMWV and the UH-60.¹²⁵ One battalion of two stinger batteries provided organic ADA support, while fifty MANPADS were dispersed across the division.¹²⁶ Finally, the LID assumed risk with a limited amount of Combat Services Support available to the infantry battalions. Mess and maintenance support came from the brigades and forward supply companies supported each battalion.¹²⁷

¹²² Hassell, *Army of Excellence Final Report, Volume III*, 6-3, 7-3 through 7-4.

¹²³ Mazarr, *Light Forces and the Future of U.S. Military Strategy*, 35; Romjue, *The Army of Excellence*, 73-74.

¹²⁴ Hassell, *Army of Excellence Final Report, Volume II*, 3-3 through 3-4, 4-1.

¹²⁵ Romjue, *The Army of Excellence*, 60.

¹²⁶ Hassell, *Army of Excellence Final Report, Volume II*, 7-1 through 7-2.

¹²⁷ Ibid., 8-8; 3-3.

Validation

How did the Army validate doctrinal and organizational changes following Vietnam?

Since World War One, the Army used a mobilization system focused on a small cadre of leaders responsible for training a large number of conscripts. Two problems existed within that system. First, the mobilization training strategy assumed that adequate time existed to raise, prepare, and equip forces for war. Second, the Army measured training by the number of hours trained not by a standard or level of performance achieved.¹²⁸ The move towards the AVF and Active Defense meant that Army formations had to be ready to fight immediately.

To address the challenge of future warfare, the Army changed how it prepared for land warfare. The proliferation of technology and its impact on the contemporary battlefield meant the Army needed to adapt its methodology for training large units. During World War Two, it took 2,000 soldiers to operate across a one-kilometer front. By 1976 improvements in firepower, maneuverability, and lethality meant the same kilometer of frontage only required 413 soldiers.¹²⁹ Technological innovations extended the battlefield and increased the land requirements to train battalions and brigades.

To codify General DePuy's vision for realistic training, Major General Paul Gorman introduced the concept of the Combined Arms Training Center.¹³⁰ Major General Gorman used the Air Force's Red Flag exercise to demonstrate how the Army could train and evaluate ground combat units.¹³¹ During Red Flag, fighter aircraft tested their combat skills against a dedicated

¹²⁸ Chapman, *The Origins and Development of the National Training Center 1976-1984*, 6.

¹²⁹ Paul F. Gorman, "Towards a Combined Arms Training Center," TRADOC Concept Paper, November 1976: 2.

¹³⁰ Chapman, *The Origins and Development of the National Training Center 1976-1984*, 14.

¹³¹ For a more detailed discussion on the influence of the Air Force's Red Flag exercise on the Army's combined arms training center concept see: Major General Gorman's: "Towards a Combined Arms Training Center." During this time, Major General Gorman served as the Deputy CoS for Training at TRADOC.

Opposing Force (OPFOR) in an environment replicating Eastern Europe.¹³² After each mission, pilots received assessment and feedback on their performance. Further, holding the exercise at the remote Nellis Air Force Base in California, allowed the Air Force to replicate combat conditions.

In 1979, TRADOC approved the concept of the Army's first combined arms training center with an operational date in 1981. The Army selected Fort Irwin, California as the site for NTC, with the intent of training combined arms battalions (CAB) against a replicated Soviet motorized rifle regiment.¹³³ Establishing NTC in the Mojave Desert solved three problems for the Army: space, realism, and evaluation.

The training area problem within CONUS coincided with the proliferation of technology. The modernization of the Army centered on the new M1A1 battle tank, the M1A2 Bradley fighting vehicle, longer range precision fires, and improvements to vertical lift. As a result, battalions required space once suitable to train divisions. NTC served as the place where CABs could train relatively uninhibited.¹³⁴ Fort Irwin provided nearly 1,000 square miles of training area for mechanized formations to conduct both force-on-force (FoF) and battalion-level live fire exercises (LFX).¹³⁵ While the terrain in the Mojave Desert did not replicate Europe, it did facilitate the training of new doctrinal concepts and enabled the Army to coordinate operations with the Air Force.

To provide a realistic training environment, NTC included a permanent OPFOR. The OPFOR benefited from gained experience by fighting Soviet doctrine against each rotational unit 200 days per year.¹³⁶ This layer of realism presented rotational units with a better-trained and prepared adversary during FoF engagements. The experience disparity presented challenges for

¹³² Gorman, "Towards a Combined Arms Training Center": 6-7.

¹³³ Chapman, *The Origins and Development of the National Training Center 1976-1984*, 22-23.

¹³⁴ Gorman, "Towards a Combined Arms Training Center": 2.

¹³⁵ Chapman, *The Origins and Development of the National Training Center 1976-1984*, 25-26.

¹³⁶ *Ibid.*, 89.

units deployed to NTC training against the Army's worst-case wartime scenario. Deviating from traditional field exercises, the FoF maneuvers allowed for free-play, where the OPFOR usually defeated the rotational battalions.¹³⁷ The complexity of the scenarios enabled units to exercise combined arms operations against a formidable adversary.

Finally, the evaluation system at NTC improved how the Army assessed and gathered lessons learned. With the development of NTC, the Army leveraged both human and technical dimensions to deliver comprehensive feedback. Teams of Observer Controllers (O/Cs) attached to each rotational battalion. The O/Cs monitored the battalion task forces, controlled FoF engagements, and conducted AARs with each echelon throughout the rotation.¹³⁸ To enhance realism, NTC outfitted units with Multiple Integrated Laser Engagement System (MILES). MILES improved engagement training with direct fire weapon systems, provided real-time feedback on marksmanship, and increased the practicality of the exercises.¹³⁹ While MILES did not account for all weapon systems, it did enhance training beyond referee adjudication. The rigor and analysis put into assessment at NTC enabled rotational units to bring lessons learned back to home station.

Within a few years of operationalizing NTC, the Army turned to the LID. Unlike the armored divisions that concentrated exclusively on Europe, the LIDs had to prepare for medium to low-level contingencies across the globe. As a result, a debate began whether to cross-train light infantry battalions at NTC or develop a separate training center. While FORSCOM scheduled the first heavy/light rotations at NTC in 1985, the Army was in the process of

¹³⁷ Dunnigan and Macedonia, *Getting it Right*, 179.

¹³⁸ Anne W. Chapman, *The National Training Center Matures 1985-1993* (Fort Monroe, VA: US Army Training and Doctrine Command, 1997), 4-5.

¹³⁹ Chapman, *The Origins and Development of the National Training Center 1976-1984*, 68-69.

approving a concept for a light infantry training center.¹⁴⁰ Finally, in 1987 the Joint Readiness Training Center (JRTC) opened at Fort Chaffee, Arkansas.¹⁴¹

NTC provided the Army with an established model to create a second training center. While variances in training methodology for light and heavy battalions existed, NTC offered the blueprint for putting units through a comprehensive training experience. Similar to NTC, JRTC focused on battalion-level units, included O/Cs for assessment and AARs, and provided a dedicated OPFOR to enhance realism. Additionally, rotations centered on FoF maneuvers.¹⁴² Comparable to NTC, Fort Chaffee dedicated the totality of its maneuver area to the rotational battalions at JRTC. While JRTC's path from concept to implementation faced unique fiscal, political, and organizational challenges, the structure benefited from the lessons learned from operating NTC.¹⁴³

Although the two training centers shared basic similarities, training light infantry battalions did require JRTC to diverge from the NTC model. First, the environment at JRTC needed to replicate the terrain more conducive to light infantry operations.¹⁴⁴ Second, as AirLand Battle required the LID to prepare for various contingencies, battalions had to train against low and mid-intensity threats. Consequently, OPFOR at JRTC fought as conventional and unconventional forces, and served in a variety of non-combatant roles.¹⁴⁵ With the exclusive

¹⁴⁰ Chapman, *The National Training Center Matures 1985-1993*, 42-44.

¹⁴¹ Daniel P. Bolger, *The Battle for Hunger Hill, The 1st Battalion, 327th Infantry Regiment at the Joint Readiness Training Center* (Novato, CA: Presidio Press, 1997) 11. The Army relocated JRTC to its current location at Fort Polk, LA in 1993.

¹⁴² Rodler F. Morris, "A History of the Joint Readiness Training Center, Volume I: Creating the Blueprint for The Original Institution, 1973-1987" (The Combined Arms Center History Office, 1989), 49, 51, 159.

¹⁴³ Rodler F. Morris' "A History of the Joint Readiness Training Center" provides a comprehensive examination of the challenges and creation of the Joint Readiness Training Center.

¹⁴⁴ Thomas E. Macia, "The Light Force National Training Center Concept" (Fort Monroe, VA: US Army Training and Doctrine Command, 1 September 1984), RC CAC/LVN, SG CATA 87, Folder JRTC-005, 12.

¹⁴⁵ Chapman, *The Army's Training Revolution, 1973-1990 – An Overview*, 25.

focus on airborne, air assault, light infantry, and Special Operations Forces (SOF), the rotational concept at JRTC differed from NTC. The Army expected light infantry units to deploy within a truncated timeline.¹⁴⁶ Therefore, rapid deployment became a key training objective at JRTC.¹⁴⁷ Unlike NTC, light battalions initiated their FoF exercise immediately upon arrival. The concept for JRTC included three scenarios dependent on the unit in rotation. The first scenario consisted of a forced entry operation for airborne and Ranger units. The second scenario focused on non-airborne units landing on an airfield controlled by “friendly forces” before moving into ground combat operations. The third scenario was SOF-specific and centered on operational and strategic-level operations.¹⁴⁸ Regardless of the scenario, the OPFOR first presented an unconventional threat before escalating to mid-intensity combat.¹⁴⁹

By the late 1980s, the CTCs had proven their worth. As a result, Army senior leadership prioritized CTC improvements despite an increased constraint on resources.¹⁵⁰ NTC continued to expand its capabilities to include brigade-level combined arms rotations, while JRTC implemented a LFX and began integrating heavier units in training scenarios.¹⁵¹

What were the operational tests of the Army’s doctrinal and organizational changes after Vietnam?

On 15 December of 1989, President George HW Bush approved the invasion of Panama.¹⁵² President Manuel Noriega’s refusal to accept the results of a legitimate election coupled with the increased hostility towards American service members by the Panamanian

¹⁴⁶ Morris, “A History of the Joint Readiness Training Center,” 54.

¹⁴⁷ Macia, “The Light Force National Training Center Concept,” 16, 29-30.

¹⁴⁸ Morris, “A History of the Joint Readiness Training Center,” 161-162.

¹⁴⁹ Macia, “The Light Force National Training Center Concept,” 3.

¹⁵⁰ Carl Vuono, “Today’s U.S. Army is Trained and Ready in an Era of Change,” *Army* (October, 1989): 25.

¹⁵¹ *Ibid.*, 25.

¹⁵² Lawrence A. Yates, *The U.S. Military Intervention in Panama: Operation Just Cause December 1989-January 1990* (Washington, DC: US Army Center of Military History, 2015), 35.

Defense Forces (PDF), compelled President Bush to authorize the use of military force. The limited aims of the invasion focused on “safeguarding American lives, defending democracy in Panama, combating drug trafficking, protect the integrity of the Panama Canal treaty, and the apprehension and extradition of President Noriega.”¹⁵³

The Army developed the LID to address the emerging crisis in Central America. The physical geography of Panama did not favor heavy, mechanized forces. Additionally, the PDF presented a low-intensity threat outside the Soviet sphere of influence. Doctrine writers addressed this type of scenario in the 1982 version of FM 100-5 while arguing for including light infantry units in the Army's order of battle. Finally, Just Cause required speed, mobility, and mass to prevent the PDF from withdrawing into the interior and transitioning to guerilla warfare.¹⁵⁴ The five days between President Bush's decision and the start of the operation required a force capable of rapidly deploying with minimal preparation.

Just Cause tested the capabilities of the Army's LID. The operation commenced with simultaneous air insertions and ground assaults from units prepositioned in Panama. The 75th Ranger Regiment seized the Torrijos International Airport, Tocumen military airfield, and the Rio Hato Military Base.¹⁵⁵ Following the initial seizure of Torrijos/Tocumen, paratroopers from 1st Brigade, 82nd Airborne Division parachuted onto the airfield and expanded the lodgment. By the morning of D-Day, soldiers from 2nd Brigade, 7th Infantry Division landed at Torrijos/Tocumen and reinforced positions across the airfields.¹⁵⁶ Once on the ground, units from the 82nd Airborne Division began sequential air assault operations onto objectives in and around Panama City to

¹⁵³ R. Cody Phillips, *Operation Just Cause: The Incursion into Panama* (Washington, DC: US Army Center of Military History, 2004), 9.

¹⁵⁴ *Ibid.*, 10.

¹⁵⁵ Thomas Donnelly, Margaret Roth, and Caleb Baker, *Operation Just Cause: The Storming of Panama* (New York: Lexington Books, 1991), 189-190; Yates, *The U.S. Military Intervention in Panama*, 285-286.

¹⁵⁶ Donnelly, Roth, and Baker, *Operation Just Cause: The Storming of Panama*, 212, 316.

neutralize PDF garrisons.¹⁵⁷ Simultaneously, units prepositioned in Panama conducted ground and air assault operations from American military installations to protect the Panama Canal, secure key infrastructure, and seize the PDF headquarters.¹⁵⁸

Major combat operations ceased after seventy-two hours. The disorganization of the PDF coupled with tactical and operational overmatch ensured US forces gained overwhelming superiority from the outset of the operation.¹⁵⁹ Further, the PDF did not present a formidable air defense or combined arms threat. Therefore, US forces experienced air superiority and minimal threats to airborne operations. Nevertheless, the low-intensity threat matched the capabilities of the Army's restructured LID. Because of the limited deployment requirements, 7,000 light infantry soldiers arrived in Panama within the first twenty-four hours, with another 7,000 arriving before the cessation of hostilities.¹⁶⁰ The availability of utility aviation enabled the rapid movement of units to objectives across Panama, with US forces securing twenty-seven objectives during the first day of combat.¹⁶¹ Finally, light infantry units proved they could successfully operate in urban areas when supported by aviation assets.¹⁶²

Iraq invaded Kuwait on 2 August 1990, setting the stage for the largest American military operation since Vietnam.¹⁶³ While the ground war culminated within 100 hours, the preparation for the campaign occurred over four months. While Just Cause demonstrated the ability to rapidly respond to an emerging threat, Desert Shield/Storm exhibited the Army's capability to conduct LSGCO against a mechanized adversary.

¹⁵⁷ Yates, *The U.S. Military Intervention in Panama*, 57, 259.

¹⁵⁸ Phillips, *Operation Just Cause*, 19-20.

¹⁵⁹ Yates, *The U.S. Military Intervention in Panama*, 401.

¹⁶⁰ Phillips, *Operation Just Cause*, 18.

¹⁶¹ *Ibid.*, 19.

¹⁶² Yates, *The U.S. Military Intervention in Panama*, 475.

¹⁶³ Anne W. Chapman, Carol J. Lilly, John L. Romjue, and Susan Canedy, *Prepare the Army for War: A Historical Overview of the Army Training and Doctrine Command, 1973-1998* (Fort Monroe, VA: Military History Office, US Army Training and Doctrine Command, 1998), 168.

Desert Shield commenced on 7 August 1990. President Bush ordered military forces to Saudi Arabia to enforce UN sanctions and prepare for offensive operations to expel Iraqi forces from Kuwait.¹⁶⁴ To counter the threat of invasion, the Army had to open the theater and rapidly build combat power. Similar to Panama, the Army ordered the 82nd Airborne Division into Saudi Arabia. By 24 August, 12,000 paratroopers were on the ground.¹⁶⁵ To counter the potential of six Iraqi mechanized divisions attacking into Saudi Arabia, the 101st Airborne Division, 24th Mechanized Division, 1st Cavalry Division followed the 82nd Airborne Division into theater through November.¹⁶⁶ Further, during the planning phase for ground combat, General Norman Schwarzkopf approved a two-corps operation to defeat the Iraqi Army. Consequently, the Army added VII Corps from Germany and the 1st Infantry Division from Fort Riley, Kansas to the forces already in theater.¹⁶⁷ By the time the US military transitioned to Operation Desert Storm, the Army had deployed over 250,000 soldiers to Saudi Arabia.¹⁶⁸

The transition to Desert Storm on 17 January 1991 triggered the start of major combat operations.¹⁶⁹ Hostilities commenced with a 42-day air campaign. After achieving air superiority, the Air Force focused on reducing the combat power of the Iraqi Army.¹⁷⁰ The US Army followed with a ground operation focused on destroying the Republican Guard.¹⁷¹ During the

¹⁶⁴ Chapman et al., *Prepare the Army for War*, 168.

¹⁶⁵ Robert H. Scales, *Certain Victory: The U.S. Army in the Gulf War* (Washington, DC: Potomac Books, 1993), 49.

¹⁶⁶ Ibid., 96.

¹⁶⁷ Richard M. Swain, *Lucky War: Third Army in Desert Storm* (Fort Leavenworth, KS: US Army Command and General Staff College Press, 1994), 90.

¹⁶⁸ Scales, *Certain Victory*, 148.

¹⁶⁹ Chapman et al., *Prepare the Army for War*, 168.

¹⁷⁰ Swain, *Lucky War*, 176, 184-185.

¹⁷¹ Stephen A. Bourque, *Jayhawk! The VII Corps in the Persian Gulf War* (Washington, DC: Government Printing Office, 2002), 189.

100-hour ground war, the Army demonstrated the capabilities of the modern, doctrinally based mechanized force trained for LSGCO.¹⁷²

To defeat the Iraqi Army, planners envisioned a two-corps envelopment in line with the deep battle concept posited in AirLand Battle.¹⁷³ The availability of modern airlift enabled the XVIII Airborne Corps to conduct a wide envelopment, approximately 260 kilometers into Iraq to turn the flank of Iraqi forces in Kuwait and cut to the line of communications from Baghdad.¹⁷⁴ The 24th Mechanized Division provided the armored support to the light infantry during its air assault into Southern Iraq. Concurrently, the armored-heavy VII Corps prepared to penetrate and envelop Iraq's forward defenses and destroy the Republican Guard.¹⁷⁵ VII Corps focused on the deep area by attriting Iraqi forces with aviation and fires. VII Corps massed artillery, armor, and attack aviation in the close area and overwhelmed defenders by attacking with combined arms teams.¹⁷⁶ Finally, the combination of mass and mobility provided constant overmatch and overwhelmed Iraqi forces.¹⁷⁷

Major combat operations ceased on 28 February 1991. While Desert Storm is considered a resounding success, drawbacks did exist. Gaps in sustainment capability, coordination problems with the Air Force, and vulnerabilities during the initial force build-up provided improvement areas.¹⁷⁸ Nevertheless, the Army maintained overwhelming operational and tactical superiority through the use of fires, air, and CAM. The Army's success in the Gulf War can be further

¹⁷² Scales, *Certain Victory*, 382.

¹⁷³ Ibid., 25-26.

¹⁷⁴ Bourque, *Jayhawk!*, 189.

¹⁷⁵ Ibid., 178, 189.

¹⁷⁶ Ibid., 460, 340.

¹⁷⁷ Scales, *Certain Victory*, 366.

¹⁷⁸ Dunnigan and Macedonia, *Getting it Right*, 208.

attributed to the renewed focus on collective training and the commitment to winning the first battle of the next war.¹⁷⁹

Findings and Analysis

This monograph now turns to the findings and analysis. The findings section answers the study's eight research questions based on empirical evidence presented in the case study. The results of the findings are then used to test the study's three hypotheses. While answering the focused research questions and testing the hypotheses, it is important to re-introduce the study's thesis: transformations in doctrine and organizations, validated in training and operations, enabled the Army to become a lethal, adaptable, and innovative force during its transition to LSGCO after Vietnam.

The first question is: What factors drove changes in Army doctrine following Vietnam? The preoccupation with Vietnam turned the Army's attention away from the conventional threat in Europe, forcing large-scale ground combat skills to atrophy. The Soviet proliferation in military technology, coupled with the outcome of the Arab-Israeli War presented the Army with the urgency to readdress LSGCO. Finally, the creation of TRADOC streamlined the approach to conceptualize and implement doctrinal changes across the force.

The second question is: What doctrinal changes did the Army implement to refocus on LSGCO? FM 100-5 (1976) reintroduced the Army's focus on mechanized warfare, addressed lethality on the modern battlefield, and the importance of winning the first battle. FM 100-5 (1982) solidified the Army's focus on LSGCO but concentrated on perceived limitations of its predecessor. The 1982 version of FM 100-5 acknowledged other potential contingencies outside of Europe, reestablished the Army's offensive mindset, and emphasized the operational level of war.

¹⁷⁹ Bourque, *Jayhawk!*, 456; Scales, *Certain Victory*, 5.

The third question is: How did changes in doctrine impact the Army's transition to LSGCO? First, the Army emphasized CAM and mechanized warfare. Second, leveraging technology and coordination with the Air Force allowed the Army to maximize firepower while fighting outnumbered. Third, doctrine emphasized the depth of the battlefield and placed importance on disrupting enemy C2, fires, and ADA. Finally, FM 100-5 addressed the importance of commanders seizing the initiative and exploiting opportunities. Intellectual agility, rapid decision-making, and flexibility remained synonymous with succeeding in LSGCO.

The fourth question is: What factors drove organizational change in the Army following Vietnam? The ROAD concept was outdated and underwent nearly ten years of adaptations to address the conflict in Vietnam. Further, the move to the smaller, AVF required the Army to adapt to how it organized for combat. Finally, the ROAD structure did not support the doctrinal and technological advances in the Army's transition to LSGCO after Vietnam.

The fifth question is: How did the Army reorganize its divisions following Vietnam? Before the Gulf War, the Army underwent three organizational reforms. The DRS focused on developing a modern, heavy force capable of surviving on the European battlefield. Division-86 concentrated on the heavy division but placed more emphasis on the tactical and operational requirements posited in FM 100-5 (1982). Finally, the AOE initiative made few modifications to the heavy division and concentrated on modernizing the LID to address contingencies across the conflict continuum.

The sixth question is: How did the Army's organizational structure impact the transition to LSGCO? The organizational structure maximized combined arms capabilities in heavy divisions, while fires, ADA, and support assets enabled tempo and mobility during large-scale combat. The LID ensured that the Army maintained a rapidly deployable force, capable of operating and surviving in multiple environments. Finally, the addition of the CAB provided each division with a fourth maneuver brigade and the ability to shape the depth of the battlefield.

The seventh question is: How did the Army validate doctrinal and organizational changes following Vietnam? After Vietnam, the Army developed a holistic approach to training. The Army created two national training centers to prepare battalions for LSGCO and test doctrinal changes. The development of the training centers increased realism and provided standard-based assessment. NTC prepared armored and mechanized formations for large-scale combat against the USSR, while JRTC focused on training light infantry units for low and mid-level contingency operations.

The eighth question is: What were the operational tests of the Army's doctrinal and organizational changes after Vietnam? Two operations at the end of the Army's transformation period tested doctrinal and organizational changes. Just Cause tested the readiness and capabilities of the LID to rapidly deploy and operate in a low-intensity environment. Operation Desert Shield/Storm tested the Army's ability to conduct CAM against a mechanized army. Both operations demonstrated the limitations and effectiveness of the AOE division and AirLand Battle doctrine.

The first hypothesis asserts that changes in doctrine and organizations, validated in training and operations, enabled the Army to become more lethal during its transition to LSGCO. The evidence supports this hypothesis. A clear connection exists between the development of doctrine through validation to lethality. Both Active Defense and AirLand Battle provided the blueprint for creating a mechanized force capable of countering the Soviet threat. Both manuals addressed the importance of CAM, massing firepower, and integrating with the Air Force. To support the doctrinal shift, the Army reorganized its divisions to survive on the modern battlefield. The first two organizational redesigns centered on the structure and capabilities of the heavy division. The Army created CABs by merging mechanized and armored divisions and increased the ability to mass firepower by improving long-range fires and adding attack aviation to the division structure.

The development of NTC and JRTC supported the doctrinal shift and organizational redesigns. Specifically, operations at NTC enabled divisions to train battalions in CAM against a “peer” adversary. The focus of training large-scale maneuver provided critical repetitions and learning opportunities for units in preparation for fighting and winning future battles. Commanders who participated in the Gulf War credited their experience at NTC with their success during that conflict.¹⁸⁰ Finally, Desert Storm provided the decisive test for the new doctrine and the reorganization of mechanized formations. The Army’s fifteen years of changes culminated with a 100-hour ground war that overwhelmed the Iraqi Army. While not tested against a true peer threat, the overmatch in technology and capabilities provide abundant evidence of the Army’s improved lethality on the modern battlefield.

The second hypothesis asserts that changes in doctrine and organizations, validated in training and operations, enabled the Army to become more adaptable during its transition to LSGCO. The empirical evidence supports this hypothesis as well. Active Defense responded to the Army’s need to refocus on LSGCO. After initial circulation and consideration across the force, Army leadership adjusted the new doctrine. The implementation of AirLand Battle in 1982 addressed identified gaps and perceived weaknesses of Active Defense. However, the Army did not abandon the path envisioned by General DePuy. AirLand Battle maintained the focus on the mechanized battlefield in Europe but widened the aperture to include emerging threats outside the Soviet sphere of influence.

The progression of the Army’s organizational redesign paralleled the doctrinal modifications. While the initial restructuring effort during DRS exclusively focused on the heavy division, the introduction of AirLand Battle required the Army to reshape the force design. The Division-86 and AOE initiative still emphasized the heavy fight but adapted to the perceived environment posited in AirLand Battle. The two restructuring efforts after DRS considered

¹⁸⁰ Bolger, *The Battle for Hunger Hill*, 12.

multiple threat environments, resulting in a revamped LID. With the inclusion of the LID, the Army maintained operational agility and retained the capacity to address threats across the conflict continuum.

Developing JRTC after the initial success of NTC provided an adaptable training solution to address emergent threats. Just as the division redesign adapted to the evolution of doctrine, introducing JRTC as a training option enabled the Army to respond to the unique requirements of the LID. Instead of forcing light infantry battalions to break with doctrinal practice and train with heavy forces at NTC, introducing JRTC enabled the Army to adapt without degrading functionality. Responding to the crisis in Panama demonstrated the Army's potential to adapt to the contemporary environment. Continuous modifications in doctrine, organizations, and training ensured that the Army possessed the right force with the requisite skill set to respond to a specific contingency without detracting from the main threat in Europe.

The third hypothesis asserts that changes in doctrine and organizations, validated in training and operations, enabled the Army to become more innovative during its transition to LSGCO. Available evidence supports this hypothesis. The development of Active Defense and AirLand Battle resulted from Army leaders thinking critically and creatively about how to prepare for LSGCO. Innovative thinking is present in the doctrine's focus on winning the first battle of the next war, describing how the Army will fight outnumbered and win on a mechanized battlefield, and the significance of integrating the Air Force into combined arms operations. Further, AirLand Battle introduced the operational level of war to address the Soviet echelon of battle.

The proliferation of technology in the post-Vietnam Army compelled the Army to develop innovative solutions for leveraging new weapon systems. The focus on the heavy division changed how the Army built combat formations. Instead of learning how to fit new systems into existing divisions, the weapon system served as the building block of the

organization.¹⁸¹ Further, by anticipating future demands Army leadership identified the need to maintain a LID. Through multiple redesign initiatives, the Army successfully created a light formation capable of rapidly deploying to austere environments with organic equipment. Further, to maximize capabilities, the Army structured the LID to operate alongside heavy forces in close terrain during LSGCO.¹⁸²

Training innovations were a critical element of the Army's transition to LSGCO after Vietnam. To maintain an AVF, training methodology shifted from time-based to performance-based assessments. The development of NTC increased realism and allowed combined arms battalions to prepare for LSGCO against a peer threat. Further, the addition of JRTC supplemented operations at NTC and provided the same opportunities for light infantry battalions based on appropriate contingencies. Finally, positive outcomes in Just Cause and Desert Storm demonstrated how innovative thinking in training battalions for future combat enabled the Army to anticipate future demands and stay ahead of potential enemies.

Conclusion

This study assessed three mechanisms of the US Army's transition to LSGCO after the Vietnam War: doctrine, organizations, and validation. Military historians, experts, and professional officers have thoroughly scrutinized and studied the Army's holistic transformation following the experience in Southeast Asia. However, this study adds to the existing body of knowledge by concentrating on the link between the three mechanisms listed above and the impact on preparing for LSGCO. The empirical evidence collected supports the study's thesis, which states that transformations in doctrine and organizations, validated in training and

¹⁸¹ DePuy, "Letter to General Frederick C. Weyand Dated 18 February 1976", in *Selected Papers of General William E. DePuy*, 180.

¹⁸² Romjue, *The Army of Excellence*, 46.

operations, enabled the Army to become a lethal, adaptable, and innovative force during its transition to LSGCO after Vietnam.

The Army's transition to LSGCO was evaluated using a structured and deliberate analysis of doctrinal and organizational changes between 1974-1991. To analyze validation, this study examined collective training at NTC and JRTC in addition to operational tests in Panama and the Middle East. This study answered eight focused research questions using empirical to evaluate three hypotheses. The doctrinal and organizational sections included three questions each, centered on the factors driving change, specific changes implemented, and the impact of those changes during the transition to LSGCO. The validation section included two questions relating to how doctrinal and organizational changes were validated in training and tested during operations.

Understanding the transition to LSGCO after the Vietnam War serves two distinct purposes. First, linking doctrinal and organizational changes to validation is significant for the military historian trying to better understand the Army's post-Vietnam transformation. The evolution of doctrine from Active Defense to AirLand Battle, coupled with the divisional restructuring initiatives enabled the Army to refocus on large-scale combat. Further, training experiences at NTC and JRTC as well as operational experiences in Just Cause and Desert Storm validated the transformation.

Second, military practitioners can use lessons from the post-Vietnam transformation to assist the Army's current transition to LSGCO after seventeen years of limited contingency operations. While the circumstances surrounding each shift differ, similarities do exist. In 2017, the Army released a new version of its operations manual codifying its renewed focus on LSGCO. The updated manual emphasizes preparing for major operations and campaigns against a peer adversary on a lethal and chaotic battlefield.¹⁸³ Further, to focus on lethality against peer

¹⁸³ US Army, *FM 3-0*, (2017), 1-1 through 1-2.

adversaries the Army has converted one Infantry Brigade Combat Team (IBCT) to an Armored Brigade Combat Team (ABCT). By 2019, the Army will have eleven active duty ABCTs in the force.¹⁸⁴ Finally, rotations at NTC and JRTC have refocused on decisive action and increased the level of complexity battalions and brigades will encounter in future conflicts.¹⁸⁵ As the Army continues its current transition to LSGCO, leaders can continue to draw on lessons from the post-Vietnam transformation.

This study used lethality, adaptability, and innovation as a lens to examine the Army's transformation after Vietnam. However, to gain a more holistic view of the Army's refocus on LSGCO, additional research is required. An additional study may examine the impact of the Arab-Israeli War on US Army training and doctrine after 1973. A second study could examine the role of leadership in the Army's transition to LSGCO. A third study may compare the Army's transition to LSGCO after 1974 to the current transition following seventeen years of limited contingencies in Iraq and Afghanistan.

The period between 1974-1991 was a turning point for the US Army. This study adds to the existing body of knowledge during this crucial era by examining the transition from counterinsurgency operations to a force designed and prepared for large-scale combat. The Army's Refocusing on LSGCO demonstrated the lethality, adaptability, and innovation of the Army as it embraced the steady and rapid changing character of warfare after Vietnam.¹⁸⁶

¹⁸⁴ Todd South, "The Army is Converting Two BCTs as it Beefs up its Fighting Force For the Next Big War," *Army Times*, September 20, 2018, accessed February 8, 2019, <https://www.armytimes.com/news/your-army/2018/09/20/the-army-is-converting-two-bcts-as-it-beefs-up-its-fighting-force-for-the-next-big-war/>.

¹⁸⁵ Christopher R. Norrie, Thomas E. Lamb, and Michael J. Culler, "Ready Now – Our Number One Priority," *Military Review* 98, no. 5 (September-October 2018): 62-63; David S. Doyle and Aaron Combs, "How Has the Joint Readiness Training Center Changed to Adapt to Large-Scale Combat Operations?" *Military Review* 98, no. 5 (September-October 2018): 72-73.

¹⁸⁶ DePuy, "Letter to Letter to MAJ GEN David Ott et al., Dated 23 July 1974, with draft concept paper, Concept of Operations ["Pot of Soup" Letter]," in *Selected Papers of General William E. DePuy*, 122.

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