

Preparing for the Future: Developing an Adaptive Army in a Time of Peace, 1918-1941

A Monograph

by

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Abstract

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As the US Army transitions into a period of transformation, it is focusing its attention on becoming a more adaptable organization that can meet the challenges of an uncertain future. Faced with personnel and budget reductions, the Army is evaluating changes to its operational doctrine, organizational structure, leader development, and unit training in an effort to become more lethal and expeditionary. The modern Army faces the uncertainties of asymmetrical hybrid threats combining multiple forms of warfare across multiple domains to include cyber and space. Between 1918 and 1941, during the Interwar Period, the Army faced similar uncertainties as the Army attempted to anticipate the impact of rapidly developing technologies in firepower, aviation, mechanization, and motorization and the threat from rising powers in Asia and Europe. While these challenges are significantly different, in both examples emerging technological advances led to changes in the conduct of warfare. To parallel the modern Army's approach, the examination framed the research around the Interwar Army's adaptation of its doctrine and organizational structure, development of adaptable leaders through officer education, and preparation of the force for uncertainty through large-scale two-sided maneuvers. The experience of the Interwar Army at developing an adaptable organization provides an historic case study to apply to the modern Army as it transitions for the future.

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Acronyms

AEF	American Expeditionary Forces
BCT	Brigade Combat Team
CCC	Civilian Conservation Corps
CGSS	Command and General Staff School
CPX	Command Post Exercise
DOTMLPF	Doctrine, Organization, Training, Material, Leadership and Education, Personnel, Facilities
FM	Field Manual
FSR	Field Service Regulations
GHQ	General Headquarters
IPF	Initial Protection Force
MCLU	Manual for Commanders of Large Units
NDA	National Defense Act
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OPFOR	Opposing Force
PMP	Protective Mobilization Plan
WDGS	War Department General Staff
WPD	War Plans Division

Introduction

Following a decade of focusing on sustained combat operations in Iraq and Afghanistan, the United States Army is on the cusp of entering a new transition period as it attempts to shift focus toward its future. During Operations Iraqi Freedom (OIF) and Enduring Freedom (OEF), the Army adapted organizationally to face new challenges that it had not anticipated prior to conflict such as conducting counter insurgency operations, integrating new technology, and reorganizing to improve operational flexibility. The Army adapted its tactical doctrine to include counter insurgency and security force advisory operations. The Army also witnessed the proliferation and employment of new technologies such as drones, robots, mine-resistant vehicles, and digital command systems at all command levels that have become part of the Army's equipment inventory. Further, the Army adapted its organization to one centered on task-organized brigade combat teams and modular support brigades that enabled joint force commanders to build tailored Army force packages. As the Army transitioned from these conflicts, it sought future adaptation by employing the lessons learned while anticipating future requirements in an uncertain future.

Organizational Adaptability and the United States Army

Adaptation within an organization such as the United States Army is often difficult because it results in a change to the existing organizational culture. The Army is an organization whose culture is rich with artifacts such as uniforms, traditions, and a distinctive language. The Army reinforces its culture through distinct narratives based on its historic successes and anticipated successes against future adversaries.¹ In general, there are three steps necessary for an

¹ Mary Jo Hatch and Ann L. Cunliffe, *Organization Theory: Modern, Symbolic, and Postmodern Perspectives*, 2nd ed. (Oxford: Oxford University Press, 2006), 189.

organization to adapt successfully: recognizing the need for change, understanding what change is necessary, and implementing the change required.² However, for the change to have a lasting effect it should be incremental and compatible with existing norms.³ The first step, recognizing the need for change, is the most critical and often the most difficult for the Army during times of peace.

In 2010, the Department of Defense commissioned the Defense Science Board (DSB) to conduct an in depth study on how to enhance the adaptability of the department. The report of the DSB is of particular interest because of its application of organizational theory and theories of adaptation to the military. Through its examination of numerous civilian and government organizational case studies, the DSB developed a detailed definition of adaptability as “the ability and *willingness* to anticipate the need for change, to *prepare* for that change, and to implement changes in a *timely manner* in response to the surrounding environment.”⁴ When examining military organizations, the board found that those engaged in combat tended to be incredibly adaptable; however, adaptability was of less importance for organizations further from the enemy.⁵ Therefore, while the Army has adapted its tactics and organizational structure successfully to conducting counterinsurgency operations, it faces a significant challenge to adapt

² Max McKeown, *Adaptability: The Art of Winning in an Age of Uncertainty* (London: Kogan Page Ltd, 2012), 4, accessed February 24, 2015, http://fw8pk7vf4q.search.serialssolutions.com/?ctx_ver=Z39.88-2004&ctx_enc=info%3Aofi%2Fenc%3AUTF-8&rft_id=info:sid/summon.serialssolutions.com&rft_val_fmt=info:ofi/fmt:kev:mtx:book&rft.genre=book&rft.title=Adaptability&rft.au=McKeown%2C+Max&rft.date=2012-04-03&rft.pub=Kogan+Page&rft.isbn=9780749465247&rft.externalDocID=9780749465247¶mdict=en-US.

³ Hatch and Cunliffe, 208-209.

⁴ U.S. Department of Defense, *Report of the Defense Science Board 2010 Summer Study on Enhancing Adaptability of U.S. Military Forces: Part A. Main Report* (Washington, DC: Office of the Under Secretary of Defense, 2011), 1; emphasis added.

⁵ Defense Science Board, 2.

to an uncertain but complex future.

In preparing for this uncertain future, the Army considers the impact of change in accordance with its doctrine, organization, training, material, leadership and education, personnel, and facilities (DOTMLPF). In a budget constrained environment, the Army focuses less on facilities, material, and personnel and focuses more on doctrine, organization, training, and leadership. Streamlining material acquisition, generating leaner but more capable formations, and developing practical doctrine to merge new capabilities are three priorities expressed in a Force 2025 white paper from January 2014.⁶ In a second white paper, the Army stressed the importance of maneuvers for testing and evaluating implemented DOTMLPF changes.⁷ In a third white paper from October 2014, the Army pointed to the importance of investing in human performance in particular through education.⁸ These areas of emphasis along the DOTMLPF are consistent throughout the Army's transition periods.

Throughout its history, the United States Army has adapted to contend with the crisis at hand. Prior to World War II, the United States had maintained only a small standing Army that would expand during a crisis after mobilizing the population and leveraging the industry to man

⁶ US Army Training and Doctrine Command, "Army Vision – Force 2025," White Paper, January 23, 2014, 7, accessed November 2, 2014, <http://www.arcic.army.mil/Initiatives/force-2025-beyond.aspx>.

⁷ US Army Training and Doctrine Command, "Force 2025 Maneuvers," White Paper, January 23, 2014, 5, accessed November 2, 2014, <http://www.arcic.army.mil/Initiatives/force-2025-beyond.aspx>.

⁸ US Army Combined Arms Center, "The Human Dimension White Paper: A Framework for Optimizing Human Performance," White Paper, October 9, 2014, 7, accessed March 5, 2014, http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CB8QFjAA&url=http%3A%2F%2Fusacac.army.mil%2Fsites%2Fdefault%2Ffiles%2Fdocuments%2Ffact%2FHumanDimensionWhitePaper.pdf&ei=5KUAVf2IK4iHyAS7jIGYBw&usg=AFQjCNFqdLU-6Xr_TKMO45Gt-o6beakAgA&sig2=01xViGX5e2Y30o7D_CSTDA&bvm=bv.87920726,d.aWw.

and equip its necessary units.⁹ When the crisis ended, the Army demobilized just as rapidly and resumed a peacetime posture. There was little effort to capitalize on lessons learned and to prepare the Army for future wars prior to the Civil War. After the Civil War, however, the Army recognized the need for continued training and education to keep pace with advances in warfare and established a system of schools to provide training to the Regular Army units and officers.¹⁰ Slow peacetime adaptation continued at the dawn of the twentieth century under Secretary of War Elihu Root with the creation of the Army War College and the General Staff Corps, as well as other reform efforts, to prepare Army for future mobilization.¹¹ These reforms, however, did little to change the organizational culture of the Army.

The Army that emerged from the hardship and bloodshed of the battlefields of World War I, determined not to repeat the mistakes of 1917-1918, would develop a peacetime organization that adapted to emerging technology and methods of warfare despite its reduced force structure and budget limitations. Similar to the impact of advances in the cyber and space domains on the contemporary Army, the advent of technological advances in firepower, motorization, mechanization, and aviation posed significant questions for the future of warfare after 1918.

⁹ Allan R. Millett, Peter Maslowski, and William B. Feis, *For the Common Defense: A Military History of the United States from 1607 to 2012*, 3rd ed. (New York: Free Press, 2012), 241.

¹⁰ Marvin A. Kreidberg and Merton G. Henry, *Department of the Army Pamphlet 20-212: History of Military Mobilization in the United States Army, 1775-1945* (Washington, DC: Government Printing Office, 1955), 147.

¹¹ Kreidberg and Henry, 176-179. See also Millett, et al., 292-308.

The US Army in World War I

When the United States declared war against Germany in April 1917, the country and its Army were unprepared for the realities of the war that had been raging in Europe for three years. The Regular Army at that time contained fewer than 135,000 soldiers stationed in numerous posts in the continental United States and her overseas possessions.¹² Including the Marine Corps and the National Guard, the country's total ground force was approximately 220,000 men.¹³ The Army had only a few small standing regiments with no established brigades, divisions, corps, or field armies.¹⁴ While the Army had an adequate supply of its primary infantry weapon, the Springfield Model 1903, it had to rely on significant support from the Allied forces to supply machineguns, tanks, artillery, and other implements of modern war.¹⁵ While the National Defense Act of 1916 had increased the Army's end strength to 175,000 soldiers and formalized a National Guard of 400,000 men, the Army was unable to implement fully these changes prior to the declaration of war.¹⁶ The French theorist Ardant Du Picq, who argued for the importance of the soldier and his morale over the changing technology as the decisive factor on the battlefield, strongly influenced the Army's prewar doctrine.¹⁷ In part because of the demands supporting the

¹² American Battle Monuments Commission, *American Armies and Battlefields in Europe* (1938; repr., Washington DC: Center of Military History, 1992), 15.

¹³ Mark Ethan Grotelueschen, *The AEF Way of War: The American Army and Combat in World War I* (New York: Cambridge University Press, 2007), 11.

¹⁴ Grotelueschen, 12.

¹⁵ Richard M. Stewart, ed., *American Military History, Volume II: The United States Army in a Global Era, 1917-2008*, 2nd ed. (Washington DC: Center of Military History, 2010), 23, accessed September 26, 2014, https://cgsc.blackboard.com/bbcswebdav/pid-184006-dt-content-rid-1082106_1/xid-1082106_1.

¹⁶ Kreidberg and Henry, 193-194.

¹⁷ Kenneth Finlayson, *An Uncertain Trumpet: The Evolution of U.S. Army Infantry Doctrine, 1919-1941* (Westport: Greenwood Press, 2001), 30.

Punitive Expedition beginning in 1916 and the reluctance of President Wilson to prepare for war, the Army made little effort to change its doctrine of mobile warfare centered on infantry maneuver despite the reports of carnage on the Western Front.¹⁸ The country and the Army faced a daunting task in mobilizing the nation for war and preparing the American Expeditionary Forces (AEF) for combat on the Western Front.

The first American division arrived in France in June 1917; however, the AEF would not be ready for independent combat operations for almost eighteen months. One of the first hurdles for the AEF was organizing and preparing the millions of men expected to mobilize and deploy to Europe. The AEF formed the division as its basic combined arms combat formation. Unlike their European counterparts, the AEF divisions were large divisions with four infantry regiments, three artillery battalions, and fourteen machinegun companies that allowed the division greater depth to remain on the offensive for a longer duration.¹⁹ Known as the “square” division because of the four infantry regiments, these divisions formed into corps and corps into field armies. More than a command and control element for the divisions, the AEF established robust staffs for corps and field army headquarters that each maintained specialized support troops under their control.²⁰ With the mobilization of millions of untrained civilians and the formation of new headquarters, the AEF planned a multifaceted training program to train divisions and their staffs and provide much needed experience in combat.

The AEF’s plan established army, corps, and division level programs that were to conduct specialized individual training as well as division-level collective training. Field army-level schools by branch, which included the Army Line Schools and the General Staff College,

¹⁸ Grotelueschen, 24-31.

¹⁹ Stewart, 13.

²⁰ Stewart, 14.

focused on educating the officers at the company and field-grade levels. Each corps initially established a training division and a replacement division to train individual combat and specialized skills. Upon arrival, each division was to conduct a three-phased collective training program over a four-month period that would culminate with deploying to a quiet section of the front and serve as part of a French corps to gain combat experience. However, only the First Division completed the training as planned with most subsequent divisions receiving an average of two months or less of preparation.²¹ The training and schools would continue throughout the war, but the German Spring Offensive in 1918 resulted in the commitment of AEF divisions to support the Allies and halt the German advance.

The experience of the American divisions that supported the Allies in the blocking the German offensive in the Aisne-Marne Region caused the AEF to adapt its operational concept in an effort to reduce the number of casualties. After suffering more than sixty thousand casualties (total killed, wounded, and missing) between May and August of 1918 the AEF commander, General John J. Pershing, admitted to his Chief of Staff, “perhaps we are losing too many men to machine guns.”²² After an official review, the AEF acknowledged the need for different tactics for trench warfare. Under the “Combat Instructions for Troops of First Army” and Pershing’s subsequent “Combat Instructions,” the AEF divided offensive operations into three zones each

²¹ Paul F. Braim, “The Test of Battle: The American Expeditionary Forces in the Meuse-Argonne Campaign, 26 September – 11 November 1918” (PhD diss., University of Delaware, 1983), 65-69.

²² James W. Rainey, “Ambivalent Warfare: The Tactical Doctrine of the AEF in World War I,” *Parameters, Journal of the US Army War College* 13, no. 3 (September 1983), 41, accessed February 4, 2014, http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCAQFjAA&url=http%3A%2F%2Fwww.dtic.mil%2Fdtic%2Ftr%2Ffulltext%2Fu2%2Fa518352.pdf&ei=QOrTVP2UGYq_ggTm0ICIBQ&usg=AFQjCNGOwtKQq17H3XpVeHVb7zHro42AKA&sig2=MNogPIDAf8AiLhCTwoJNdA&bvm=bv.85464276,d.eXY.

requiring different tactical considerations.²³ The first phase, covering the penetration of the forward defenses, incorporated the Allied stationary front tactics to break through the enemy defenses. Once a breakthrough occurred, the next two phases, the intermediate and exploitation zones, called for a tactical pause for reorganization and transition to the mobile warfare of American prewar doctrine.²⁴ The AEF had adapted its operational doctrine to meet the combat conditions, but insufficient training time meant that implementing the concepts would result in great cost in American lives during the AEF's offensives at St. Mihiel and, particularly, the Meuse-Argonne.

The AEF's last major offensive of the war began on September 26, 1918, when nine divisions, organized into three corps, jumped off along a narrow front between the Argonne Forrest in the west and the Meuse River in the east. The objective of the Meuse-Argonne Offensive was to sever the German rail lines in the area of Mézières and Sedan, which would force the German Army to retreat toward the frontier.²⁵ When the Armistice went into effect on November 11, the American forces had advanced roughly thirty miles and nearly reached Sedan but at the cost of nearly 117,000 casualties.²⁶ The AEF's lack of experience and training in modern warfare had resulted in what some criticized as excessive losses suffered out of

²³ HQ First Army, "Combat Instructions for Troops of First Army," August 29, 1918, issued as HQ 1st Division Memorandum, September 1, 1918, *World War Record of the First Division A.E.F. (Regular)*, vol. 2, quoted in Grotelueschen, 45; John J. Pershing, "Combat Instructions," dated September 5, 1918, in *Policy-forming Documents of the American Expeditionary Forces* (1948; repr. Washington DC: Center of Military History, 1988), 491-495.

²⁴ Grotelueschen, 44-49.

²⁵ American Battle Monuments Commission, 167-170.

²⁶ *Ibid.*, 192.

proportion to the limited gains.²⁷ The development and application of heavy artillery, machine guns, tanks, aircraft, and gas in modern, industrialized warfare had had a profound effect on how the Army perceived the future of warfare.²⁸ Based on their experience with the AEF, the Army's senior leaders understood that they would have to take measures to influence Congress and the President to organize and modernize the Army in a time of peace.

The US Army After the War

The rapid demobilization of the Army and budget reductions following the war impeded its ability to reorganize, modernize, and conduct large-scale combined-arms training during much of the Interwar Period. The Army officially began to reorganize under the National Defense Act (NDA) as amended in 1920. The NDA created the framework for an expandable force from which a force of two to three million soldiers could be mobilized.²⁹ However, the Army's limited budget prevented it from fulfilling the necessary end strength to fill the authorized divisions and headquarters. Similarly, while the Army invested in experimentation with tanks, aircraft, and other technologies that had emerged from World War I, budget constraints slowed tactical testing and doctrinal development. The Army did invest heavily in schools, particularly its officer education. Further, the Army mobilized and conducted large-scale training exercises that served to test its organizational structure, operational doctrine, and plans for expansion that would serve as the basis for its war preparations after December 7, 1941. Despite the constraints of limited budget and shortages of personnel and equipment, between 1918 and 1941, the Army developed into an adaptable organization that anticipated a need for change, took measures to prepare for

²⁷ Braim, 201.

²⁸ Peter J. Schifferle, *America's School for War: Fort Leavenworth, Officer Education, and Victory in World War II* (Lawrence: University Press of Kansas, 2010), 9.

²⁹ M. B. Stewart, "Four Years After," *Infantry Journal* 22, no. 3 (March 1923): 250-251.

that change, and implemented the change in a timely manner while still at peace.

Research Question and Methodology

Beginning with prewar mobilization in 1939 through the end of the war in 1945, the United States Army expanded from a force of around two hundred thousand soldiers to a force of more than eight million. During World War II, the US Army fought and won against determined but widely different enemies on numerous fronts in multiple theaters. Not wanting to repeat the mistakes of World War I, the Army had implemented significant changes during peacetime that allowed it to be more adaptable to technological advances and rapid mobilization of combat forces. However, the question remains: what were the major developments during the Interwar Period that facilitated this degree of organizational adaptation for the US Army. The answer to this question is found in the examination of the Interwar Army's approach to its DOTMLPF. In the budget constrained environment of the Interwar Period, the US Army enabled organizational adaptability through the development of its doctrine and organization, leader education, and execution of realistic training. Examination of these developments are of particular interest for contemporary US Army leaders to identify, through historic example, how these organizational developments created or enhanced organizational adaptability.

The first development was the evolution of the Army's operational doctrine and tactical organization. These evolutions indicated that the Army was aware of the advances in technology and their impact on the conduct of warfare; as well as, the Army's willingness to implement the changes necessary to adapt. An analysis of the National Defense Act of 1920 and its impact on the tactical and institutional organization of the Army revealed that the policy had intended to create a capable land force that was able to mobilize quickly and adapt to the crisis at hand. Without reviewing technological developments of various weapon systems during the period, an analysis of the Army's doctrinal and organizational development illustrated that the Army

adapted its tactics and formations to incorporate technological advances. In part because of budgetary constraints, but also a result of the NDA of 1920, the Army was able to develop multiple systems without overly committing until the eve of war. Contemporary professional writings provided insight on how the Army anticipated the need for change based on these advances and the reports from wars abroad.

The second development was the Army's emphasis on its officer education system, particularly the Fort Leavenworth General Service Schools, later becoming the Command and General Staff School (CGSS), which trained mid-level officers for command and staff functions at the division and corps. CGSS was of particular importance to the development of the Army's future leaders because it was the center for professional debate among officers, participated in the development of doctrine, and provided officers with the practical application of the Army's operational doctrine.³⁰ While the effectiveness of the schools manner of instruction for developing the intellectual capacity of the student officers is debatable, the education provided the Army with officers that were capable of leading large formations in combat.³¹ In particular, the school's method of instruction provided the students the opportunity to applying the principles they learned in the classroom by solving tactical problems.³² An explanation of the different aspects of the applicatory method illustrates how the CGSS education provided the student officers with the skills and knowledge that prepared them to lead large formation as

³⁰ William O. Odom, *After the Trenches: The Transformation of U.S. Army Doctrine, 1918-1939* (College Station: University Press, 1999), 86.

³¹ Timothy K. Nenninger, "Leavenworth and its Critics: The U.S. Army Command and General Staff School, 1920-1940," *The Journal of Military History* 58, no 2 (April 1994), 3, accessed February 1, 2015, <http://search.proquest.com/lumen.cgscarl.com/docview.docviewoptionsbar.saveasexportformatselection:changesaveasfileformat/Pdf?t:ac=195631090>.

³² Schifferle, 100-101.

adaptable senior leaders.

The final development was the Army's execution of large-scale two-sided exercises to train its divisions, corps, and field armies in combined-arms maneuver under near combat conditions. In addition to training soldiers for combat at multiple echelons, these large-scale maneuvers served the Army as a test bed for new tactics and combat formations.³³ With minimal constraints to the opposing commanders, each force had to adapt to greater uncertainty in the tactical situation as they vied for a position of advantage. Furthermore, the soldiers and officers executing the maneuvers learned to adapt to the hardships and stress of the combat environment, which prepared them to operate in degraded conditions without the risk of losing lives. These exercises also served to test the Army's latest tactical formations and operational concepts. The training objectives, the lessons learned, and the resulting changes to structure and doctrine indicate the effect the maneuvers had on preparing the Army for the coming war.

Significance of Study

As today's Army focuses its attention on developing as a more adaptable organization for the future, it faces many of the same challenges that it has faced in previous peacetime periods. As public interest shifts away from the Army, it must remain adaptable to meet the challenges of rapidly changing technological advancements and changes methods of warfare from rising security threats while operating with a smaller budget and troop reductions. Nearly a century ago, the Army faced a similar challenge in integrating rapid technological advancements in firepower, motorization, and mechanization into its operational doctrine and tactical formations. During the Interwar Period, the Army established a culture of adaptability by implementing organizational,

³³ Jean R. Moenk, *A History of Large-Scale Army Maneuvers in the United States, 1935-1964* (Fort Monroe: Historical Branch Office of the Deputy Chief of Staff for Military Operations and Reserve Forces U.S. Continental Command, 1969), 4.

education, and training developments that set conditions for mobilization and employment after the United States declared war in 1941.

Part 1

Adapting the Organization and Operational Doctrine

By the time the armistice went into effect on November 11, 1918, the American Expeditionary Forces (AEF) had advanced nearly thirty miles through stubborn German resistance and aided the Allies in forcing the German retreat along the Western Front. Often attributed as the result of the superiority of the American emphasis on open warfare, the AEF had adapted its tactical organizations and doctrine to incorporate the lessons of the Allied armies.³⁴ The AEF had incorporated the trench warfare tactics and learned the employment of modern weapons such as tanks, machineguns, heavy artillery, and aircraft. This adaptation in combat had come at the cost of over 254,000 American casualties, almost half of which occurred during the Meuse-Argonne Offensive alone.³⁵ While such high casualties were common during the war, greater prewar preparation of the Army for modern warfare would have minimized those casualties caused by confusion and lack of training.³⁶ Not wanting the Army to repeat the blunders and shortcomings of the AEF in the next war, General Pershing ordered numerous after action reviews and boards to capture the lessons learned from the various arms and services during the war.

³⁴ Arthur W. Page, *Our 110 Days Fighting* (Garden City: Doubleday, Paige & Company, 1920), 6. Page and other contemporaries attribute this emphasis on open warfare as the decisive factor that enabled the American offensive and ended the war faster, thereby, saving thousands of lives. See also American Battle Monuments Commission, 16-17, and 25.

³⁵ American Battle Monuments Commission, 515.

³⁶ Page, 140.

AEF Superior Board on Organization and Tactics

The General Headquarters (GHQ) then convened a group of senior officers known as the AEF Superior Board on Organization and Tactics to review the results of the minor boards and after action reviews, consider their own experiences, and make recommendations to the Army for changes regarding its future tactics and organization.³⁷ The long, frustrating build-up of combat forces and the relatively brief but successful period of actual combat shaped the recommendations of the board.³⁸ Not surprisingly, the Superior Board focused much of recommendation on organizational changes to improve administration and support functions while directing less attention to tactical changes.³⁹ The Board found that the infantry attack, in accordance with prewar doctrine and the lessons of trench warfare, remained the most decisive form of the offensive and that tactical units would still require sufficient strength for “continuous fighting for a long period.”⁴⁰ Their report confirmed the efficacy of the Army’s prewar operational concept, but also acknowledged the increased importance of firepower and the necessity for coordination between the infantry and artillery to support combined arms operations.

Although focused primarily on the tactical lessons from the war, an underlying frustration expressed in the Board’s report was the lack of prewar preparation. The Board’s findings

³⁷ American Expeditionary Forces Superior Board, “Report of Superior Board on Organization and Tactics,” (General Headquarters American Expeditionary Forces, 1925), 1.

³⁸ David E. Johnson, “From Frontier Constabulary to Modern Army: The U.S. Army between the World Wars,” in *The Challenge of Change: Military Institutions and New Realities, 1918-1941*, ed. Harold R. Winton and David R. Mets (Lincoln: University of Nebraska Press, 2000), 167.

³⁹ Johnson, 167.

⁴⁰ AEF Superior Board, 20.

criticized the country's "policy of unpreparedness," which yielded too few properly trained men at the front, for risking mission success and the large number of casualties.⁴¹ Throughout the report, the Board stressed the importance of combined-arms training during peacetime. While disagreeing with some of the Board's findings, such as the size and structure of the division, General Pershing furthered the argument for prewar preparation by recommending the peacetime formation and training of standing corps headquarters.⁴² He understood, however, that the peacetime end strength of the Army would be too small to organize fully for war. Pershing recommended that its peacetime organization be adaptable enough to respond to immediate crisis but quickly expandable to respond to national emergencies.⁴³ The recommendations of General Pershing and the Superior Board set the stage for the development of national and Army policies that shaped the adaptability of the organizational structure of the Army of the United States and its operational doctrine during the Interwar Period.

The National Defense Act as Amended in 1920

One of the major developments to come in the aftermath of the war was an amendment to the National Defense Act (NDA) in 1920.⁴⁴ The NDA of 1920 ended a long-standing argument between those who favored a large, skeletonized standing Army expanded by conscripted reserves and adopting the side of those who favored a smaller, fully formed Regular Army

⁴¹ Ibid., 20-21.

⁴² John J. Pershing, "Wrapper Endorsement," found in "Report of Superior Board on Organization and Tactics," 6.

⁴³ AEF Superior Board, 6-9.

⁴⁴ The National Defense Act: Approved June 3, 1916, As Amended By . . . , (1921; repr., US War Department, 1921), 2, accessed January 31, 2015, <https://play.google.com/books/reader?id=oVQTAAAYAAJ&printsec=frontcover&output=reader&hl=en&pg=GBS.PA4>.

augmented by trained reserve forces by adopting the latter.⁴⁵ The NDA formed the Army of the United States by formalizing its organization into the Regular Army, the federalized National Guard, and the Organized Reserves, which consisted of the Officers' Reserve Corps and the Enlisted Reserve Corps.⁴⁶ The Regular Army was that active duty component consisting of no more than 280,000 enlisted soldiers and less than seventeen thousand officers and organized as necessary into brigades, divisions, and corps.⁴⁷ The National Guard, whose end strength was a factor of a state's representation in Congress, reorganized into tactical formations and served to augment the Regular Army when federalized in an emergency.⁴⁸ The third component was the Organized Reserves that provided the Army with additional personnel trained as officers and soldiers who could reinforce existing formations or form new organizations.⁴⁹ This three-tier structure provided the War Department with an adaptable Army for crisis response and served as the framework for mobilization planning throughout the Interwar Period.

Another of the provisions of the NDA of 1920, one that often receives negative criticism because of inter-branch rivalries, was the establishment of the combat arms branch chiefs and their influence on research and development. These general officers served as the technical

⁴⁵ Edward Brooke Lee, Jr., "The Politics of our Military National Defense: With the Defense Acts of 1916 and 1920 as Case Studies" (senior thesis, Princeton University, 1940), 125, accessed March 4, 2015, <http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=6&cad=rja&uact=8&ved=0CEIQFjAF&url=http%3A%2F%2Fwww.ibiblio.org%2Fpha%2Fpolicy%2F1940%2F1940-08-28a.pdf&ei=RYH7VPTzKsiZsQTT2IHIBg&usg=AFQjCNFbWd91AnMxctqZiN3Y9hC0wwBppg&sig2=huD3R07WSN4hbzUpSDGr2g&bvm=bv.87611401,d.cWc>.

⁴⁶ The National Defense Act, 5.

⁴⁷ Ibid., 5-6.

⁴⁸ Ibid., 28.

⁴⁹ Ibid., 26-27.

experts and the proponent for technological advancement for their arm to the War Department and General Headquarters staffs.⁵⁰ To facilitate this latter requirement, the Act authorized the branch chiefs to coordinate directly through the Assistant Secretary of War for the procurement of “material pertaining to approved projects,” thereby allowing experimentation and direct acquisition.⁵¹ While there was often significant parochialism and little coordination between the various branches in competition for resources, this decentralized acquisition process afforded greater flexibility and experimentation in research and development.⁵² With parallel development of arms and equipment and the reluctance or inability to procure large quantities until a system neared perfection, the Army was able to hedge its resources, adapt gradually to technological advancements, and exploit the latest technology when resources became available.

The NDA of 1920 enlarged the War Department General Staff (WDGS) to manage the organizing, training, and mobilization of the peacetime Army. The WDGS grew to include the Chief of Staff with four assistants, also general officers, and eighty-eight other officers over the rank of captain.⁵³ This was more than double the size of the General Staff before the war.⁵⁴ The purpose of the WDGS was “to prepare plans for national defense and the use of military forces for that purpose . . . and for the mobilization of the manhood of the Nation and its material

⁵⁰ AEF Superior Board, 12.

⁵¹ National Defense Act, 11.

⁵² Ronald Spector, “The Military Effectiveness of the US Armed Forces, 1919-39,” in *Military Effectiveness: Volume 2, The Interwar Period*, 2nd Edition, ed. Allan R. Millett and Williamson Murray (Cambridge: Cambridge University Press, 1988), 75, accessed July 29, 2014, <http://site.ebrary.com/lumen.cgscarl.com/lib/carl/reader.action?docID=10502795&ppg=96>.

⁵³ National Defense Act, 9.

⁵⁴ Kreidberg and Henry, 178.

resources in an emergency.”⁵⁵ Within the WDGS, the G-3 and the War Plans Division (WPD) shared responsibility for mobilization planning.⁵⁶ With this more robust staff, the WDGS was better able to prepare the Army’s mobilization plans, anticipate mobilization challenges, and ensure a more adaptable organization throughout the Interwar Period.

To administer the personnel, training, and tactical control of the Army prior to and after mobilization more effectively, the Army deactivated the prewar continental departments and divided the continental United States into nine corps areas. Under the provisions of the NDA of 1920 and *War Department General Order #50*, these corps areas retained the functions of the prewar departments, but gained additional responsibilities.⁵⁷ The most significant of these responsibilities was the development of mobilization plans and training oversight for all Regular Army, National Guard, and Organized Reserve formations in their area.⁵⁸ Internally, each corps area was to have control of two field corps comprised of three divisions each, and, in addition to the corps-level support troops, various other support troops that were within their geographic area.⁵⁹ The first nine corps (numbered I – IX) consisted of one Regular Army and two National Guard divisions were the priority for training and mobilization while the remaining corps (numbered XI – XIX) were the Organized Reserve forces.⁶⁰ While the Army changed the corps area boundaries by 1921, the NDA of 1920 provided the Army with an adaptable command

⁵⁵ National Defense Act, 9.

⁵⁶ Kreidberg and Henry, 381.

⁵⁷ US War Department, *War Department General Order #50*, (Washington DC: Government Printing Office, 1920), quoted in Steven E. Clay, *U.S. Army Order of Battle, 1919-1941, Volume 1. The Arms: Major Commands and Infantry Organizations*, (Fort Leavenworth: Combat Studies Institute Press, 2010), 11.

⁵⁸ Clay, 11.

⁵⁹ *Ibid.*, 9.

⁶⁰ *Ibid.*, 13.

structure to enable effective preparation and execution of national mobilization.

Adapting the Organizational Structure

While the corps area headquarters had administrative, training oversight and mobilization responsibilities over the units in their areas, they were not wartime commands. Although they could serve as tactical headquarters in a crisis during initial mobilization, the Army intended to stand-up field corps and field armies. Early mobilization plans established six field armies divided into three army areas. The First, Second, and Third Armies consisted primarily of Regular Army and National Guard units while the Fourth, Fifth, and Sixth Armies contained mostly Organized Reserve units.⁶¹ None of these armies, however, was active until General Douglas MacArthur, then Chief of Staff of the Army, directed the revision of the mobilization plans and established four active army headquarters in 1932.⁶² While not fully manned, MacArthur anticipated that there should be an existing headquarters between the War Department and the mobilizing corps and division units.⁶³ Although minimally manned and absent many of the army-level supporting troops, these headquarters would enable the Army's first large-scale maneuvers and prepared the army for national mobilization.

Because the field armies and corps headquarters existed in a provisional status through much of the Interwar Period, the principal unit of the Army was the division. The postwar divisions had fewer personnel than the AEF divisions but retained the square structure with four infantry regiments. The Army intended to establish and maintain fifty-seven such divisions throughout the Regular Army, National Guard, and Organized Reserves divided among the nine

⁶¹ Clay, 98.

⁶² J.E. Kaufmann and H.W. Kaufmann, *The Sleeping Giant: American Armed Forces Between the Wars* (West Port: Praeger, 1996), 90.

⁶³ Clay, 101.

corps areas and overseas garrisons. The Regular Army was to organize and maintain twelve divisions providing each corps areas and the overseas departments with one active division. The National Guard provided each corps area with two divisions for a total of eighteen. The remaining twenty-seven divisions came from the Organized Reserves and formed the reserve field corps in each corps area.⁶⁴ However, because of personnel shortages during most of the Interwar Period, the Regular Army and National Guard divisions were significantly under strength. Exacerbating the problem was the Army's decision to continue to field the divisions across the nine corps areas.⁶⁵ Because of these conditions, the division training and testing was difficult until partial mobilization began in the late 1930s in anticipation of war.

In 1939, under the direction of the Army's new Chief of Staff, General George C. Marshall, the Army began to reorganize its divisions into smaller, more mobile forces that could take greater advantage of the technological improvements in mobility, protection, and firepower. This new organizational structure, known as the triangular division because its three regiments with three battalions each, sacrificed some of the staying power of the square division but made significant improvements in mobility and command and control.⁶⁶ The principle of the triangular design depended upon one maneuver element being able to fix an enemy formation with direct and indirect fires while another element maneuvered to find and exploit the enemy's flank. The third element remained in reserve. As the Army adopted this triangular structure, it gained the benefit of being able to reassign the personnel available from the leaner structure to form

⁶⁴ Clay, 196-199.

⁶⁵ Finlayson, 99.

⁶⁶ Ibid., 130.

additional divisions.⁶⁷ As the triangular divisions proved their worth, the Army sought to improve its efforts toward mechanization.

Frustrated with the slow development of mechanization in the infantry and cavalry branches and recognizing the need for a change based on the success of the German Army in 1939 and 1940, General Marshall established a separate Armored Force. The Armored Force focused on developing the tactical and organizational doctrine for armored (tank) warfare for the Army. The Armored Force would eventually form the first armored brigades and divisions and would eventually become the I Armored Corps built from the 1st and 2nd Armored Divisions. The initial formation of the armored divisions consisted of an armored brigade of three tank regiments, an infantry regiment with two battalions, one artillery regiment, and other supporting troops.⁶⁸ By 1942, following the 1941 maneuvers, the Armored Force reorganized the armored divisions to consist of two tank regiments and added an infantry battalion. This organization allowed the armored divisions to organize efficiently into infantry-armor combined arms teams.⁶⁹ Parallel to adapting the Army to a more mobile tactical organization, the Army's operational doctrine adapted to account for improvements in firepower and mobility as well as accounting for lessons learned from wars abroad.

Adapting the Operational Doctrine

In conjunction with the advances in equipment, the branch chiefs also served to

⁶⁷ Christopher R. Gabel, *The U.S. Army GHQ Maneuvers of 1941* (Washington DC: Center of Military History United States Army, 1992), 9-12, accessed December 17, 2014, <http://babel.hathitrust.org/cgi/pt?id=mdp.39015069115551;view=2up;seq=1>.

⁶⁸ Gabel, 25. Gabel explained the term "armored" was a neutral term to avoid association with the cavalry's "mechanized" or the infantry's "tank" terminology.

⁶⁹ *Ibid.*, 178.

standardize the doctrine and training within respective arm of services. After the war, the Army revised its operational doctrine in *Field Service Regulations 1923 (FSR 1923)*.⁷⁰ The *FSR 1923* establish a unified combined-arms doctrine that expanded upon the Army's prewar concepts, incorporated lessons of the Superior Board, and met the new demands of the NDA.⁷¹ The infantry remained the primary arm of combat whose "fighting power rest[ed] upon the basis of morale" and whose primary weapons remained the rifle and bayonet.⁷² Tanks and their employment had become part of the Army's operational doctrine. However, because of its limited capabilities and reliability at the time, the tank's role was limited to direct support of the infantry assault "by overcoming or neutralizing resistances or breaking down obstacles that check the infantry advance."⁷³ Incorporating the lessons learned from the war, the regulations placed particular emphasis on achieving fire superiority through the combination of indirect fire from the artillery, direct fire from the infantry, and close air support from attack airplanes to render the enemy's positions untenable.⁷⁴ The *FSR 1923* particularly stressed the importance of artillery's close relationship to supporting the infantry.⁷⁵ The *FSR 1923* detailed the important role of the artillery preparation through counterbattery fire as well as the rolling barrage in support of an offensive along a stationary front.⁷⁶ The timing and the level of coordination between the infantry and the

⁷⁰ US War Department, *Field Service Regulations 1923*, (Washington DC: Government Printing Office, 1923), introduction from Major General J. L. Hines, Acting Chief of Staff.

⁷¹ Odom, 23-25.

⁷² *FSR 1923*, 11-12.

⁷³ *Ibid.*, 13.

⁷⁴ *Ibid.*, 84.

⁷⁵ Odom, 62.

⁷⁶ *FSR 1923*, 99.

supporting arms required for such concepts were new developments resulting from the Army's experience in the war.

Although the *FSR 1923* incorporated the application of other advances in technology gained from its experience in the war, its operational concepts were evolutionary adaptations to the *FSR 1914*. As stated above, the infantry remained the decisive arm on the battlefield. While the new doctrine incorporated emerging concepts such as aerial reconnaissance and motorized transport into the tactical employment of the Cavalry, the branch itself, whose primary experience came from service along the United States' southwest border rather than the war, maintained its devotion to the horse.⁷⁷ While the *FSR 1923* modernized the Army's doctrine, many aspects remained consistent with the prewar regulation.

Understanding that technological advancements would have an impact on the conduct of future warfare, the Army continued to experiment and focused its land forces on the development of mechanization and motorization. During the Interwar Period, mechanization referred to the combination of firepower, protection, and mobility while motorization referred to the movement of personnel and equipment by motor transport. The Army quickly accepted motorization, and most branches had conducted experiments with motorized transport by the end of the decade. Because early experiments of a mechanized force were less than impressive, the Army devoted less effort to the development of the tank and mechanized warfare.⁷⁸ While development of mechanization remained slow throughout the 1920s, experimentation continued. This slow development of a mechanized capability protected the Army from over investment in platforms that would be obsolete within a few years.

Another factor weighing on the slow development of mechanization came from

⁷⁷ Odom, 65.

⁷⁸ Ibid., 91-92.

observations from other countries and conflicts around the world. Summarizing the view of many infantrymen during the period, one contributor to *Infantry Journal* noted that motorization, mechanization, and aircraft had facilitated the speed of the offensive; however, they remained auxiliary weapons because infantry continued to dominate in restricted terrain based on observations of the Spanish Civil War.⁷⁹ Even as late as 1939, in an article in *The Cavalry Journal* the Chief of Cavalry, Major General John Herr, continued his strong advocacy of the horse cavalry. In considering the benefits of mechanization and motorization, General Herr suggested a combination of mechanized and horse cavalry as the best solution because the horse retained superior mobility over the inherent limitations of range and mobility of motor vehicles.⁸⁰ With such perceptions from its branches, the Army had not anticipated the need for change; therefore, the *FSR 1923*, with the infantryman armed with a rifle and bayonet as the prominent arm, remained the Army's centerpiece doctrine for over fifteen years.

The initial impetus for the Army to revise *FSR 1923* was the confusion between *FSR 1923* and the Army's newly published *Field Manual 100-15, Manual for Commanders of Large Units (MCLU)*, in 1930.⁸¹ Largely borrowing from French doctrine, the proponents of the *MCLU* intended for it to provide detailed guidance for commanders at the division level and higher.⁸² The *MCLU* did not replace the *FSR 1923*; rather, it augmented the Army's existing doctrine. Among the discrepancies included differences in the method and purpose of an offensive. While

⁷⁹ Wendell G. Johnson, "The Spanish War: A Review of the Best Foreign Opinion" *Infantry Journal* 45, no. 4 (July-August 1938): 351-356.

⁸⁰ John K. Herr, "What of the Future?," *The Cavalry Journal* 48, no 1 (January-February 1939): 3-4-5.

⁸¹ US War Department, *FM 100-5, Manual for Commanders of Large Units* (Washington DC: Government Printing Office, 1930), iii.

⁸² Odom, 119.

the *FSR 1923* maintained the Army's prewar doctrine of open warfare focused on the destruction of the enemy force through offensive action, the *MCLU* emphasized the offensive as "a step-by-step forward movement from one good position to another."⁸³ By the mid-1930s, led by Major General George A. Lynch, who became the Chief of Infantry in 1937, the Army's senior leaders began to question the usefulness of retaining both the *MCLU* and the *FSR 1923* because of the inconsistencies between the two manuals.⁸⁴ With growing discontent among Lynch and other senior leaders, the WDGS initiated an effort to reconcile the differences between the manuals and produce a single capstone doctrine.

When the Army attempted to publish an updated capstone doctrine in 1939, the result did little to alleviate the discontent among senior leadership. Under the direction of Colonel Edmund L. Gruber, the chief of the Training Branch in the G3 section, the WDGS had intended to resolve the differences between the two manuals and integrate tactical and technological developments from the field.⁸⁵ Under pressure to expedite its development, Gruber stove-piped the development between the WDGS G3 and Major General Lesley J. McNair, the commandant of the Command and General Staff School, to such an extent that the branch chiefs were unable to provide their input.⁸⁶ In part because of the nature of its production and in part because of the content, when General Marshall, newly appointed as the Army Chief of Staff in 1939, approved the revised manual, he insisted it was a tentative manual and that the G3 conduct further research.⁸⁷ The

⁸³ *MCLU*, 10.

⁸⁴ Finlayson, 124-125.

⁸⁵ Odom, 126.

⁸⁶ Finlayson, 125.

⁸⁷ Odom, 130.

WDGS published its update to *FSR 1923* as *Field Manual 100-5: Tentative Field Service Regulations, Operations* (referred to as *FSR 1939*).⁸⁸

While not fully developed to the extent the Army's senior leaders would have preferred, the operational doctrine codified in the *FSR 1939* was an evolution from previous doctrine. The doctrine writers acknowledged the impact of advances in motorization, mechanization, and other technologies on the separate branches, but they did not combine these advances into a new approach to combined-arms operations.⁸⁹ Largely, the infantry remained the predominant arm of decision on the battlefield, while cavalry and artillery remained the lesser of equals.⁹⁰ The tank remained a supporting component within the infantry that was to augment the infantryman's firepower in the assault.⁹¹ The new doctrine maintained that the offensive was the most decisive form of maneuver but failed to acknowledge that technological developments had increased the distances and tempo of combat.⁹² While there was significant pressure in the Army to adapt its operational doctrine, the WDGS failed to understand the necessary change required and implemented the wrong change.

While not perfect, the *FSR 1939*, and Marshall's guidance, spurred the WDGS to continue to develop an overarching operational doctrine for the Army. With the publication of the 1939 manual, the new WDGS G3, Brigadier General Frank Andrews, requested feedback from

⁸⁸ US War Department, *Field Manual 100-5, Tentative Field Service Regulations, Operations* (Washington DC: Government Printing Office, 1939) ii-iii.

⁸⁹ Odom, 132-133.

⁹⁰ *FSR 1939*, 5.

⁹¹ *Ibid.*, 140-141.

⁹² Odom, 134.

senior leaders from the force and directed McNair for final revision.⁹³ The change in the Army's organizational structure and the formation of the Armored Force, which as described above improved tactical mobility and tempo, put greater demand on the Army to update its operational doctrine. Following Germany's invasion of Poland in September 1939, the professional journals contained numerous articles on the importance of mechanization and combined arms operations. One officer wrote in the *Infantry Journal*, "The infantry is still the 'Queen of Battles.' However, the Queen must have the most modern armament and must keep up to date with the technical methods of industry."⁹⁴ For this officer and many like him, the German method of the mechanized combined arms offensive was the path the Army should take for rearming and reorganizing.⁹⁵ The advances in technology and changes in warfare that the Germans had demonstrated in Poland were a catalyst for rapid change within the Army's organizational structure and operational concept.

The Army published its second revision of its operational doctrine less than two years after the publication of the *FSR 1939*. The 1941 version of the field service regulations, *Field Manual 100-5, Field Service Regulations: Operations (FSR 1941)*, was the culmination of more than twenty years of technological and tactical adaptation.⁹⁶ The revised operational concept was a shift from the infantry-artillery combination of arms to the infantry-armor-artillery combined-arms concept with an emphasis on mechanization and motorization. The infantry was no longer

⁹³ Odom., 130.

⁹⁴ Henry J. Reilly, "Background for Lightning War," *Infantry Journal* 47, no. 1 (January-February 1940): 6.

⁹⁵ *Ibid.*, 2.

⁹⁶ U.S. War Department, *Field Manual 100-5, Field Service Regulations, Operations* (Washington DC: Government Printing Office, 1941). Preface.

the arm of close combat but *an* arm of close combat.⁹⁷ There was also the addition of the armored divisions, as described above, that concentrated mobility and firepower to achieve decisive missions primarily against rear area objectives.⁹⁸ The development of improved transportation aircraft and the concept of attacking the depth of the enemy, the new *FSR 1941* recognized and incorporated the use of airborne infantry that could operate in the enemy's rear area.⁹⁹ Quickly implemented once the Army anticipated the need for change based on twenty years of technological progression and rising global tensions, *FSR 1941* provided the Army with its operational doctrine that would serve throughout World War II.

Summary

During the interwar period beginning in 1918 to 1941, the Army adapted its organizational structure and its operational doctrine in anticipation of the impact of technological advances in firepower, protection, and mobility on the conduct of warfare. Budget and personnel shortages, along with other constraining factors, limited the Army's modernization efforts throughout most of this period. However, the effect of this slow development meant that change was incremental but more lasting. The constraints also allowed the Army to procure and adapt to the latest technology that it had available just prior to the war.

Under the provisions of the NDA of 1920, the Army concentrated its operational focus on its organizational structure and the planning for national mobilization. The NDA established a three-tiered readiness posture for the Army in the form of the Regular Army, the National Guard, and the Organized Reserves. The WDGS established corps areas to decentralize administration,

⁹⁷ FM 100-5, 1941, 5. Italics added for emphasis.

⁹⁸ Ibid., 263.

⁹⁹ Ibid., 6.

training, and mobilization planning for the nine areas. While the Army organized into field armies and field corps, the division remained the basic unit for Army planning. The initial postwar division retained the square structure of the AEF but with few personnel. To take advantage of improvements in firepower and mobility, the Army changed the division into a triangular structure. The triangular division not only afforded better mobility and control, the excess personnel helped form other divisions. Unlike the AEF, the Army that entered World War II had existing division-level and higher command structures.

The Army's doctrinal developments during this period were similarly incremental based on the improvements in technology. The *FSR 1923* capitalized on the Army's lessons learned from the First World War while retaining the emphasis on the American preference for open warfare. The adoption of the *MCLU*, which was intended to provide clearer guidance to commanders of large units, did the opposite because of the discrepancies between it and the *FSR 1923*. In 1939, the Army attempted to integrate the concepts from these two manual while also incorporating greater appreciation for the improvements to motorized transport and mechanized capability. However, the resulting *FSR 1939* fell short of its intentions. With the publication of *FSR 1939* the Army initiated an effort to revise its doctrine again. The resulting *FSR 1941* recognized the significant changes in warfare with the rapidly improving technology and Germany's successes in Europe. The *FSR 1941*, which placed infantry and armor as equals in the infantry-armor-artillery combined arms team, was the doctrine the Army implemented and took to war.

Part 2

Enhancing Leader Adaptability

When the United States entered World War I in April 1917, the Army had no standing combat units larger than the regiment, and these were often under strength and scattered among

different posts. One of the first challenges General Pershing and the General Headquarters (GHQ) faced was organizing and training the American Expeditionary Forces (AEF) into divisions, corps, and field armies. To get American forces into combat, the AEF also had to overcome the complexity of transporting large numbers of men and material from the United States to France, traverse that country along limited supply lines, and take positions in an established front. Few officers in the Army at that time had the experience or the training for command and staff work at these higher echelon formations other than those who had graduated from the Leavenworth Schools before they closed to support the war in 1916.

The demand for those officers who had graduated from the service schools at Leavenworth prior to the war far exceeded the supply. While many Army officers had some combat experience before the war from the Spanish-American War, the Philippine Insurrection, or the Punitive Expedition in Mexico, fewer than four hundred serving officers were Leavenworth graduates.¹⁰⁰ General Pershing, the AEF commander, placed a special trust and confidence in these graduates and purposefully assigned them to the most influential positions throughout the AEF.¹⁰¹ However, because War Department suspended the service schools, there would be no additional Leavenworth trained officers coming from the United States.¹⁰² Such was the demand for additional officers able to perform staff functions on the division, corps, and field army staffs that the AEF established a general staff course in theater using the Leavenworth curriculum and

¹⁰⁰ Grotelueschen, 12.

¹⁰¹ Office of the Chairman of the Joint Chiefs of Staff, *A Military History of the U.S. Army Command and General Staff College* (Fort Leavenworth: US Army Command and General Staff College, ca 1964), 21.

¹⁰² *Ibid.*, 20.

methods of instruction with the addition of combat lessons from the front.¹⁰³ Even with the establishment of the general service school at Langres, France, and other similar schools throughout the AEF's sector in France, the general staffs and commanders of the AEF lacked practical experience in the application of modern warfare on the Western Front.¹⁰⁴ The AEF's division, corps, and field army headquarters managed to adapt and overcome initial setbacks but at great cost to human lives and wasted material. With the restructuring of the postwar Army, the War Department and the Army's senior leaders were determined to have a ready cadre of experienced and adaptable officers who could serve as commanders and senior staff officers at higher levels of command.

Limitations to Officer Experience

Although the WDGS organized the Army into field armies, corps, and divisions under the auspices of the National Defense Act (NDA) of 1920 and the plans for mobilization, competing demands constrained the Army's ability to concentrate formations and conduct large-scale training at echelons above the brigade. Although Congress authorized the Regular Army an end strength of roughly 300,000, including officers, through the NDA of 1920, it often capped the Regular Army to a force of less than 138,000 for much of period. From the allotted end strength, 38,000 soldiers were required to garrison Hawaii, the Philippines, and the Panama Canal Zone. The remaining personnel stationed in the continental United States supported the Regular Army's mission to train and educate soldiers of the National Guard and Organized Reserves. This demand was of such an extent that by 1926 the Army's Chief of Staff reported that forty-nine percent of the Regular Army had been involved in the training mission. In 1933, the Army took on

¹⁰³ Schifferle, 11-13.

¹⁰⁴ Ibid., 13.

additional responsibility by managing one of the President's New Deal programs, the Civilian Conservation Corps (CCC). Already stretched across various posts throughout the country, this support spread the Army even further across 1,350 CCC camps and required augmentation from the Navy, the Marines, and over one thousand reserve officers.¹⁰⁵ The effect of these demands in addition to the budget and personnel shortages, meant that officers assigned to troop duty posts often had little time or resources with which to conduct tactical training, especially in large formations.

Focus on Mid-Career Officer Education

The Army's senior leadership recognized that troop duty alone would not provide its officers with the experience they would need to serve on general staffs or as commanders of divisions, corps, and field armies during large-scale operations. Therefore, the Army placed significant emphasis on an officer's education and experience through the Army's education system. Upon completion of pre-commissioning education, an officer's career would alternate between troop assignments and professional schooling. The first phase of an officer's education consisted of the division schools and branch-specific special service schools focused at the brigade-level and below for company-grade officers. The second phase of the education system for mid-career officers was the General Service Schools at Fort Leavenworth where officers learned the application of the Army's combined-arms doctrine at the division and corps level. The final step in the education system was the Army War College where selected officers learned strategic problem solving by solving real-world problems for the Army staff.¹⁰⁶ Of these schools, the General Service Schools at Fort Leavenworth are of particular interest because it was there

¹⁰⁵ Edward M. Coffman, *The Regulars: The American Army 1898-1941* (Cambridge: The Belknap Press of Harvard University Press, 2004), 234-243.

¹⁰⁶ Schifferle, 32-34.

where the Army's mid-career officers received the education and experience to serve as the commanders and key staff officers of the Army's principle combined-arms formations—the divisions and corps. Therefore, a closer examination of the education experience of the mid-career officers at the Leavenworth schools is important to determine the influence on enhancing the adaptability of the officers who would lead the Army in World War II.

The Fort Leavenworth Method of Instruction

After the war, the Leavenworth schools resumed their role of preparing the Army's mid-level officers for command and staff duty in division and higher commands. The General Service School restarted as two-year program with the General Staff School following the School of the Line. While the curriculum and method of instruction was similar between the schools, there was a clear separation in their scope. The School of the Line's basic unit of instruction was the Army division while the General Staff School taught at the corps and field army levels. The schools combined in 1922, becoming the Command and General Staff School (CGSS) and the program of instruction reduced to one year to meet the demand for qualified officers. The CGSS resumed the two-year program in 1928 until 1935 when the increased demand for officers once again mandated a one-year course. While the curriculum changed over the years, the CGSS's underlying mission remained the training of officers in combined-arms warfare and the functions of commanders and staff officers at the division and corps level.¹⁰⁷ In principle, the school focused the curriculum on the realization that effective commanders required knowledge of staff work while effective staff officers need to understand the requirements of the commander.¹⁰⁸ Through this dual emphasis, the CGSS provided the Army with a reserve of officers qualified to

¹⁰⁷ *A Military History of the U.S. Army Command and General Staff College*, 22-30.

¹⁰⁸ US Army General Service School, *Annual Report 1923* (Fort Leavenworth: The General Service School Press, 1923), 8.

serve as commanders or key staff officers on general staffs for its mobilized divisions, corps, and field armies.

The instruction at Leavenworth sought to improve an officer's knowledge and experience through method of instruction that afforded the student officers the opportunity to apply the lessons learned through practical exercise. This method combined instruction methods such as lectures, conferences, and committees with application methods such as problem-solving exercises and map maneuvers to provide the students with multiple learning experiences. The instruction through lectures and conferences typically focused on teaching the application of the Army's doctrinal principles to a particular tactical problem. The difference in the two was the lectures, given to the class at large, provided a baseline understanding for all students while the smaller conferences encouraged instructor and student discussion. Initially these lectures and conferences focused at regimental operations, a level most students would be familiar with following their branch advanced courses. The level of complexity increased as the course continued beginning with combined-arms operations at the division-level and culminating with corps-level operations. Throughout the course, the student officers met in formal committees, small groups of ten students and two instructors, to review new material or a graded exercise from that week. These committees encouraged open discussion and provided a way for the students to synthesize what they had learned.¹⁰⁹ The lectures, conferences, and committees ingrained in the students the knowledge of the steps, tools, and methods to apply Army doctrine to tactical problems.

While instruction was an important component to the instruction, practical application was essential for imparting practical experience and enhancing adaptability. The practical application exercises that measured individual student performance and were in the form of either

¹⁰⁹ Schifferle, 100-107.

map problems or terrain exercises. The map problems were a four-hour graded event during which the student received an assessment on his ability to develop a solution to a tactical problem at the division, corps, or army level. The terrain exercises were similar to the map problems but done in the field. The terrain exercises developed the students understanding of the impacts of terrain on the operation. The instructor expected the student to apply the operational principles taught and come up with viable tactical solution.¹¹⁰ Through these practical application exercises, the students gained hands-on experience in applying the lessons learned in the classroom.

Whereas the map problems and terrain exercises were an individual exercises, the school also employed map maneuvers, a form of war-gaming referred to as *Kriegspiel*, where the students formed together to solve tactical problems and exercise decision making at the senior command and staff level. Conducted toward the end of the year, the instructors designed the map maneuvers to reinforce the lessons taught previously on tactics, logistics, decision-making, command, and the functions of the staff. Typically, the students would form as the friendly force while the instructors controlled the enemy forces. However, at the end of the year, the students would conduct a force-on-force exercise in which they divided and played both the friendly and enemy forces. During the map maneuvers, a key learning component for the students was the art of decision-making. The students learned by trial and error, without the assistance of an instructor, when to make or not to make a decision. Although the students did not receive an individual graded assessment similar to the map problems and terrain exercises, their performance during these map maneuvers significantly influenced the instructors' recommendations for potential to serve on a general staff.¹¹¹ As the culmination of Leavenworth's

¹¹⁰ Philip Carlton Cockrell, "Brown Shoes and Mortar Boards: U.S. Army Officer Professional Education at the Command and General Staff School Fort Leavenworth, Kansas, 1919-1940" (PhD diss., University of South Carolina, 1991), 96-99.

¹¹¹ Schifferle, 108-110.

instruction method, the map maneuvers not only reinforced what the students had learned during the previous instructions and exercises but also developed the interpersonal and teamwork skills to serve effectively on a general staff.

Criticism of the Leavenworth Method

While Leavenworth's method of instruction provided the students with the tools and experience at problem solving, many contemporaries and modern historians have sharply criticized the schools apparent fixation on the school's solution. In one example, an officer, who had received an unsatisfactory mark after employing his tanks during a map maneuver exercises in an unconventional manner despite destroying the enemy's command post and ending the exercise a day early, successfully employed his tanks in a similar fashion. The officer, Bruce Clarke, who would go on to become a four-star general and known as an expert in armored warfare, commanded Combat Command A of the 4th Armored Division in World War II.¹¹² However, such criticism appears contrary to much of the contemporary evidence that suggests that above example is the exception rather than the norm. The school routinely stressed to the instructors that the school solution was merely a solution and that a student should receive full credit for a different solution so long as he showed logical reasoning.¹¹³ Further, the school routinely assessed student solutions and used student input on the development of changes to the

¹¹² Jörg Muth, *Command Culture: Officer Education in the U.S. Army and the German Armed Forces, 1901-1940, and the Consequences for World War II* (Denton: University of North Texas Press, 2011), 129-130. Muth tended to use isolated examples such as that of Bruce Clark in his sweeping criticism of the US Army's officer education system leading up to World War II but provided little support for what was done well. The exception being the instruction at the Infantry School to which he credited the influence of then Captain Adolf von Schell—a German exchange officer serving at Fort Benning when George C. Marshall was the commandant.

¹¹³ Nenninger, 14.

solution.¹¹⁴ While other contemporary student experiences may justify the critics, the value Leavenworth's method of instruction for the students was in learning and applying the skills to solve complex problems more than getting the correct answer to a tactical problem.

Another recurring criticism was the supposed lack of emphasis on the aspect of command. Some critics point to a student survey found in the 1939 Commandant's Annual Report that indicated the subjects of command and troop leading among those subjects least taught.¹¹⁵ Contemporaries also seemed to question the school's emphasis on command given the addresses and comments of the commandants. For example, in his address to the opening exercise of the Class of 1924, the commandant, Brigadier General Harry A. Smith stated, "the mission of the Command and General Staff School is to teach tactics and logistics of the division and corps, the duties of the division and corps commanders, the organization and functioning of division and corps staffs."¹¹⁶ Smith further argued that "the general staff has become a necessity of a modern army, but care is necessary that it does not become the controlling force and usurp some or all of the duties of the commander."¹¹⁷ Accordingly, the school apportioned sixty-five percent of the instruction to command.¹¹⁸ In practice, however, the instruction focused on the functions of the

¹¹⁴ Schifferle, 111-113.

¹¹⁵ Muth, 121. Muth began his list with "command" and "troop leading procedures" implying more significance than the survey states. For example, while "Supply, evacuation, and logistics" received 24% of the responses, command received only 7%. See US Army General Service School, *Annual Report 1938-1939* (Fort Leavenworth, KS: The General Service School Press, 1939), 8.

¹¹⁶ Brigadier General H. A. Smith, Commandant of the Command and General Staff School, comment to Class of 1924 prior to the opening exercise found in "Command and General Staff School," *Infantry Journal* 23, no 6 (December 1923): 675.

¹¹⁷ Ibid.

¹¹⁸ *A Military History of the U.S. Army Command and General Staff College*, 26.

staff. The school's faculty largely following the idea that an effective commander must know the functions of the general staff and the qualities of a good commander were the result of experience and personality.¹¹⁹ The school provided the Army with future commanders who had an understanding of general staff functions and general staff officers who understood the needs of their commander.

Summary

Despite the provisions of the NDA of 1920, which allotted the Regular Army an end strength of almost three hundred thousand soldiers, the Army rarely had sufficient personnel to conduct large-scale tactical training after meeting the demands of manning overseas garrisons, training of the reserve components, and supporting the CCC. As a result, officers received only limited tactical experience, and practically no experience with large formations, while assigned to troop duty. Anticipating the need to provide a mobilized Army with a trained cadre of experienced officers who would be able to serve as commanders and staff officers at the division, corps, and army levels, the Army invested in officer education.

The Army formalized the officer education system during the Interwar Period beginning with pre-commissioning training at West Point or the Reserve Officers' Training Corps program at other universities and culminating with the War College. While the special service schools, which were often branch specific, focused on the tactics and employment of forces at regiment and below and the War College focused on strategic leadership, the Command and General Staff School at Fort Leavenworth provided many officers with their first opportunity to learn to apply combined arms tactics at the division level and higher.

The Leavenworth method of instruction provided students with a combination of

¹¹⁹ Schifferle, 72-73.

classroom instruction and practical application. The combination of lectures, conferences, and committees provided the officers with the tools and methods to apply Army doctrine to tactical problems. The practical exercises reinforced the lessons learned in the classroom while providing the students with the experience and confidence in being able to apply those skills under pressure. While there was an approved school solution for each of these exercises, it was not the only possible solution. General Omar Bradley, in his autobiography *A General's Life*, noted, “[w]hen a ‘conventional’ solution to a complex military problem is already well known by rote, unconventional – and often better – solutions are more likely to occur.”¹²⁰ Through this method of instruction, CGSS provided the Army with a reserve of adaptable leaders who would serve as the cadre of commanders and staff officers in an expanded Army during World War II.

Part 3

Preparing for Degraded Operations

Beginning in the 1930s, the Congress improved the Army’s funding and authorized modest increases in the Army’s end strength. As stated previously, the National Defense Act (NDA) of 1920 authorized the Regular Army an end strength of approximately three hundred thousand soldiers and officers. However, during much of the Interwar Period, the Army’s strength was less than 138,000. Between manning the overseas garrisons, training of the reserve component, and supporting the New Deal Programs, the Army had little opportunity to conduct large-scale (division and higher) training. Because of rising tensions in Europe and Asia and the influence of the Army’s Chief of Staff, General Douglas MacArthur, the President authorized a substantial increase in military spending to include increasing the Regular Army’s end strength to

¹²⁰Omar N. Bradley and Clay Blair, *A General's Life* (New York: Simon and Schuster, 1983), 61.

156,000 and the National Guards end strength to 235,000 by 1940.¹²¹ While full implementation would take full effect before 1940, the Army was able to implement some modernization programs. Following the German conquests of Poland and France, Congress authorized a peacetime mobilization that included the nation's first peacetime draft and an increase in the Army's end strength from less than 190,000 men in the Regular Army on September 1, 1939, to approximately 1,460,998 by June 30, 1941.¹²² The increase in personnel and funding allowed the Army to plan for large-scale maneuvers that would prepare the Army for war during a time of peace.

These large-scale maneuvers, executed at the corps and field army level, would focus on the higher echelon staffs and support troops that had been difficult to man and train previously. The objectives of these maneuvers were twofold. Through combined arms maneuver and the integration of support troops at multiple echelons, the Army was able to use the maneuvers as testing grounds for its organizational structure and operational doctrine. Because these maneuvers involved large numbers of personnel and equipment dispersed over wide areas, they afforded commanders and their staffs the opportunity to react to the frictions associated real-world conditions, and to learn from their shortcomings and tactical errors prior to actual war.¹²³ The large-scale maneuvers were an integral component in preparing the Army for combat in World War II.

The Army did have some success with the use of command post exercises (CPX), and support to the Civilian Conservation Corps offered the Army experience with large-scale

¹²¹ Kaufman and Kaufman, 88-89.

¹²² Gabel, 8, 13 and 19.

¹²³ Moenk, 4.

mobilization.¹²⁴ However, of particular concern for the Army's senior leadership was the conduct of large-scale operations, defined as division, corps, and army-level. The Regular Army had few tactical units intact larger than battalion, and only three of its nine authorized divisions manned sufficiently to function.¹²⁵ Soldiers assigned to the remaining six divisions served as the skeletonized staff. The National Guard's 200,000 part-time soldiers provided just enough forces to maintain its eighteen divisions.¹²⁶ These personnel issues meant that there were almost no corps-level support troops and only a few higher-level elements other than a few tank and air units.¹²⁷ Nevertheless, changes in the 1930s meant that the Army was able to conduct preliminary large-scale maneuvers.

Early Large-scale Maneuvers (1935-1939)

The Army's first attempts at large-scale peacetime maneuvers occurred between 1935 and 1939. In 1932, under the guidance of the Army's Chief of Staff, General MacArthur, the Army reorganized by nominally constructing four field armies in the Regular Army to support national mobilization. Although organized into the Regular Army, these armies existed largely only on paper as provisional organizations. As such, most of their personnel, to include the commanders, were assigned to other organizations and assumed their positions only when the Army mobilized. Nevertheless, the assigned army commanders were eager to train these headquarters and their supporting troops. First Army conducted the first such exercise in 1935. The exercise involved approximately 36,000 soldiers and concentrated around Pine Camp, New

¹²⁴ Schifferle, 27.

¹²⁵ Gabel, 8.

¹²⁶ Ibid.

¹²⁷ Moenk, 3.

York. Constructively, the First Army consisted of six corps and eighteen divisions. On the ground, however, the First Army existed with borrowed manpower for the staff and regular troops from the 1st Division. The exercise was not a full-scale force-on-force exercise; rather, it was a CPX with subordinate commands in the field. The exercise's overarching objective was to prepare the active components in the logistics and administration of mobilization and preparing for an emergency.¹²⁸ Although there were significant shortcomings, the Army had put a field army headquarters with subordinate commands to conduct training successfully – a significant accomplishment with no experience since mobilization and deployment for World War I.

The Third Army conducted its maneuvers in 1938. Like First Army, it did so with similar training objectives. The Third Army maneuvers, however, also included a two-sided, free-play exercise in which a provisional corps faced a reinforced division. With only twenty-four thousand soldiers divided into three divisions and supporting cavalry and corps-level units, the maneuvers were unable to replicate fully the realism of combat.¹²⁹ The maneuvers, however, did provide opportunity for commanders at multiple echelons to overcome the challenges of degraded operations. One cavalry officer stated that his “squadron had everything from night marches, lost connecting files, delaying rations, missent orders, delayed reliefs, misunderstood instructions, down to even improperly buried dead horses to deal with.”¹³⁰ The large-scale, two-sided maneuver, like the mobilization of First Army in 1935, was another first for the Army.

The next year, First Army went to the field again for maneuvers. Similar to the previous army-level exercises, First Army suffered from personnel shortages, a lack of standing corps and

¹²⁸ Moenk, 21-23.

¹²⁹ Ibid., 23.

¹³⁰ Francis G. Smith, *History of the Third Army: Study No. 17* (Washington DC: Historical Section – Army Ground Forces, 1946), 6

army support units, and had to form a provisional army staff, but they put approximately fifty thousand soldiers in the field to conduct training from regiment to corps. The maneuvers culminated in late August with the “Black” army engaged against a smaller, more mobile “Blue” corps.¹³¹ Like the previous exercises, First Army provided commanders and staffs with experience in the logistics and administration of mobilization, but had limited success in testing doctrinal concepts because of the limitations in personnel and equipment.

These earlier maneuvers suffered from many of the same deficiencies. Foremost among the deficiencies was the shortage of personnel and equipment. While the armies existed on paper, at the time there were few, if any, permanently assigned soldiers to the army headquarters. When First Army went to the field for its maneuvers in 1939, it had two regular officers permanently assigned and the only organic corps and army-level support units came from two signal battalions. The army staffs came from pulling soldiers from subordinate commands or borrowing those from other commands to form provisional staffs. Similarly, the armies pooled resources from the subordinate commands to form the semblance of support troops. Shortages in modern equipment also impeded the effectiveness of the maneuvers. The First Army commander, General Hugh Drum, reported that his army had no 155mm artillery and only a small fraction of its machineguns and mortars. Shortages in antitank guns, trucks, and tanks were common. Engineer equipment was also in short supply with one river crossing consuming over half of the pontoon equipment available in the Army.¹³² Despite the shortcomings, these exercises influenced the conduct of future large-scale maneuvers.

¹³¹ Moenk, 23-25. To differentiate between opposing forces, the Army often assigned colors to the sides. Common colors were black, blue, white, and red.

¹³² Ibid., 26.

Protective Mobilization Plan

Fearful of the growing threat from an aggressive Germany and Japan, gradually the United States began to prepare for war. As Chief of Staff, General MacArthur had negotiated a modest increase in the Army's budget and personnel strength over a four-year period that would allow each of the nine corps areas to field one division.¹³³ His successor, General Malin Graig decided to scrap MacArthur's plan and develop a new mobilization plan known as the Protective Mobilization Plan (PMP).¹³⁴ The PMP maintained the four-army construct of MacArthur's plan, while creating four new divisions.¹³⁵ Under the PMP, the mobilized Army would include three sections. The first section, consisting of the Regular Army and National Guard, was the four hundred thousand man Initial Protective Force (IPF) while the subsequent sections were staged mobilization of reserves that brought the total to one and a half million men.¹³⁶ Actual mobilization, however, did not occur as planned.

The United States began mobilization through Executive Order without a declaration of war. Therefore, the precise date of national mobilization (M-Day) is uncertain. A good reference is September 8, 1939, when President Franklin D. Roosevelt declared a limited national emergency following Germany's invasion of Poland.¹³⁷ In the days following the President's declaration, the War Department General Staff (WDGS) War Plans Division (WPD) began to plan for a much larger increase in the IPF to include up to 320,000 Regular Army and 425,000

¹³³ Kaufmann and Kaufmann, 88.

¹³⁴ Kreidberg and Henry, 476.

¹³⁵ Kaufmann and Kaufmann, 90.

¹³⁶ Kreidberg and Henry, 477.

¹³⁷ Gabel, 9.

National Guard.¹³⁸ With steadily increasing personnel numbers and a growing budget, the Army began to fill its units to combat strength and field new equipment. The PMP served as the framework for mobilization from 1939 to 1942 when full mobilization began and overwhelmed the system.

Large-scale Maneuvers 1940

By 1940, a number of factors allowed the Army to continue conducting large-scale maneuvers but with much improved effectiveness. With the President's declaration of emergency and the beginning of limited mobilization, the Army began to fill units with the newly available personnel. Additionally, the increase in government spending on defense meant that the Army could begin limited modernization. Lastly, the Army's reorganization of its divisions from the World War I legacy square construct to the smaller, more mobile triangular division increased the availability of additional personnel. With these additional soldiers, the Army was able to activate a sufficient number of upper-echelon support troops to form one standard corps.¹³⁹ With these assets and formations established, the Army was able to conduct the first true large-scale peacetime maneuvers that could train soldiers and provide a litmus test for its emerging doctrine and force construct.

Third Army was the first of the armies to participate in the 1940 maneuvers. The objectives for the spring maneuvers were "to train the new type corps, composed of triangular divisions, in concentrations over long distances against a mobile enemy, and in maneuver under

¹³⁸ Kreidberg and Henry, 556.

¹³⁹ Moenk, 26-27.

combat conditions, both alone and coupled with combat aviation and mechanized forces.”¹⁴⁰

When IV Corps formed at Fort Benning during the preliminary phases of the maneuvers, it was the first Army corps to do so since 1918. The corps consisted of the triangular 1st, 5th, and 6th Divisions along with its organic and provisional support troops.¹⁴¹ For the force-on-force phase of the maneuvers, IV Corps deployed from Fort Benning Georgia to the Louisiana Training Area where it faced the provisional IX Corps consisting of the square 2nd Infantry Division, the 1st Cavalry Division, and provisional support troops. Unlike the previous large-scale exercises, Third Army's maneuvers actually provided commands at all echelons with experience in the conduct of combined-arms mobile warfare against a non-cooperative opponent.¹⁴² For the Army, Third Army's maneuvers validated the new type corps organization and the triangular division structure, and revealed shortages in antitank, artillery, and reconnaissance elements.¹⁴³ While the maneuver provided valuable lessons learned, the Army was unable to implement significant changes before Third Army went to the field again later that summer.

In August 1940, Third Army conducted maneuvers again; however, this period of training focused on the National Guard divisions augmented with Regular Army support. Third Army focused the majority of this training period at the division level and below and only devoted four days to the army maneuvers. The IV Corps, which included the 30th and 31st National Guard Infantry Divisions, and the 23rd National Guard Cavalry Division, faced the

¹⁴⁰ From Section V, Volume I, Report Third Army Maneuvers, May 5-25, 1940, Sabine Area, quoted in Francis G. Smith, *History of the Third Army: Study No. 17* (Washington DC: Historical Section – Army Ground Forces, 1946), 7.

¹⁴¹ Gabel, 12.

¹⁴² Moenk, 32-33.

¹⁴³ Smith, 8.

provisional VIII Corps consisting of the 36th and 45th National Guard Infantry Divisions, the 2nd Infantry Division, and the 1st Cavalry Division.¹⁴⁴ Two significant lessons came from Third Army's after action report. The first lesson was that building ad hoc corps headquarters and support units was detrimental to the organization. The second lesson was that peacetime training of the National Guard had been insufficient. The National Guard soldiers lacked the fitness and discipline to endure the physical hardships and privations associated with combat, but by the end, they had shown improvement.¹⁴⁵ With the conclusion of the Third Army maneuvers, the Army began to make further changes to its organization with the establishment of the Armored Force.¹⁴⁶ The Armored Force would get its test during the General Headquarter (GHQ) directed maneuvers in 1941.

Also during August 1940, First Army conducted maneuvers in upstate New York and followed a similar pattern of preliminary training that culminated in a large-scale force-on-force exercise. During this final phase, First Army represented the "Blue" United States forces while I Corps, consisting primarily of the triangular 1st Infantry Division, represented the "Black" enemy forces. The objective of the First Army maneuvers was an evaluation of the triangular division versus the square division. Because neither force was able to outmaneuver or destroy its opponent, General Drum's conclusion was that both division structures were necessary but for different purposes. Where the triangular division offered greater mobility, the square structure had more staying power for sustained combat along a stationary front. General Drum's observations of the First Army maneuvers contributed significantly to the conduct of future large-

¹⁴⁴ Moenk, 33-34.

¹⁴⁵ Smith, 9-10.

¹⁴⁶ Kaufmann and Kaufmann, 171.

scale exercises. He recommended that coordination and planning for such exercises begin at least four to six months before execution to secure suitable training area, develop a realistic scenario, and establish the administrative, logistic, and control systems necessary to handle the concentration of forces. He also recommend that the maneuver planners develop a detailed plan for the training of the umpires to ensure realism and consistency in adjudication.¹⁴⁷ With the completion of the First Army maneuvers, the Army began to prepare for the 1941 maneuvers, which would become the largest full-scale maneuvers in its history.

The GHQ Directed Large-Scale Maneuvers of 1941

As the war continued in Europe and the Japanese continued its Asian expansion, The Army continued its peacetime expansion and modernization under the PMP. The activation of National Guard units for one year of federal service and the Burke-Wadsworth Selective Service Act, initiating the first peacetime draft, increased the Army's strength to approximately 1.4 million soldiers.¹⁴⁸ To assist the WDGS with managing the mobilization of the Army, it established the GHQ in July 1940. These factors and the lessons from the previous large-scale exercises all contributed to the planning and execution of the General Headquarters maneuvers in 1941.¹⁴⁹ These maneuvers, which involved all four of the field armies, were the culmination of the Army's prewar mobilization. They matched Second and Third Armies against each other in Louisiana, First Army against IV Corps in the Carolinas, and Fourth Army in a coastal defense

¹⁴⁷ Moenk, 38-39.

¹⁴⁸ Moenk, 41-42; Selective Training and Service Act of 1940, S Rep. 4164, 76th Cong., 3rd sess., 1940, 885. The Selective Training and Service Act of 1940 was also called the Burke-Wadsworth Selective Service Act for the Senators that introduced the bill.

¹⁴⁹ Moenk, 42.

exercise against a notional force.¹⁵⁰ Like the previous exercises, the US Army intended these maneuvers to test its warfighting doctrine, combat formations, and equipment; as well as, prepare its officers and soldiers for rigors of modern combat but on a much larger scale.

The largest and most significant of these exercises was the Second Army versus Third Army maneuvers conducted in September 1941. These maneuvers involved over four hundred thousand soldiers, nearly one thousand aircraft, and covered an area of roughly thirty thousand square miles of Texas and Louisiana making them the largest peacetime maneuvers in American history.¹⁵¹ During the first phase, one of the GHQ objectives was to determine if a smaller but more mobile force could achieve advantage over a numerically superior foe.¹⁵² The smaller of the two armies, Second Army received reinforcement from an armored corps with two armored divisions of the Armored Force and consisted of two triangular infantry divisions, and a cavalry division. Second Army was to rely on mobility, speed, and use of terrain to seek positions of advantage. Third Army was larger but less mobile with only one triangular infantry division and a reinforced cavalry division. To counter Second Army's armored capability, Third Army received a provisional tank group and three GHQ provisional antitank groups. Senior Army leaders wanted to evaluate whether these antitank groups would provide Third Army the balance to counter Second Army's ability to conduct massed armor attacks.¹⁵³ With neither side achieving a decisive victory, the first phase ended with an armistice at the end of the fifth day. However, the lessons learned would have to wait until the conclusion of the second phase.

¹⁵⁰ Gabel, 44-45.

¹⁵¹ Moenk, 10 and 53.

¹⁵² Gabel, 96.

¹⁵³ Moenk, 55-57.

During the second phase, GHQ wanted to test whether a smaller force in a deliberate defense could defend against an attacker that was superior in virtually every way.¹⁵⁴ Second Army, defending Shreveport, Louisiana, relinquished its armored corps and one of the two armored divisions but gained two of the GHQ provisional antitank groups.¹⁵⁵ The phase witnessed Second Army conducting retrograde and delaying actions against the numerically superior Third Army. When the exercise terminated, Third Army had pushed Second Army to the outskirts of Shreveport, but Second Army had remained largely intact.¹⁵⁶ Through the constraints of a training exercise, the Louisiana maneuvers provided the Army with valuable experience in the conduct of modern mechanized warfare with large formations.

For the US Army the Louisiana maneuvers presented commanders on both sides with significant tactical problems to overcome that had approximated the hardships of actual combat. Commanders had to contend with the administrative and logistics challenges associated with sustaining large concentrations of personnel, crossing multiple unfordable rivers, and controlling large unit engagements. At the same time, commanders faced an uncooperative enemy with its own objectives attempting to defeat them in battle. The exercises also saw experimentation with large mechanized and motorized units, employment of antitank groups and airborne forces, and coordination between ground and air forces. Soldiers at all levels learned the importance of coordination, security, and tactical discipline. Perhaps most importantly to the Army's senior leaders, the maneuvers had proven that mechanized forces were vulnerable.¹⁵⁷ Based on the

¹⁵⁴ Gabel, 96-97.

¹⁵⁵ Moenk, 60.

¹⁵⁶ Gabel, 110-111.

¹⁵⁷ Bell I. Wiley and William P. Govan, *History of the Second Army: Study No. 16* (Washington DC: Historical Section – Army Ground Forces, 1946), 28-29.

lessons learned, the Army continued to adapt to modernize and improve.

The Louisiana maneuvers also served to challenge the Army's organizational structure and operational doctrine. Overall, the exercises had validated the Army's existing doctrine.¹⁵⁸ However, the lack of effectiveness of the armored formations during the maneuvers caused the Armored Forces branch to examine its structure and operational concepts. The examination found that the armored division's organization created regimental and brigade stovepipes preventing the various arms from effectively coordinating without a decision from the division commander. The organization did not allow effective organization into combined arms combat teams. As discussed in Part 1, the Armored Forces sought to change the division structure to allow the organization of combined-arms teams. Other changes in the Armored Force doctrine emphasized employing reconnaissance forces and infantry to clear ground prior to committing tanks for the decisive blow.¹⁵⁹ The Armored Force would have a chance to implement new tactics and redeem itself during First Army's Carolina maneuvers.

The GHQ maneuvers in North and South Carolina pitted First Army against the IV Corps reinforced with the I Armored Corps. The smaller IV Corps consisted of approximately one hundred thousand men and almost nine hundred tanks and other armored vehicles. They faced the First Army consisting of almost 195,000 men and over four thousand antitank guns, of which 764 were mobile. Similar to the Louisiana maneuvers, the Carolina maneuvers were to determine if a smaller but more mobile force could gain an advantage over a numerically superior force.¹⁶⁰ The maneuvers terminated without a decisive victory with First Army having pushed IV Corps into a

¹⁵⁸ Ibid., 29. The assumption here is that *FSR 1941*, published that May, was in effect by September 1941.

¹⁵⁹ Gabel, 121-122.

¹⁶⁰ Moenk, 67.

defensive pocket on defensible terrain.¹⁶¹ These results of the First Army maneuvers reinforced the lessons learned from the previous maneuvers. Of these lessons, one of the most significant in for Army leaders was that mechanized forces were not invincible and that infantry and armor needed to be mutually supporting forces. With the declaration of war on Japan on December 8, 1941, the First Army maneuvers were the last of the large-scale peacetime maneuvers.

Summary

Although the Army suffered from personnel and budget shortages throughout much of the Interwar Period, rising tensions in Europe and Asia resulted in a renewed effort to bring the Army up to modern standards. The effect of the NDA of 1920 and mobilization under the framework of the PMP allowed the Army to grow steadily in strength beginning in 1937. By the 1941 maneuvers, after implementation of the peacetime draft, the Army had grown to 1.4 million soldiers. The Army also began to reorganize into triangular divisions making the excess personnel available to fill higher echelon support troops. As the Army grew in size, it prepared for war by conducting a large-scale, combined-arms maneuvers to train soldiers in combat operations and test the Army's doctrine and tactical organizations.

The large-scale exercises were of great value to the Army as it prepared for war. For the first time in its history, the Army was able to train higher echelon commands in realistic two-sided maneuvers. The training and exercises prepared the officers and men at all levels to adapt to battlefield conditions based on the terrain, weather, enemy situation, and other sources of friction. Similarly, the large-scale maneuvers served to test the Army's operational doctrine and tactical organizations by revealing weaknesses and vulnerabilities in the Army's warfighting concepts exemplified with the changes to the armored forces. Unlike the Army that entered World War I,

¹⁶¹ Gabel, 164.

the Army in December 1941 was trained and experienced in modern combined-arms warfare.

Conclusion and Recommendations

When the Japanese attacked Pearl Harbor on December 7, 1941, one week after the conclusion of the General Headquarters directed maneuvers, the prewar mobilization of the Army ended. When the United States declared war, the Army had a trained force of over 1.6 million soldiers available to defend the country for the first time in its history.¹⁶² Under wartime mobilization, the Army quickly expanded to an end strength of over 3.6 million and activated thirty-one new divisions, including nine armored divisions and two airborne divisions.¹⁶³ With the Army expanding and the country re-tooling for war, the Army still required several months before it was capable of offensive operations against the Axis powers.¹⁶⁴ Within three years, however, the American Army would consist of over eight million soldiers in eighty-nine divisions fighting in multiple theaters of operations separated by vast oceans.¹⁶⁵ The Army of World War II was better prepared than the American Expeditionary Forces of World War I for the modern realities of combat.

During the Interwar Period, the Army demonstrated its organizational adaptability through the anticipation, preparation, and implementation of change in a timely manner while in a peacetime environment. With the advances and innovation of technology and tactics, the Army evolved its operational concept, its capstone doctrine, and its tactical organizational structure to meet these new challenges. Additionally, the Army devoted significant attention to the education

¹⁶² Stewart, 77.

¹⁶³ Gabel, 185.

¹⁶⁴ Stewart, 77.

¹⁶⁵ Gabel, 185.

and training of its officer corps, especially the mid-career officers who would serve as future commanders and primary general staff officers of divisions, corps, and field armies. Lastly, the Army's execution of large-scale, two-sided maneuvers beginning in the late 1930s through the start of the war allowed testing of doctrinal concepts while preparing the force to operate under degraded conditions.

Two major developments took effect during the Interwar Period as a result of the lessons learned by the AEF in World War I. The first development was the National Defense Act of 1920. The NDA provided the structure for an expandable Army consisting of the Regular Army, the National Guard, and the Organized Reserves. While Congress never provided sufficient funding to the Army to organize fully in accordance with the NDA, the structure would remain in effect throughout the period and provided the framework from which it developed the tactical organization. The Army's divisions retained the AEF's "square" structure of four infantry regiments until 1939. Recognizing that improvements in motorization and mechanization increased the depth of the battlefield and the tempo of combat, the Army adapted its divisions to a "triangular" structure with three maneuver regiments to improve mobility. The Army created the Armored Force in 1940 to expedite the development of the tank and mechanized warfare. The Army continued to adapt its tactical organizational structures as technology and tactical experience dictated.

The second major development of the postwar Army was the evolution of its operational concept, or capstone doctrine. With the publication of *Field Service Regulations 1923*, the Army maintained much of its prewar doctrine with regard to the primacy of the infantry and the importance of the offensive. However, the *FSR 1923* did incorporate the lessons gained from the AEF on the Western Front, especially the lesson of firepower. The *FSR 1923* placed greater emphasis on the cooperation between infantry, artillery, and aerial bombardment required to render the enemies positions untenable. Recognizing the lack of doctrine for commanders and

staffs of large units such as field armies, the Army first adopted the *Manual for Commanders of Large Units* from the French. With the publication of *Field Manual 100-5: Tentative Field Service Regulations, Operations* in 1939, the Army attempted to integrate concepts from the *MCLU* with an updated operational doctrine. However, the *FSR 1939* fell short of expectations and did not fully account for the effects of technological improvements on combined-arms operations. Along with tactical organization changes, the German invasion of Poland and France prompted the Army for a significant overhaul of its operational concept. The *FSR 1941* gave much greater importance to the tank and stressed combined arms warfare conducted by the infantry-armor-artillery force.

Recognizing the importance of a well-trained and educated officer corps to command and serve as primary officers on the general-level staffs of divisions, corps, and field armies upon mobilization, the Army committed significant resources to officer education. Upon commissioning, an officer's education would progress through three levels. The first level was the division and branch-specific schools taught to company-grade officers focused at the regiment and below. The next level was the General Service Schools where mid-level officers learned the employment of division and corps sized formations. The last level, which was more selective, was the Army War College where senior officers focused on solving strategic-level problems for the GHQ. Of these schools, the General Service School is unique in that it provided officers with the experience, tools, and problem solving techniques to perform as commanders and staff officers of echelons that existed only on paper throughout much of the Interwar Period.

However, beginning in 1935 and continuing until the eve of war, the Army executed a series of large-scale maneuvers throughout the United States. With the rising tensions in Europe, Congress modestly authorized budget and personnel increases for the Army enabling full-scale maneuvers employing large numbers of men and the new weapons and equipment. With the increased personnel coming from the new end strength and the reorganization of the tactical

organization into a triangular formation, the Army activated the field armies, corps, and divisions. Mobilizing the National Guard further increased the available units that participated in the exercises. Most of these large-scale maneuvers culminated in two-sided, full-scale maneuvers pitting large formations against each other. The Army used the maneuvers to test emerging concepts including mechanization and motorization, close-air-support and ground-to-air coordination, and the square and triangular divisions. The two-sided maneuvers replicated, as much as was possible then, the conditions of actual combat and tasked the commands to solve complex tactical problems against an uncooperative opponent trying to achieve his own objectives. These exercises prepared the officers and soldiers to operate in degraded conditions, which facilitated shortening the time of adapting to real-world combat conditions.

The US Army faces many of the same challenges today that it faced in the period between World War I and World War II. After more than a decade of sustained conflict in Iraq and Afghanistan, the Army is on the cusp of a postwar transition period. Much like the AEF in 1917, the Army rapidly changed its tactical organization and operational concepts to meet the reality of the war in which it engaged. The Army adapted its basic tactical unit from the division to the brigade combat team (BCT). These BCTs were task organized into standing combined arms forces and offered the theater commander more flexibility. During these operations, the Army also witnessed the proliferation and employment of new technologies such as drones, robots, mine-resistant vehicles, and digital command systems at all command levels that have become part of the Army's equipment inventory. The Army published new operational concepts such as *Field Manual 3-24.2, Tactics in Counter Insurgencies*, into its doctrine then introduced those concepts in its officer and enlisted education systems to provide its leaders with the tools to

increase their adaptability.¹⁶⁶ Further, the Army instituted two-sided, full-scale mission readiness exercises to prepare BCTs for degraded operations. These were similar to developments during the Interwar Period that built the Army into an organization that adapted quickly to the demands of a new war. As the Army prepares to transform its tactical formations and operational concept for the future, a program it refers to as Force 2025, there are applicatory lessons from the Army of 1918.

In 1939, when the Army began an experiment with triangular divisions, it did so on a limited basis. Before committing an Army wide transition, the Army tested the concept in actual, full-scale maneuvers against the existing structure, the square division. Similarly, as the Army transforms its BCT structure, it should evaluate the new model under real-world conditions at the combat training centers and evaluate that performance against the existing BCT structure. While increased expeditionary capability and personnel and budgetary limitations are factors of assessment, any new BCT model must retain or exceed the capability of the current model.¹⁶⁷ By implement change in an incremental fashion, the Army would have the ability to test and adapt the model to meet the criteria without committing a large portion of the limited resources.

This systematic evolution is also necessary with the development of the Army's overarching operational concept and doctrine. The AEF's experience in World War I influenced the Army's operational concept in the *FSR 1923* but did not result in a radical change. As technology and warfare changed in the years between the wars, the Army evolved its doctrine during the Interwar Period without a radical change from its fundamentals of fire and maneuver.

¹⁶⁶ US Department of the Army, *Field Manual 3-24.2, Tactics in Counter Insurgencies* (Washington DC: Department of the Army, 2009), ix.

¹⁶⁷ US Army Training and Doctrine Command, "Army Vision – Force 2025," White Paper, January 23, 2014, 5, accessed November 2, 2014, <http://www.arcic.army.mil/Initiatives/force-2025-beyond.aspx>.

Likewise, as today's Army transitions from combat operations in Afghanistan, it should continue to incorporate the lessons learned while retaining its core competencies.¹⁶⁸ The Army's recent framework publications have remained evolutionary while adapting to the complexity of the modern environment.

The Army must continue to focus on inculcating its operational concept and doctrinal methodologies to its leaders of all levels through its education system. While integrating lessons learned from the recent conflicts, the Army schools should focus their effort on teaching the doctrinal principles of the Army's core competencies. Focusing the education on the fundamentals of the Army's operational concept would provide its leaders with the knowledge and skills to apply the principles in different situations. Similar to the schools during the Interwar Period, the Army continues to provide its officers with practical application of doctrine in its officer education system. This combination of instructional lessons and practical exercises is necessary to provide leaders with the knowledge and skills necessary to reduce the time necessary to adapt to the environment.

To evaluate properly the Army's operational concepts and tactical organizations and to ensure the readiness of its leadership and formations for combat, the Army must continue to support and conduct realistic two-sided training. The Army conducts BCT two-sided combined-arms maneuver training at the combat training centers and command post exercises for division and corps headquarters. To ensure the maximum effectiveness of the training and to evaluate the formations adequately, both sides should receive general guidance that defines their objectives and limited constraints to keep within the exercise similar to the orders to the field army commanders during the large-scale maneuvers of the late 1930 and early 1940s. Particularly, with

¹⁶⁸ US Department of the Army, *Army Doctrine Publication 3-0, Unified Land Operations* (Washington DC: Government Printing Office, 2011), 6. ADP 3-0 defines the Army's core competencies as combined arms maneuver and wide area security.

regard to the opposing force (OPFOR), the OPFOR commander should have a realistic objective for the replicated threat but be free to determine and exploit asymmetrical advantages over the training unit. Without constraining the OPFOR to a prescribed operational concept, such training exercises reveal shortcomings in the organization or operational concepts while providing an opportunity for units to adapt to degraded conditions.

As today's Army seeks to evaluate and adapt its operational structure and doctrine, its education system, and its unit training to improve the adaptability of the organization to prepare for an uncertain future. As evident from examining the Interwar Army, the Army has faced similar challenges such as budget reductions, personnel shortages, and rapidly advancing technology and tactics in its past. Contrary to what many historians have argued, the Interwar Army was a highly adaptable organization that implemented policies and programs that allowed it to not only adapt to changes in modern warfare but also expand significantly upon national mobilization. While cyber and space domains provide challenges to the modern Army, contemporary leaders can learn from the successes and shortcomings of the Interwar Army as well as other post-conflict transformation periods.

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