General Lesley J. McNair: Little-Known Architect of the U.S. Army

By



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## ABSTRACT

General Lesley J. McNair demonstrated an innovative spirit and exceptional intellectual capacity in his efforts to organize and train the U.S. Army for World War II. The influence he exerted on Army doctrine, training, equipment development, unit organization, and combined arms fighting methods placed him among the handful of generals most responsible for both the effectiveness and the flaws of the force that the United States sent to war in 1942. Through his strong views and aggressive leadership, McNair played a key role in guiding the Army's interwar mechanization and doctrinal development efforts. Many studies of this period have described aspects of his participation in that process. However, no comprehensive study of McNair's forty-year military career exists, largely because he did not survive the war, and he left behind no personal memoirs or diaries when he died of wounds inflicted by errant American bombs in Normandy on July 25, 1944.

This study examines General McNair's full career – from his graduation from the United States Military Academy at West Point in 1904, through his death in Normandy forty years later. The analysis demonstrates how McNair's ideas developed over four decades of service, culminating in their practical application during the pre-war mobilization period and his influence on U.S. Army effectiveness in World War II. Several themes recur throughout the period of McNair's service as the General Headquarters' (GHQ) chief of staff from 1940-42, and the commander of Army Ground Forces (AGF) from 1942-44. He placed significant emphasis on the value of officer education and held strong convictions regarding the qualities required in a competent commander and soldier, leading him to advocate tough, realistic training. He embraced military innovation and technological development and remained personally involved in tests and experiments throughout his career to modernize the Army. He strove to gain

efficiencies in unit organization by streamlining and standardizing units and training, while advocating pooling of specialized equipment and units at corps level and above, thereby optimizing organizations for task organization. This study demonstrates that one can discern the conceptual roots of all these overarching ideas in McNair's actions and experiences during the several decades of his lesser-known early career.

This reevaluation of the career of General McNair also provides a lens through which to reconsider the question of U.S. Army effectiveness during World War II. While the "materiel superiority" narrative still dominates historical interpretations of America's contribution to the war effort, several recent studies have begun to create a competing narrative that depicts a U.S. Army overcoming severe mobilization obstacles to develop into an excellent Army on par with all of the other major combatants during the war. The analysis offered in this study supports this emerging reinterpretation of America's war effort by reevaluating the career of one of the U.S. Army's most important but least understood architects – General Lesley J. McNair.

## Acknowledgements

Many historians advised me against choosing this different dissertation topic, mostly due to the concern that insufficient archival records existed to support a detailed analysis of Lesley McNair's career. I did receive encouragement from a few key individuals, but most reminded me that no single source of "McNair Papers" exists, and warned me that I would have to visit many different archives, all the while wondering whether I would find enough sources to support my thesis. These fair and well-intentioned warnings did not deter my stubborn determination to pursue my chosen topic, and a combination of luck, persistence, and mostly the help of many very talented archivists and historians enabled me to amass a large volume of research data – in the end, far more than I could use in this project.

Regarding the supposed dearth of archival material on McNair's career, I heard an often-repeated story, which soon took on the form of folk wisdom or mythology, about an unnamed graduate student who started work on a dissertation on McNair but failed to complete it due to lack of sources. Some even repeated the rumor that Clare McNair, Lesley's wife of nearly forty years, might have burned his papers out of grief in 1944. I quickly learned, much to my relief, these myths contained little if any truth.

Only one person could ever name the adviser of the mysterious graduate student who had tried but failed to write about Lesley McNair's career. Well after I had embarked on the project, a historian recalled Dr. Edward "Mac" Coffman had once worked with a student interested in McNair. Upon contacting Dr. Coffman, I learned he did in fact have a student at one time who expressed an interest in writing a dissertation on McNair, but the student dropped out of the

graduate program in his first semester for personal reasons, before even beginning research for his dissertation.

Later, on one of several research trips, I discovered a set of "McNair Papers" at the Library of Congress. A note Clare McNair included with the other materials in the set of boxes proved she donated the papers, which include items such as personal letters, original promotion "sheepskins," and scrapbooks of photos and newspaper clippings Clare collected throughout her husband's career. Interestingly, the letters in the collection of personal papers include none to or from Lesley – they consist entirely of Clare's communications with friends of the family and Lesley's professional acquaintances. However, no evidence exists that Clare selectively destroyed any of Lesley's personal records or letters.

The lack of any unofficial letters in the other archives where I found many excellent sources, both in McNair's and in the records of officers he worked with during his career, indicate he simply did not devote time to personal correspondence. After McNair's death in 1944, the official historians at Army Ground Forces found enough documents McNair had collected over the course of his career to fill several boxes, but these documents consist almost exclusively of official correspondence. McNair famously maintained an incredibly arduous work schedule throughout his career. He spent World War II in stateside assignments and therefore had no need to maintain a lengthy written correspondence with Clare, and he apparently kept track of his son Doug's career through correspondence with officers he worked for, rather than by keeping in touch through personal letters. He generally lacked interest in media attention and exhibited no desire to establish a "legacy" for himself, although one can only speculate whether he might have produced a memoir had he survived the war.

These factors taken together provide the most logical explanation for the lack of personal letters or diaries in those records that do exist in various archives across the country. McNair apparently concentrated on his official duties, leaving social matters for Clare to handle – a very traditional arrangement for the time, and an unsurprising one given McNair's formal, businesslike demeanor.

One historian I particularly respect strongly discouraged me from devoting my time to this project, questioning the value of an analysis of the career of a man who merely served as a staff officer during World War II. I hope that the following study will underscore the critical role that staff officers played during World War II in developing the organizations, training programs, and combined arms doctrine that U.S. Army unit commanders relied on for success in combat. Staff officers fulfilled a critical function various unit echelons, in the early-twentieth century just as they do today, despite the common view of the U.S. Army as "commander-centric." The Army has long relied heavily on the capability of its staff officers in the performance of it day-to-day operations, but historians rarely produce studies of officers who spent the majority of their wartime duty in staff positions. By contrast, commanders play a key role given their unique authority and responsibility, and therefore they attract a great deal of attention from historians. Nevertheless, even the best commanders would find themselves severely hindered by the absence of the many skilled staff officers who serve throughout their organizations.

Lesley McNair served in two high-level positions in the War Department during World War II, including his final role as Commander, Army Ground Forces – arguably a "staff" position based on the nature of his duties, but in reality command of a staggering number of troops serving at training posts across the continental United States. He also possessed a broad

range of previous experience serving in command and staff positions, in peacetime and combat, spanning the period 1904-44. The profusion of histories of commanders like George Patton and Omar Bradley (and their counterparts in the Allied and Axis armies) illustrates the popularity of "great commander" history, but the military historiography would benefit from an increase in the number of studies of the hardworking yet underappreciated staff officers that helped translate their commanders' vision into executable orders. While America's great (and sometimes controversial) combat commanders deserve study, a large body of archival data remains largely untapped that could help correct the current imbalance in the historical record by casting light on the contributions of the many staff officers without whom they could not have functioned effectively. Perhaps the following study will encourage more historians to explore this relatively barren terrain by demonstrating that analyses of the careers of officers who served in staff positions during America's wars not only serve a useful purpose, but also prove equally interesting and insightful to those readers seeking to understand the Army's effectiveness in combat throughout America's history.

I could not have completed this project without the support, advice, and friendship of many people. First, I must thank the staff and my fellow faculty members at the School of Advanced Military Studies (SAMS) at Fort Leavenworth. When I submitted my application to the graduate program at the University of Kansas' History Department in 2008, my adviser called his friend Candace Hamm, senior administrative assistance at SAMS, since he knew I had attended the course several years earlier. Candace, well known as the wonderful lady who really runs SAMS, regardless what the many directors and deputies that she has seen come and go over the years might have thought, remembers everyone who has passed through the hallways of SAMS since she first started working there, and for some reason she put in a good word for me. I

am certain to this day that her informal recommendation had more to do with my acceptance as a graduate student at KU than any formal recommendation I received. Colonel (Retired) Richard Dixon, the Deputy Director for Operations, supported my application for a position on the faculty at SAMS – my primary career goal ever since graduating the course four years earlier – even though I had only just started my doctoral coursework, and the position required successful completion of a PhD program. Without Rich's support, and that of Dr. Jakob Kipp, SAMS' Deputy Director for Academics at that time, I am certain I would not have made it through the screening process and been hired. Since then I have had the opportunity to work in the most demanding and rewarding intellectual environment I have ever experienced, where students and faculty alike push each other every day to achieve their best. The current Deputy Director for Academics, Dr. Scott Gorman, has also provided me invaluable support, entrusting me with course author duties, helping me find research funds, and giving me some much-needed time to focus on my graduate studies when the calendar allowed it.

My fellow faculty members at SAMS and CGSC have assisted me immensely, both directly and indirectly, as I pursued a graduate degree while working full time. Many took more than their fair share of the monograph student load to afford me a little additional time to pursue my studies, while others gave me invaluable advice navigating the rough terrain of a PhD program, or merely listened to me talk (far too much, I am certain) about my dissertation topic. Several coworkers deserve special mention for their friendship and their efforts to keep me motivated when times got tough – Lieutenant Colonel (Retired) Bruce Stanley, Lieutenant Colonel (Retired) Eric Price, Dr. Peter Schifferle (Lieutenant Colonel - Retired), Lieutenant Colonel Francis Park, and Lieutenant Colonel Jon Parvin in particular. Finally, Dr. Steve Lauer (USMC Colonel - Retired) proved particularly knowledgeable in my topic area and provided me

invaluable advice. Steve was kind enough to provide me an unpublished manuscript that both benefited my research immensely and gave me an example of a high-quality dissertation that demonstrated what a historian can achieve through detailed research, critical analysis, and hard work. I am very anxious to see his manuscript appear as a book, as it will go far to shatter much of the flawed accepted wisdom that still taints military historians' understanding of World War II.

Many people at the Combined Arms Research Library (CARL) at Fort Leavenworth also helped me immensely. Several research librarians, including Rusty Rafferty, Elizabeth Dubuisson, Aaron Higby, and Jennifer Otto proved particularly helpful in my quest for obscure archival documents both at the CARL and from other libraries and online databases. I owe Heather Turner a particular thank you for her assistance with innumerable interlibrary loan requests, never failing to find the source I needed even when heroic measures were required.

Archivists at research libraries across the country, some I have met and some I only know through phone calls or email, enabled me to do what I was so often told could not be done – find primary source data covering Lesley McNair's entire career, from his pre-West Point years through his tragic death in Normandy in 1944. Dr. Tim Nenninger proved especially helpful in this regard, helping me navigate the myriad of finding aids and research procedures at the National Archives at College Park. I am certain my time there would have been far less productive without Tim's help. Tim also put me in touch with Eric Voelz at the National Archives at St. Louis. Eric provided me the researcher's fabled gold mine when he sent me Lesley McNair's entire personnel file from 1919 through the end of his career – thousands of pages of documents many researchers have long assumed burned in a fire that destroyed most early-twentieth century military personnel files a half century ago. When I called, Eric checked,

and gave me the happy news that McNair's records had been stored along with those of a select group of the military's most senior officers in a fire safe vault. McNair's personnel file had survived the fire, and before long, Eric provided me a copy of the entire record. I could not have completed this dissertation without those files.

Other archivists also provided invaluable assistance: Dr. Conrad Crane, Richard Baker, Carol Funck, Leanne Fawver, and Shannon S. Schwaller at the Military History Institute helped me learn about the history of the Army War College during the interwar years, and uncover the details of McNair's experience as a student there in the class of 1929. Mary Sego, Kelly Hiller, and Elizabeth Wilkinson at the Purdue University Library sent me invaluable documents that helped me reconstruct the fascinating history of the four years McNair spent there as the Professor of Military Science and Tactics. Finally, Dr. Boyd Dastrup, Field Artillery Branch Historian, and Lyndon Couvillon, former curator of the Fort Sill Museum and now an independent scholar, provided me invaluable documents concerning McNair's service in the Field Artillery and at Fort Sill.

As anyone who has completed primary source research on a limited budget will understand, a project like this often depends on financial assistance. A research travel grant provided by the KU Office of Graduate Studies paid for one of three research trips – for this I am grateful to Dr. Roberta Pokphanh (Program Coordinator) and Sara Gillahan (Accounting Specialist). I also want to thank Devon Dougherty of the Verndale Historical Society, who provided me information on the town where Lesley McNair grew up, and helped me get in touch with Hallie Katnic, McNair's great-great-granddaughter.

I owe a particular debt of gratitude to my dissertation committee. My chairperson, Dr. Ted Wilson, guided me kindly but firmly through three and a half of the most challenging years

of my professional career. He provided not only the skilled instruction and mentorship for which the community of military historians knows him so well, but also the occasional extra push I needed to stay motivated when it seemed there was no end in sight, or to help me through those occasional moments of panic most graduate students experience on particularly difficult days. For his unflagging assistance, I will forever owe Dr. Wilson a huge debt of gratitude.

I also am deeply grateful to two of my committee members who instructed me as a hotheaded young major at CGSC, but for some reason still agreed to serve on my committee – probably out of sheer curiosity. The first, Dr. Chris Gabel, guided me through my first research project on the U.S. Army during the interwar period and its performance at Kasserine pass, and his experience and excitement in the early-twentieth century U.S. military helped mine grow from the dilettantism of a young major into the foundation of my post-Army career. Dr. Robert Baumann, director of graduate programs at the various schools of CGSC, approved both of my masters' theses, and still somehow mustered the courage to serve on my dissertation committee.

Dr. Jeffrey Moran, my twentieth century American History professor at KU, helped me see how little I really know about the history of America during the century in which I have spent most of my life. His unique insight and sincere passion for history both reminded me of the importance of recognizing the limits of one's knowledge, and inspired me to keep seeking intellectual growth. Finally, Dr. Brent Steele of the KU Political Science Department agreed to serve on my committee even though we had not previously worked together, and he provided a unique perspective to this chemistry student turned historian who still has much to learn about political science.

In addition to their invaluable advice and moral support, many of the above individuals helped me find far more archival research materials than I could possibly use in one project – I

hope future endeavors will not only enable me to make effective use of this additional material, but also improve upon the work I have completed to date. All of the people mentioned above, and many others I am certain my poor memory caused me to forget – an oversight for which I sincerely apologize – have helped me complete this research project; nevertheless, any errors or omissions are my responsibility alone.

Finally, I must thank my family for their support and sacrifices over the past three and a half years. My wife Amy, in particular, bore a disproportionate share of the burden as I worked full time while completing a PhD program at night and on weekends. In addition to tolerating my occasional (and surely painfully boring) rants about my coursework and dissertation topic, she has shouldered far more than her share of the responsibility for raising our two children over the past several years. While my heavy workload has made our rare opportunities to spend time together even more precious, this benefit pales in comparison to the challenges it has placed in her path, but she has overcome them with unflagging determination and unwavering support. After sixteen years together on active duty, we thought we had been through it all together; little did we know how hard the first several years of my "retirement" would be. I will never be able to repay her for standing by me and seeing this process through with me to the end. Similarly, my children, Anna and Mark Taylor, Jr., have lived with an absent-minded or simply absent father for the past several years, while I focused almost all my energy on one and three-quarters jobs. I only hope we can soon reconnect as a family and in some small measure make up for lost time. I cannot express my appreciation for their support, and their understanding that as hard as it might have been, the work I have done over the past few years has opened the door for me to a truly rewarding and intellectually stimulating second career. For this, I will always be in their debt.

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# CHAPTER ONE

## Introduction

General George C. Marshall once called General Lesley J. McNair "the brains of the Army" in recognition of the exceptional intellectual capacity he applied to the process of organizing and training the U.S. Army that fought World War II.[1] The influence he exerted on Army doctrine and training, equipment development, unit organization, and combined arms fighting methods placed him among the handful of generals most responsible for both the effectiveness and the flaws of the Army that the United States sent to fight the war in 1942. Through his broad experience, tireless work ethic, and effective leadership, McNair played a key role in guiding the Army's interwar mechanization and doctrinal development efforts, and various studies have described his participation in that process. Similarly, the Army's official histories of World War II describe McNair's role in the procurement, mobilization, and training of personnel to enable the growth of the Army from its pre-war strength of just over 100,000 to more than eight million by the end of the war. However, no previous historian has undertaken a comprehensive study of McNair's career, perhaps because he did not leave behind a personal memoir or diary when he died of wounds inflicted by errant American bombs in Normandy in 1944.

[1] John T. Whitaker, "Lieutenant General Lesley James McNair," in *These Are the Generals* (New York, NY: Alfred A. Knopf, 1943), 126; McNair earned posthumous promotion to the permanent rank of General (four star) on 9 September 1954 - see Herbert M. Jones to Mrs. Lesley J. McNair, 10 September 1954, McNair Papers, National Archives at St. Louis. Nevertheless, most sources still refer to McNair as "Lieutenant General McNair"; McNair was never particularly fond of this term of admiration, viewing himself as more of a "pick-and-shovel man," and he struck reference to it from the draft he reviewed of an official history late in his career. See Ely J. Kahn, *McNair, Educator of an Army* (Washington, DC: The Infantry Journal, 1945), 13.

Existing sources that focus directly on Lesley McNair suffer from brevity or lack of detailed research. None provides an objective analysis of his long and influential career.[2] However, a large body of literature exists regarding U.S. Army effectiveness during World War II, and the Army's preparations for the war during the preceding two decades (the "interwar period"). These works frequently mention McNair. Missing from these works, however, is discussion of the depth of experience he gained over the full length of his career, the variety of positions he held, and the way his experience and his interactions with other future senior Army leaders influenced his thinking about modern warfare. Rather, they usually identify him simply as a bureaucrat or in many studies as culpable for some particular error (or errors) that the U.S. Army made during its interwar preparations that led to degraded performance during the war.[3]

[2] Larry Lehner and Dorothy Lehner, "McNair: Verndale to St. Lo," (Verndale, MN: Verndale Historical Society, 1976), 10; Brooks E. Kleber, "McNair, Lesley James," in *Dictionary of American Military Biography*, ed. Roger J. Spiller (Westport, CT: Greenwood Press, 1984), 695-99; John T. Whitaker, "These Are the Generals - McNair," *Saturday Evening Post* 215, no. 31 (30 January 1943): 123-26; Kahn, *McNair, Educator of an Army*, 50-54. These four works, the only previous sources containing any significant amount of biographical information on Lesley McNair, all suffer from key limitations. The Lehners' short paper, while an admirable tribute to Verndale's most famous hometown boy, contains some factual errors resulting from its amateur nature. Kahn's 64-page essay lacks documentation and serves more as eulogy than biography. Finally, Whitaker's article consists mostly of anecdotes aimed at the general reader, while Kleber's three-page essay merely provides a short biographical sketch intended to give readers a feel for McNair's personality and work habits.

[3] These many works vary significantly in focus, scope, and quality, but all suffer in their critical analysis of McNair's performance at GHQ and AGF from the lack of a detailed study of his career. The lack of a consolidated source of "McNair Papers," and McNair's own disinterest in keeping diaries or providing personal information to the media, probably have much to do with the broad-brush representations one normally finds of him in the secondary literature. For an often-cited and highly critical analysis of the Army's interwar preparations, see David E. Johnson, *Fast Tanks and Heavy Bombers: Innovation in the U.S. Army, 1917-1945* (Ithaca, NY: Cornell University Press, 1998); for other oft-cited and more balanced works that provide detailed information on their primary topic, but little background on Lesley McNair despite the key role he played in the events they address, see Williamson Murray and Allan R. Millett, eds., *Military Innovation in the Interwar Period* (New York: Cambridge University Press,1996); Jonathan M. House, *Combined Arms Warfare in the Twentieth Century* (Lawrence, KS: University Press of Kansas, 2001); Christopher R. Gabel, *Seek, Strike, and Destroy: U.S. Army Tank Destroyer Doctrine in World War II*, Leavenworth Paper 12 (Washington, D.C.: Combat Studies Institute, U.S. Army Command and General Staff College, 1985); ———, *The U.S. Army GHQ Maneuvers of 1941* (Washington, D.C.: Center of Military History, United States Army, 1992).

The existing secondary sources on World War II and the interwar years that mention McNair base their evaluation of his contributions to the Army almost entirely on the last four years of his career, when McNair served as the chief of staff, General Headquarters (GHQ) from 1940-42, and the commander of Army Ground Forces (AGF) from 1942-44. The cumulative effect of these works leads readers to associate McNair's name with a litany of training errors and combat inefficiencies, resulting in his status as one of America's most often mentioned and most poorly understood general officers of World War II. The many works on U.S. Army effectiveness during the war usually offer a detailed analysis of the particular events or factors on which they focus, often to support a specific argument regarding modern Army reorganization or "Army Transformation," but they provide rather narrow depictions of McNair himself. In particular, these studies fail to identify the immense depth and breadth of experience McNair developed over his long career, assessing McNair's views on issues of organization, doctrine, and training as flawed based on hindsight rather than thorough critical analysis. They often single out a particular decision he made or action he took without adequately placing it within the context of the entirety of his career, or within the complexity of the situation he faced. Perhaps the most common flaw in these analyses is asserting a level of individual control over decisions and events that McNair simply did not possess. Even at the height of his responsibilities as commander of Army Ground Forces, he remained subordinate to the War Department General Staff, and coequal to the commanders of Army Air Forces and Army Service Forces. Once America entered the war, the Operations Division of the War Department often deferred to commanders in the field when their advice conflicted with those of McNair. Therefore, previous works that either focus on or mention McNair fail to provide a

comprehensive understanding of his career as a whole, or his influence on the U.S. Army's preparation for and effectiveness during World War II.[4]

The following study seeks to provide the first comprehensive analysis of Lesley McNair's forty-year military career. It describes many positions he held, experiences he gained, and mentors who shaped his thinking, much of which previously lacked coverage in the secondary literature. In short, the following puts General McNair in context, revealing how his ideas developed over the course of his long career, culminating in their practical application during the pre-war mobilization period and the resulting effectiveness of the force America sent to fight World War II. Analysis of his intellectual development reveals that the themes historians tend to emphasize in the better-known period of McNair's service – the last four years of his career – stem from a thread of continuity that reaches back to his service at much earlier stages of his military service. This objective and detailed analysis leads to a better understanding of his thinking as a senior officer, and opens the door to new interpretations of his actions and decisions which, until now, frequently suffered from misunderstanding or flawed assumptions due to lack of context.[5]

[4] For a particularly useful source highlighting the tension between the War Department's Operations Division and its three subordinate headquarters (Army Ground Forces, Army Service Forces, and Army Air Forces), see War Department Operations Division (OPD), "Operations Division Files: Office of the Director of Plans & Operations, War Department," January 1942 - July 1944, National Archives and Records Administration, College Park, MD, RG 165, Entry 422, Boxes 40-48.

[5] The "Green Books" or U.S. Army official histories of WWII did much to emphasize the last four years of McNair's career and his expertise as an organizer and trainer of troops. No other period of his career can be studied in such detail without resorting to archival sources. See Kent Roberts Greenfield, Robert R. Palmer, and Bell I. Wiley, *The Army Ground Forces: The Organization of Ground Combat Troops*, United States Army in World War II, ed. Kent Roberts Greenfield (Washington, D.C.: U.S. Army Center of Military History, 1947; reprint, 2004); Robert R. Palmer, Bell I. Wiley, and William R. Keast, *The Procurement and Training of Ground Combat Troops*, The Army Ground Forces: United States Army in World War II (Washington: Office of the Chief of Military History, 1948). Much less information exists in the secondary literature on McNair's WWI service, but some sources briefly address the period, including Kleber, "McNair."

By extension, a deeper understanding of the full span of McNair's career supports a more thoughtful and informed perspective on the U.S. Army that fought World War II. His career spanned both World Wars and the much-discussed interwar period. By studying McNair's career one can achieve a firmer grasp on the details and significance of these key events in the history of the early twentieth century U.S. Army. Furthermore, analysis of how the young Lieutenant McNair developed into the lieutenant general who eventually commanded the Army Ground Forces serves as a lens through which to reevaluate the effectiveness of the entire U.S. Army in World War II. Much as with the misrepresentations of McNair, many studies of America's effectiveness during the war present a tenacious and widespread but deeply flawed accepted wisdom, which persists largely due to similarly flawed or shallow analysis.

For example, Edward G. Miller greatly oversimplified the media reaction to McNair's Armistice Day address to the troops, broadcast on November 11, 1942 over the Blue Network, in his book *Nothing Less than Full Victory*. Titled "The Struggle is for Survival: The Importance of Training and Personnel," but more commonly referred to as "McNair's 'Kill or be Killed' speech," Miller concluded that McNair's remarks about the need for American troops' battle hardening in combat permitted "the media [to have] a field day."[6] Further, Miller placed much of the blame for what he calls the "U.S. Armor Problem" on McNair's shoulders, since McNair – just "an artilleryman" – upon his appointment to senior leadership in GHQ and later AGF lacked the imagination to handle his varied responsibilities in these positions.[7]

[6] Edward G. Miller, *Nothing Less Than Full Victory: Americans at War in Europe, 1944-1945* (Annapolis: Naval Institute Press, 2007), 16. Research shows that letters McNair received from listeners writing in support of his remarks greatly outnumber those from listeners writing in protest of it; Various, "Folder: Letters in Response to McNair's 1942 Armistice Day Address," 1942, McNair Papers, U.S. Library of Congress.

[7] Miller, *Nothing Less Than Full Victory*, 273. By 1940 McNair possessed a broad range of experience that made him something much more than merely "an artilleryman."

In fact, one finds no shortage of critics of McNair's capabilities as a senior leader during World War II in the historical record. Among the most recent examples, Chris Prigge, much like Edward Miller, referred to McNair upon his appointment as GHQ chief of staff as merely "a field artillery officer." This erroneously discounts his broad military experience. Prigge went on to imply a bias on McNair's part that led him to an unwarranted belief "that antitank guns could be massed to defeat a tank attack," and caused him to advocate flawed Army organization and equipment, particularly within reconnaissance units.[8] Such interpretations fail to account for McNair's vast experience in field tests of various organizations and equipment throughout his career.

The following analysis seeks to demonstrate that McNair deserved the nickname Marshall gave him. In a military not known for producing famous and prolific theorists (e.g., B.H. Liddell Hart, J.F.C. Fuller, G.S. Isserson, V.K. Triandafillov, Antoine Jomini, or Carl von Clausewitz), McNair stands out as an intellectual. However, like most military thinkers, he worked within a military bureaucracy, which itself existed within a larger national and social system. He faced challenges navigating the complex terrain of these systems as did all military intellectuals, and not surprisingly, sometimes he failed to predict the nature of future warfare with complete accuracy. In other cases, he simply lacked the ability, being only one man – albeit an influential one – to resolve the flaws he recognized in those larger systems. Americans in the decades between the world wars still harbored a distrust of large standing armies, and their unilateralist leaning led them to support congressional actions to constrain military progress through stringent military budget cuts and personnel authorizations. McNair could only attempt

[8] Christopher Prigge, "Tradition and Transformation: The Origins of the U.S. Armored Cavalry Regiments" (Ph.D. diss, Harvard University, 2011), 345. Ironically, earlier in the paper the author points out McNair's close relationship since 1918 with George C. Marshall, who hand-picked McNair for the position at GHQ in 1940.

to do his best to work around these constraints, advising the best possible course given a limited range of options. In short, McNair got some things wrong, but given the challenges he faced, it is fair to assert that he got much right.

Further, as James Wheeler pointed out in a recent *Army* article, McNair now ranks among "Marshall's forgotten men." Wheeler described these men as leaders Marshall noted as particularly capable early in his career and called upon for senior leadership when the need arose in 1939. Wheeler wrote his article in response to an earlier article by Cole Kingseed entitled "Marshall's Men," adding these "forgotten men" to Kingseed's list of the better-remembered men Marshall appointed to key leadership positions during WWII. As Wheeler pointed out, McNair's service "and that of the other forgotten Marshall men, is unknown to most Americans." However, even Wheeler, as he sought to remind his readers of McNair's contributions, painted him with a broad brush. For example, he emphasized Marshall's role in selecting general officers for the Army's senior leadership positions, but failed to acknowledge McNair's perhaps equally significant responsibility of recommending the division commanders for every division and corps the Army activated to fight WWII. Stephen R. Taaffe, however, corrected this oversight in his recent book, *Marshall and His Generals*. As Taaffe pointed out, "Despite all his years in the small prewar army, it was impossible for Marshall to personally meet and evaluate every officer eligible for the highest ranks and positions." Therefore, "he had to depend increasingly upon the recommendations of others . . . especially General Lesley McNair of Army Ground Forces."[9]

This study seeks to provide a context for understanding McNair at the pinnacle of his career by analyzing the full scope of McNair's forty years of Regular Army service, revealing the threads of continuity in his intellectual development that help explain his actions during the

[9] James Scott Wheeler, "Marshall's Forgotten Men," *Army* 58, no. 11. Stephen R. Taaffe, *Marshall and His Generals: U.S. Army Commanders in World War II*, Modern War Studies, ed. Theodore A. Wilson (Lawrence, KS: University of Kansas Press, 2011), 6.

critical years of the Army's mobilization for and engagement in World War II. This analysis rests on a number of key research questions: In what positions and assignments did Lesley J. McNair during his military career? What developmental experiences formed the key milestones in the early stages of his career? How did these experiences shape his perceptions and attitudes regarding army doctrine, organization, training, and innovation? How did these perceptions and attitudes develop over the course of his early career, and shape his actions in the latter stages of his career, at the height of his influence? What was General Lesley J. McNair's ultimate impact on the United States Army, not just during the final few years of his career, but throughout the entirety of the four decades that he served? And, to the degree that this can be dealt with, what has been his legacy?

Examination of General Lesley McNair's forty-year military career makes possible a better-informed understanding of McNair's long-term impact on the Army, while revealing many previously unknown or rarely mentioned early developmental experiences that influenced his performance during the better-known final years of his career. In addition, this account is intended to be more than merely a narrative of McNair's forty years of military service – the story of an individual officer who rose to positions of prominence in both World Wars. In a sense, it serves as a lens through which to view the early-twentieth century Army in a variety of contexts. These include Army culture, technological innovation, relationships between citizens and soldiers – particularly during the interwar period – and the ongoing struggle to understand the lessons of World War I as the Army prepared to enter World War II. The following analysis represents not only the first comprehensive study of General Lesley J. McNair – one of the chief architects of the early twentieth century Army. It also seeks to further the ongoing discourse on the doctrinal developments, organizational adjustments, mechanization efforts, and other

technological innovations the Army implemented after World War I, and the resulting effectiveness of the American Army that fought World War II.

Analyzing the career of an officer whose active service spanned the years 1904-44, and involved duty in high-level staff positions during both World Wars and a key role in many innovative efforts between the wars, revealed much about both the man himself and the period during which he served. This naturally led to many insights regarding the existing historiography of the early-twentieth century Army, and particularly its fighting effectiveness during World War II, when McNair was among the Army's most senior general officers, responsible for the mobilization training of all the ground forces America sent to fight the war. Over the past several decades a standard narrative has dominated the historical discourse regarding the U.S. Army's performance during the war, which, put simply, argues America's success stemmed from material preponderance, which alone enabled the Army to overcome its qualitative inferiority to its Axis foe – particularly the vaunted *Wehrmacht*.

Given his key role in the preparation of the Army to fight during WWII, McNair serves as a key individual with name recognition value, making him an easy target on which to place blame for the supposed ineptitude of U.S. Army soldiers, noncommissioned officers, and officers. The remarkable longevity of this accepted wisdom regarding the U.S. Army's performance in WWII reveals itself any time historians of the Second World War assemble in a group of more than the handful of recent revisionist historians. The accepted wisdom leads to statements one still hears at evens like the 2010 Conference of the Society of Military Historians, where one panelist stated (to paraphrase), "the U.S. Army never matched the German Army's skill in combined arms mechanized warfare, but somehow won WWII anyway."

The following analysis combines historical perspectives from a number of subfields that rarely appear together in a single work. These include the interwar officer education system; military and industrial mobilization for both WWI and WWII; the organization and internal relationships of the War Department staff during the Second World War; and the effectiveness of the U.S. Army once battle-hardening through combat experience enabled it to fight in accordance with the organization and doctrine developed during the interwar period. A slowly growing body of work has contributed to a growing awareness that it is time to abandon the flawed narrative of U.S. military ineptitude only overcome through sheer materiel superiority. The following work represents an attempt not only to increase historical understanding of the career of one of the chief architects of the WWII Army by revealing previously unknown facts regarding his previous thirty-six years of active service; it also should shed new light on the early twentieth century Army as a whole.

The study combines a chronological and a thematic organizational structure. While the chapters run in chronological order, certain themes recur throughout the various stages of McNair's career – some possibly familiar, and others newly revealed through archival research. Some of the themes do not become clear until the later stages of the study, when their recurrence links previously misunderstood or misrepresented actions on McNair's part to their roots in an earlier stage of his career. These themes include McNair's lifelong emphasis on the value of officer education and his strong convictions regarding the qualities required in a competent commander. Further, he embraced military innovation and technological development from the earliest stages of his service, and the Army groomed him as an officer particularly qualified to conduct field tests and experiments to update Army doctrine and organization. He consistently strove to improve Army effectiveness by gaining efficiencies in unit organization through

various measures of streamlining and pooling of assets – efficiencies in some cases beneficial in their own right, and in others necessary due to real limitations in personnel and materiel availability. He understood the value of arduous, realistic training to achieve individual and unit proficiency, and perhaps more importantly he grasped that all concepts required objective, detailed experimentation to test their practical value. He recognized from an early age the importance of combined arms fighting methods, and consistently sought to optimize the Army for task organization.

As he strove to inculcate these values in the Army, McNair maintained an exhausting schedule throughout his career, regularly working sixteen-hour days and rarely taking leave. He traveled thousands of miles on the road and in the air to visit units in training. Finally, he did administrative work himself that other officers might have delegated to someone else, not only to ensure it met his exacting standards, but also because completing it all required working well into the night, something he preferred to do himself rather than requiring such sacrifices from his subordinates. Perhaps unsurprisingly, one can discern the roots of all these ideas and traits in McNair's actions and experiences during the several decades of his lesser-known early career.

# CHAPTER TWO

## Early Career

Existing secondary sources that mention McNair almost without exception focus on his service during the last few years of his life, when he served as chief of staff at General Headquarters (GHQ) and later commanded the Army Ground Forces (AGF). These sources describe McNair as a staff officer responsible for the organization and training of the ground forces America sent to fight World War II, but they lack the perspective one can gain by analyzing his four-decade long career in both staff and command positions, during peace and war. This enhanced perspective sheds light on what many interpret as shortsighted and mistaken policies he championed both during pre-war mobilization and after deployment.

### McNair the Young Man and Cadet

Lesley James McNair lived a small-town existence for most of his youth. His father, James McNair, immigrated to America from Comphelltown, Scotland, at the age of eight, in 1854. James lived in Ohio with his seven siblings and his parents, William and Mary McNair, until the 1870s when he moved with his family to Neoga, Illinois. James met and married Clara Mantz McNair in Dayton, Ohio in 1880, and moved to Verndale, Minnesota the following year. Today, Verndale boasts a population of just over 500, but in the 1880s, the town enjoyed a bustling economy, attracting merchants and farmers seeking an entry point to new agricultural areas in the northern Midwest. Verndale's economy centered on packaging wheat brought in from the northern prairies, and shipping it to Minneapolis and onward to satisfy demands from across the nation. James and Clara McNair operated a general store near the central part of town and lived in a small home a block and a half from the store. They raised four children: two sons

and two daughters. They celebrated the birth of Lesley James, their second child and firstborn son, on 25 May 1883.[10]

Lesley McNair attended school in Verndale through ninth grade, the highest grade available at the local school, consistently excelling academically. However, no opportunity existed near Verndale for a bright young man to complete high school, prompting the McNair family to leave Verndale after fourteen years there. The family genealogy, a multi-volume project completed by James Birtley McNair between 1923 and 1960, covered the history of the extended McNair family; those originating in Scotland and other parts of Great Britain, including those who adopted variant spellings of the last name. The genealogy described James and Clara as prominent members of the Verndale community. In addition to his general store, James dealt in timber products, and spent a great deal of time in camps looking after his timber interests in Nimrod, Minnesota. According to one account, Verndale residents described Clara as a "model housewife, devoted mother, and steadfast friend," whom neighbors regarded an accomplished musician. She also maintained a strong interest in local educational affairs. Perhaps this interest helped her convince James to sell his timber business and leave behind his beloved camps in the woods, so that he could move his family to Minneapolis in 1894, providing Lesley and his siblings the opportunity to finish high school.[11]

Lesley took full advantage of this opportunity. Driven by the goal of serving as a U.S. Navy officer, he finished high school in 1897 with a strong record and competed successfully for a position to attend the U.S. Naval Academy at Annapolis. However, he grew frustrated with the academy's long waiting list, and enrolled the following year in the Minnesota School of

[10] James Birtley McNair, *McNair, McNear, and McNeir Genealogies: Supplement, 1950* (Los Angeles, CA: James Birtley McNair, 1950), 833; Lehner and Lehner, " McNair: Verndale to St. Lo," 9.

[11] McNair, *McNair, McNear, and McNeir Genealogies: Supplement, 1950*, 833; Lehner and Lehner, " McNair: Verndale to St. Lo," 9-10.

Business, Minneapolis, Minnesota. There he pursued a degree in the mechanical engineering field, studying ordnance construction, woodworking, metalworking, ordnance design, bookkeeping, and statistical work. By spring, 1900 he completed this program and, still on the waiting list to attend the Naval Academy, he sought admittance to the United States Military Academy (USMA) at West Point. The academy notified him of his acceptance to a position as a cadet on 1 August 1900.[12]

McNair continued his record of outstanding academic performance at USMA. When he earned his commission in 1904, he ranked eleventh out of the 124 graduates in his class. He received an appointment as a second lieutenant in the field artillery, a branch that suited him well due to his skill in mathematics – consistently among his strongest subjects during his four years as a cadet. In addition to his commission as a field artillery officer, McNair earned a nickname at West Point. As the Lehners recall in "Verndale to St. Lo," McNair's "West Point colleagues remembered him as a mathematical shark, and called him 'Whitey' [because his of his hair, so blonde it looked white], a nickname that followed him the rest of his life."[13]

McNair's particular interests, most notably mathematics, stand out when one compares his class rank in each topic to his overall class rank during each of his four years at USMA. For example, McNair completed his first year ranked number thirty-one out of 154 "Fourth Class" (first year) cadets, but he ranked twenty-fourth in mathematics – his highest ranking among all subjects that year. In his second year, he earned his highest overall ranking of his West Point career, taking sixth position among the 142 "Third Class" cadets, ranking fourth in drawing and tenth in mathematics – his two best subjects that year. McNair struggled a bit in his third year, falling to number thirty out of 125 cadets; but he ranked fifth in drawing, twentieth in conduct,

[12] _____, " McNair: Verndale to St. Lo," 9-10; Adjutant General, "Summary of Efficiency Reports and Account of Services," 1917, McNair Papers, National Archives at St. Louis, MO.

[13] Lehner and Lehner, " McNair: Verndale to St. Lo," 10.

and twenty-third in mathematics. McNair finished his senior year as number eleven out of 124 graduating cadets, ranking eighth in Ordnance & Gunnery, twelfth in mathematics, and eighteenth in military efficiency.[14]

Always committed to strict discipline both for himself and for others, McNair experienced only one lapse in conduct during his four years in the notoriously strict program of instruction at West Point. He returned late from leave on one occasion, after visiting a young woman named Clare Huster in New York City. Since he married Clare soon after graduation and spent the rest of his life with her, the demerit probably seemed a small price to pay.[15] Before the young cadet's wedding to Clare, he headed west to begin active service as a second lieutenant in the mountain artillery. In the early twentieth century, officers faced stiff competition to earn a commission in the field artillery. However, it proved a perfect fit for Second Lieutenant McNair, a talented mathematician who also had enjoyed the mentorship of West Point's mathematics department faculty, composed at the time primarily of field artillerymen.[16] McNair soon found a way to put his exceptional talent in drawing and ordnance design to use, resulting in a four-year detour from the standard field artillery career path.

[14] During McNair's four years at West Point, the curriculum only included Drawing during the cadets' second and third years, and only offered Ordnance & Gunnery and Military Efficiency in their fourth year. McNair's talent for drawing, ordnance & gunnery, and mathematics remained consistent throughout his active duty career. "Official Register of the Officers and Cadets of the United States Military Academy, 1901," (West Point, NY: U.S.M.A. Press and Bindery, 1901), 17; "Official Register of the Officers and Cadets of the United States Military Academy, 1902," (West Point, NY: U.S.M.A. Press and Bindery, 1902), 15; "Official Register of the Officers and Cadets of the United States Military Academy, 1903," (West Point, NY: U.S.M.A. Press and Bindery, 1903), 12; "Official Register of the Officers and Cadets of the United States Military Academy, 1904," (West Point, NY: U.S.M.A. Press and Bindery, 1904), 10.

[15] ———, " McNair: Verndale to St. Lo," 10.

[16] "Official Register of the Officers and Cadets of the United States Military Academy, 1901."

**Service with the Ordnance Branch**

The newly commissioned McNair arrived at Fort Douglas, Utah in September 1904 to undertake his first tour of duty after three months of leave. He served as a platoon leader assigned to the 12th Battery, Mountain Artillery. While learning the duties of a young leader of field artillerymen, McNair requested in 1905 an examination for detail to the Ordnance Branch. He took the exam in February, and the board of examiners recommended approval of his request in May. On 22 May 1905, McNair received orders reassigning him to the Ordnance Branch, arriving at Sandy Hook Proving Ground in New Jersey on 14 June. While McNair possessed exceptional talent for drafting and ordnance, the presence in New York of Ms. Clare Huster might also have influenced his decision to request a branch detail to Ordnance, with its promise of an assignment on the east coast. He certainly did not waste any time, marrying Clare on 15 June 1905, the day after his arrival in New Jersey.[17]

McNair spent the next four years serving in a wide variety of Ordnance Branch positions. Despite his academic proficiency and evident interest in the Ordnance Branch, McNair's efficiency reports from this period reflect mixed performance. This appears to have resulted from a shaky relationship with a particular supervisor, but he may also have found it difficult to achieve a reasonable balance between his personal and professional life after experiencing five years of military routine at West Point and the remote Army outpost at Fort Douglas.

First Lieutenant G. R. Green, his battery commander at Fort Douglas, recorded only positive remarks in McNair's first efficiency report. Green described the young lieutenant as an officer who possessed excellent "Attention to duty, profession zeal and general bearing and

[17] "The Adjutant General: Consolidated Cross Reference Card, Personnel File of Lesley J. McNair (Pre-1919)," McNair Papers, National Archives and Records Administration, Washington, D.C; Adjutant General, "Summary of Efficiency Reports and Account of Services, 1917."; Kahn, *McNair, Educator of an Army*, 52; Lehner and Lehner, " McNair: Verndale to St. Lo," 10.

military appearance," and very good "intelligence and judgment shown in instructing, drilling, and handling enlisted men." Green identified McNair as a good equestrian, suited for service in the field artillery, or as an instructor at the U.S. Military Academy, and – largely due to his "special ability in mechanical drawing and map making" – particularly fit for "detail in Ordnance Department." However, Green found McNair best suited, in the event of war, for service with the field artillery.[18]

By contrast, McNair's efficiency reports from his four-year detail with the Ordnance Department provide a mixed assessment of the young officer. His first two reports reflect performance on par with that of his assignment at Fort Douglas. Colonel G.S. Smith, his supervisor during the first year of his branch detail, when he served as a staff officer in the office of the Chief of Ordnance, commended his basic skills and characteristics as an Army lieutenant. Smith judged McNair "well fitted for detail on the General Staff," but stated, "to a limited extent he appears to be qualified for command of troops." With no performance deficiencies noted, one can only speculate why Smith believed McNair possessed limited potential for command; however, this could have been merely a result of his youth and lack of experience. Regardless, Smith summarized his report by finding McNair "qualified for his position," and stating he "should be entrusted with important duties commensurate with his experience and rank." Smith recommended McNair for either artillery or ordnance duty in time of war.[19]

In 1906, McNair left the office of the Chief of Ordnance for Watertown Arsenal in Boston. His first supervisor, Lieutenant Colonel F.E. Hobbs, seemed quite impressed with McNair's performance, finding him excellent or very good in all the basic officer leadership

[18] Adjutant General, "Summary of Efficiency Reports and Account of Services, 1917."; "The Adjutant General: Consolidated Cross Reference Card, Personnel File of Lesley J. McNair (Pre-1919)."

[19] _____, "Summary of Efficiency Reports and Account of Services, 1917."; "The Adjutant General: Consolidated Cross Reference Card, Personnel File of Lesley J. McNair (Pre-1919)."

qualities. He deemed McNair fit for detail as "an instructor in the Department of Ordnance and Gunnery" or in "command of troops." Further, Hobbs noted that he commended McNair "in a special report made by me to the Chief of Ordnance as to character and service of detailed officers who had served under my command." However, McNair spent his final two years while detailed to the Ordnance Branch working for Major C.B. Wheeler, and given the fact that the two efficiency reports McNair received during this time stand out as the only ones with any adverse remarks, it appears the two officers did not work particularly well together.[20]

For example, in his first efficiency report on McNair, written in 1908, Wheeler found him reasonably well qualified in the general skills of an officer, but found he possessed "no peculiar fitness for detail," and wrote that McNair's "capacity for work is not large." Wheeler clearly did not think highly of McNair, writing, "I would not object to his being under my immediate command but I would prefer to have an officer of greater capacity." Wheeler further pointed out that he had mentioned McNair unfavorably in an Ordnance Office report earlier that year, and believed McNair was "unwilling to devote more time to routine work than the daily office hours, no matter how much his work may be in arrears. He has at times worked over hours but there is a general spirit of unwillingness."[21]

McNair's problems with Wheeler continued the following year. His 1909 efficiency report, in which Wheeler seemed more pleased generally with McNair's performance, provided positive assessments of his performance and potential, but levied significant criticism near the end of his comments. However, this latter text simultaneously reveals the most likely explanation for Wheeler's negative assessment of McNair's performance. It reads, "Captain McNair's

[20] _____, "Summary of Efficiency Reports and Account of Services, 1917."; "The Adjutant General: Consolidated Cross Reference Card, Personnel File of Lesley J. McNair (Pre-1919)."

[21] _____, "Summary of Efficiency Reports and Account of Services, 1917."; "The Adjutant General: Consolidated Cross Reference Card, Personnel File of Lesley J. McNair (Pre-1919)."

otherwise good efficiency is impaired by his lack of power of appreciating the best methods of conducting his duties in accordance with the wishes of his commanding officer for whose judgment he has appeared at times to be willing to substitute for his own." Whatever challenges he may have experienced while working for Wheeler, they did not prevent McNair from earning promotion to captain in Ordnance (although this promotion did not apply in his basic branch – Field Artillery – where he remained a first lieutenant).[22]

Despite his difficulties with Major Wheeler, McNair learned a great deal during his four years working for the Ordnance Branch. At Watertown Arsenal, in particular, McNair undertook an intensive "course of practical profession" that included diverse practical categories of experience. In this yearlong course, McNair performed hands-on study of laboratory test machines and methods. This included breaking test specimens, metallurgical analysis, foundry skills including the melting of bronze and cast iron, the manufacture of steel and pouring of castings, and the use of equipment including the forge, steam hammer, bolt machine and shears, lathes, planes, shapers, milling and boring machines, and test devices. McNair received practical experience during the day, and completed academic work after hours, including the study of course notes, reference books, and technical drawings. The expertise he developed served him well in the coming years, when the Army turned to him with increasing frequency to oversee various equipment tests and boards.[23]

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[22] ———, "Summary of Efficiency Reports and Account of Services, 1917."; "The Adjutant General: Consolidated Cross Reference Card, Personnel File of Lesley J. McNair (Pre-1919)." McNair accepted promotion to first lieutenant in the field artillery on 20 May 1907, but simultaneously earned temporary promotion to captain for the duration of his branch detail. This final efficiency report from McNair's Ordnance Department detail makes it appear even more likely his relatively poor evaluations by Major Wheeler probably have more to do with a personality conflict than any limited capability on McNair's part. McNair's evaluations from all the other officers he worked for, including two other Ordnance Branch supervisors, describe McNair's performance in much more favorable terms.

[23] ———, "Summary of Efficiency Reports and Account of Services, 1917."

**Service with the Field Artillery**

When McNair departed Watertown Arsenal in 1909, he possessed a broad range of skills and experience that set him to a degree apart amongst his fellow artillerymen. Building on his exceptional mathematical and technical drawing ability, McNair learned the value of methodological rigor in the conduct of equipment tests and experiments during his branch detail with Ordnance. A traditional field artillery career path could not provide such a wealth of broadening opportunities. In five short years, Lieutenant McNair had developed a solid foundation of technical and tactical proficiency.

With his new wife in tow, and restored to his previous rank in the Field Artillery, First Lieutenant McNair returned west for service in his primary branch. He received orders reassigning him to the 4th Field Artillery at Fort D.A. Russell, Wyoming on July 1, 1909, where he took command of Battery C two weeks later. McNair spent the next eight years with the Field Artillery at posts in Wyoming, Texas, and Oklahoma, or on combat duty in and around Mexico. In these assignments, McNair mastered the demands of service in remote and mountainous terrain, and developed a reputation as an energetic, no-nonsense leader. Second Lieutenant Jacob L. Devers, a newly-commissioned platoon leader assigned to McNair's battery after graduation from the 1909 West Point class, remembered McNair as an outstanding battery commander. In particular, Devers recalled McNair set high standards, led by example, and could get the most out of his men – skills critical for successful commanders in the difficult conditions Army personnel faced in austere western outposts.[24]

The Army soon began to make use of the experience McNair gained during his detail to the Ordnance Department. Much of the equipment currently in use by the mountain artillery

[24] Ibid.; Kahn, *McNair, Educator of an Army*, 52; Edward M. Coffman, *The Regulars: The American Army, 1898-1941* (Cambridge, MA: The Belknap Press of Harvard University Press, 2004), 153-54.

served its purpose marginally at best. Units of the mountain artillery still used the 2.95-inch Vickers-Maxim mountain gun, a weapon obsolete since 1905 when the Ordnance Department developed a 3-inch howitzer for the light artillery. Although Ordnance had planned to develop an experimental battery to test a new mountain gun the same year, they had made no significant progress in the intervening four years (and still had no new mountain howitzer as late as 1916).[25] Therefore, the Ordnance Department tested various modifications to the obsolete 2.95-inch gun, modifying its carriage and sight in an effort to make it more suitable for mountain duty. Furthermore, most mountain artillery units' packsaddles, other transport and pioneer equipment, and items including kitchen gear and the mobile forge ranged from unsuitable to nonexistent. McNair spent much of his four years in command of Battery C working to find solutions to these various equipment challenges, conducting tests and participating in boards while training his men in extremely arduous conditions.[26]

McNair's work to improve mountain artillery equipment and training contributed to a larger Army-wide effort to modernize the field artillery. This project dated to the turn of the century, when the poor performance of the field artillery during the Spanish-American War prompted American development of a new 3-inch howitzer. Observers of the Russo-Japanese War of 1904-05 reported dramatic improvements in field artillery procedures that increased the effectiveness of indirect fire. As Janice McKenney noted in *The Organizational History of Field Artillery*,

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[25] U.S. Ordnance Department, *Handbook of the 2.95-Inch Mountain Gun Matériel and Pack Outfit*, (Washington, DC: Government Printing Office, 1912, Revised 1916).

[26] Lesley J. McNair, "Report of 1st Lieut. Lesley J. McNair on Ammunition Carriers for Mountain Artillery," May 17th, 1912, National Archives and Records Administration, College Park, MD, RG 337, Entry 58, Box 5; ———, "Report of 1st Lieut. L. J. McNair, 4th Field Artillery on Organization and Equipment of Mountain Artillery," September 12, 1912, National Archives and Records Administration, College Park, MD, RG 337, Entry 58, Box 5; U.S. Army War Department, *Drill Regulations for Mountain Artillery (Provisional), United States Army*, (Washington, DC: Government Printing Office, 1908).

> That war involved the clash of large armies armed with modern weapons, resulting in the extensive use of trenches. The effectiveness of artillery fire drove both sides to cover, that is, in defilade. Laying guns indirectly while in defilade became standard, with centralized control provided through the use of telephone wire. Indirect fire control resulted in an increase in the number of potential firing locations, and the ability to shift the fire of a great number of pieces without physically moving them permitted the use of heavier, less mobile artillery in the field.

However, field artillery leaders argued Field Artillery organization and personnel management hindered its ability to take full advantage of the new 3-inch gun and the advance firing methods observers had witnessed in the Russo-Japanese War.[27]

After much debate, Congress passed an act separating coast and field artillery into two branches in 1907, based on the conclusion that the mission and function of the two sub-fields of artillery differed so much that having artillery officers rotate between assignments in the two types of units served no useful purpose. The same act "authorized six additional field batteries and gave the heretofore provisional regiments legal standing. The regiments, numbered 1 through 6, each had two battalions of three four-gun batteries. The 1st, 3d, and 5th Field Artillery were authorized as light artillery to serve with infantry troops, the 2d and 4th as mountain or pack artillery, and the 6th as horse artillery to serve with the cavalry." The mountain artillery, in which McNair served, served the same infantry support role as the light artillery, but relied on mules instead of horses to negotiate mountainous terrain, and employed generally lighter, more mobile equipment. However, no mountain equivalent of the new 3-inch gun yet existed by 1909, despite years of supposed effort to develop one, so one of McNair's first priorities involved testing the existing gun to find ways to maximize the potential of a weapon most artillerymen considered obsolete.[28]

McNair's first step in this effort involved traveling with one firing section from his battery to Fort Riley, Kansas, in September 1909 to conduct firing tests for six weeks with the

[27] Janice E. McKenney, *The Organizational History of Field Artillery, 1775-2003* (Washington, D.C.: United States Army Center for Military History, 2007), 99.

[28] Ibid., 101.

Ordnance Department's prototype 2.95-inch mountain howitzer. Upon his arrival at Fort Riley, McNair requested detailed drawings of the modified Vickers gun, which he used after his return to Fort D.A. Russell to prepare a detailed report on the Fort Riley firing tests, which included engineering drawings for a custom mountain artillery piece designed to his specifications that he recommended the Ordnance Department build and test. He submitted this report on 5 April 1910, and then began planning a training exercise. The Ordnance Department had not yet issued any of the new mountain guns to C Battery, so McNair took his men to the Target and Maneuver Reservation, Pole Mountain, Wyoming for a month of training in July 1910. This training gave McNair his first opportunity to test his battery in field conditions, identify needed equipment and training shortfalls, and prepare for more tests, which he planned for early the next year.[29]

Meanwhile, during the first few months of 1911 Major William Lassiter of the 5th Field Artillery conducted an inspection of the 4th Field Artillery for the Inspector General, Maneuver Division, based in San Antonio, Texas. Major Lassiter issued his findings on May 6, 1911, having conducted his inspection in March and April of that year (He began the inspection on the same day the 4th Artillery's new commander, Colonel E.D. Hoyle, took command). Before describing his detailed findings, Lassiter introduced his report with several general observations concerning the challenges he observed in the mountain artillery. These supported his finding that,

> The batteries are not thoroughly reliable agencies for the prompt delivery of effective fire. The officers are not, as a rule, well skilled in posting their guns and employing them to produce fire which is quickly effective. It is difficult to escape the conclusion that, so far as the officers are

[29] Adjutant General, "Summary of Efficiency Reports and Account of Services, 1917."; "The Adjutant General: Consolidated Cross Reference Card, Personnel File of Lesley J. McNair (Pre-1919)." McNair also found time while at Fort D.A. Russell to earn certificates of proficiency in field engineering, military law, the field service regulations, and military administration.

> concerned, this condition is in a great measure due to an imperfect and incomplete system of training.[30]

Lassiter qualified this assessment, however, noting the unique challenges facing the mountain artillery. These centered on the particularly onerous nature of their mission, combined with the austere conditions artillerymen endured at posts like Fort D.A. Russell.

Further, Lassiter pointed out the poor material and organizational state of the mountain artillery, emphasizing that, "prompt attention should be given the matter of placing the mountain artillery on a better footing with respect to matters of equipment and of interior organization." He provided a list of equipment and methods that needed improvement, including the gun and packsaddle, mule loading procedures, and the training of enlisted men. In particular, he advised finding a way to simplify the pack mule loading procedures so that enlisted men could learn this skill in a reasonably short period. He stressed the goal of eventually replacing the civilian packers that the firing batteries required with military personnel, to reduce reliance on contractors for combat-related functions. Lassiter's observations provided a list of mountain artillery issues that McNair sought to resolve by leading his battery through various tests and exercises over the next several years.[31]

Concurrently with Lassiter's inspection, McNair received orders effective March 13, 1911 to serve on a Mountain Artillery Board with two other artillery officers from the 4th Artillery. Their orders directed the board to observe McNair's battery as it tested various equipment under development for the mountain artillery, including the modified mountain artillery howitzer, a replacement for the standard aparejo pack saddle, and miscellaneous other field equipment. The board's first test consisted of a long-range march from Fort D.A. Russell to

[30] Major William Lassiter, "Official Extract, Report of Inspector General, Maneuver Division, San Antonio, Texas," May 6, 1911, National Archives and Records Administration, College Park, MD, RG 337, Entry 58, Box 5.

[31] Ibid.

San Antonio and back, completed between March 13 and July 14. After only a short break, McNair took his battery back to the field, conducting another round of firing tests and field exercises at Pole Mountain, Wyoming between July 25 and August 13.[32]

The War Department terminated McNair's first Mountain Artillery Board on February 26, 1912 and approved the board president's three-page report summarizing its findings. The board found that the tests McNair's battery conducted, both at the firing range and on the march from Fort D.A. Russell to San Antonio and back, confirmed, as written in the report, that "there is no arm of the service so deficiently equipped as the mountain artillery." However, the War Department soon turned to McNair for further tests of mountain artillery equipment. Less than a month after the Mountain Artillery Board issued its final report, McNair received orders to conduct further analysis of the equipment identified as deficient in the initial series of tests, with a particular focus on the gun and pack saddle. To complete these tests, McNair began planning another, longer march that would take the battery through Colorado and then back to Fort D.A. Russell in the summer of 1912. While most of the equipment tests would have to wait until this upcoming march through Colorado, McNair completed a detailed study of the pack saddle problem based on the findings of the previous years' tests, and submitted this report on May 17th, 1912.[33]

Since most members of the field artillery considered the aparejo saddle deficient as currently configured, primarily due to its excessive weight and the skill required for artillery personnel to load it correctly (requiring the service of civilian contractors), McNair set out to find a suitable replacement. The Ordnance Branch had already devised an alternative

[32] Adjutant General, "Summary of Efficiency Reports and Account of Services, 1917."; "The Adjutant General: Consolidated Cross Reference Card, Personnel File of Lesley J. McNair (Pre-1919)."

[33] Lesley J. McNair, "Mountain Artillery Board Report," February 25, 1912, National Archives and Records Administration, College Park, MD, RG 337, Entry 58, Box 5; ———, "Report on Ammunition Carriers for Mountain Artillery, May 1912."

configuration for the 1911 field tests that used long canvas bags instead of wooden boxes to carry the ammunition. When McNair first saw this design, he realized that the modified packsaddle would cause injury to the mules, and he made recommendations to the Ordnance Branch for improvements. However, the Ordnance Branch disregarded McNair's recommendations, issuing his battery a set of their modified packsaddles as originally designed. McNair designed a test that compared five packsaddle configurations, including three variants of the aparejo Ordnance Branch was already considering for adoption (or retention) as standard equipment. McNair's test also included the English packsaddle, commonly in use throughout Europe and considered by many mountain artillerymen a superior packsaddle to the aparejo. Finally, McNair's test included a fifth pack saddle of his design, using the basic aparejo saddle but equipped with a specially designed ammunition pack and other modifications to improve deficiencies he had observed in training and testing of all the other pack saddle variants.[34]

In his test, McNair judged the aparejo – in either of its two configurations – worst out of the five tested in two categories. The first of these, efficiency, equated to the percentage of the total weight of the packsaddle made up by the artillery ammunition it carried – i.e. the ratio of ammo weight to total weight. The second, capacity, represented the ratio of the weight made up by ammunition in a fully loaded pack to the 350-pound maximum loading capacity of the mule – i.e. the degree to which the pack made full use of the mule's carrying capacity. Further, McNair found that the variant of the aparejo developed by the Ordnance Department (equipped with canvas bags instead of wooden boxes) provided only slightly better efficiency and capacity than the two current configurations. However, the English packsaddle performed equally well in these

[34] ———, "Report on Ammunition Carriers for Mountain Artillery, May 1912."

two criteria, and outperformed all three of the Ordnance Department's designs in other characteristics including durability, load distribution, and packing ease and efficiency.[35]

Compared with the poor performance of any of the existing packsaddle variants, including the English version, the packsaddle McNair designed performed quite well. In McNair's configuration, the aparejo supported a smaller, more durable, efficiently designed canvas ammunition carrier, which improved the packsaddle's load size, weight distribution, and center of gravity. This enabled pack mules to carry heavier loads with far less risk of injury to the mule, and made ammunition more readily accessible to the firing batteries. McNair's men constructed the packsaddle to his specifications with materials on hand, and yet it withstood more than two weeks of near-constant use without breaking down (the Ordnance Branch's canvas ammo pouch, by contrast, demonstrated poor endurance due to the weak, lightweight canvas used to make it). McNair's packsaddle carried the most rounds in the smallest carrying configuration, in two-round packs that one man could easily remove from the pack and carry to the firing battery even in rough terrain. Finally, it exceeded all the other configurations in efficiency and capacity by 12% or more. Based on these results, McNair proposed his design for adoption by the mountain artillery, but given the short period McNair had available to test it, he recognized the need for more extensive tests, and identified a number of additional improvements he believed it would benefit from. Therefore, he recommended the Ordnance Branch construct eight sets of his proposed carriers for issue to his regiment for further testing.[36]

Shortly after submitting his detailed packsaddle report, McNair began preparing his battery for the upcoming field test, scheduled for June 20 – August 17, 1912. Lieutenant Devers,

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[35] Ibid.

[36] _____, "Report on Organization and Equipment of Mountain Artillery, September 1912." McNair provided his own detailed engineering drawings for his proposed design, demonstrating the skill he had developed in drawing and mathematics at business school and West Point, and during his four-year detail to Ordnance Branch.

still serving as a platoon leader in McNair's battery, participated in this particularly high-profile and arduous test, in which McNair led his battery – consisting of three pack trains of fifty mules each – on a 51-day, 844-mile march. The battery departed from Cheyenne, Wyoming, headed south through Denver, Colorado Springs and Canyon City, and then returned to the Rockies to conduct a record-setting high-altitude firing mission at 14,000 feet before returning home to Wyoming. However, as late as 1917 Captain Leroy P. Collins wrote a short article published in the Field Artillery Journal noting the Army had yet to accomplish the further tests McNair recommended, and the standard aparejo configuration remained the one in use:

> I believe that the further test recommended by Captain McNair has never been made. There has always existed in our service a strong prejudice in favor of the aparejo to the exclusion of other types of pack saddles, probably due to the feeling that what was good enough for the old Army in its severe frontier service, is good enough for us. This feeling has been strengthened undoubtedly by the influence exerted on the army by the old time civilian pack masters. While no one denies that the aparejo has played an important role in our past history, yet the great number of sore backs, ensuing after a long march make it a matter of great importance that a pack saddle which is easier on a mule's back be adopted, if such a one exist or can be developed. Many mules returned from the march mentioned with holes in their sides which could not be covered by two hands and these were months in healing with no work.[37]

Even at this early stage of his career, McNair demonstrated a strong interest in innovation to find the most effective equipment for the Army's use, and he possessed the skill to conduct and prepare reports on detailed and methodologically sound tests of such equipment.[38]

This conflict between McNair, an ordnance-trained unit commander, and Ordnance Branch engineers regarding packsaddles for mountain artillery units serves as an example of the challenges caused by the bifurcation of responsibilities for military equipment procurement in and employment the early twentieth century. This division of responsibilities caused significant problems for the U.S. Army as it attempted to incorporate new technologies when modernizing

[37] Leroy P. Collins, "Pack Saddles for Mountain Artillery," *FA Journal* Jul-Sep 1917: 343-45.

[38] Coffman, *The Regulars*, 154; Kahn, *McNair, Educator of an Army*, 54; Collins, "Pack Saddles for Mountain Artillery," 343-45.

its organization and doctrine. Historian Daniel Beaver identified the root of the problem in his description of the informal nature of the relationships that guided the functioning of the Board of Ordnance and Fortification, established in 1885 to conduct a Congress-mandated review of the Army's planned coastal-defense system. Beaver pointed out,

> By 1888 it was clear that construction and location of the new fortifications required formal coordination of the technical and construction bureaus and the army combat arms as well as close cooperation with the navy. In an unprecedented piece of legislation passed on September 22, 1888, Congress mandated a permanent Board of Ordnance and Fortification chaired by the commanding general of the army and including representatives of the War Department staff as well as an independent civilian representative to integrate the coastal defenses of the United States. The first formal interbureau managerial experiment by the War Department, it brought together engineers, ordnance, signals, and artillery officers to discuss systematic weapons research and development, improve cooperation between themselves and with the navy, and cultivate technical connections with American industry.

Under its first commander, the very competent General of the Army John McAllister Schofield, the board performed quite well, but as Beaver pointed out, several inefficiencies in its inner workings meant its effectiveness relied largely on informal relationships and a spirit of cooperation between the commanding general, the secretary of war, and the bureau chiefs. In particular, the Ordnance Bureau and the engineers each had their own boards, and they controlled the contracting process. This meant "the successful operation of the Board of Ordnance and Fortification hinged on personal consultation and informal connections."[39]

As leadership changed among the various departments and agencies that worked with the Board over the next ten years, the spirit of cooperation that existed under General Schofield's tenure eroded. By 1899, Secretary of War Elihu Root lost all confidence in the Board, and made no mention of it in his annual report that year. However, the War Department took no effective action to decisively disband or replace the Board. Implementation of Root's general staff system at the turn of the century left the Board overlooked, and its functions devolved to various

[39] Daniel R. Beaver, *Modernizing the American War Department: Change and Continuity in a Turbulent Era, 1885-1920* (Kent, OH: Kent State University Press, 2006), 60-62.

agencies, with war planning falling under the purview of the War College Division of the General Staff, while the technical and supply bureaus or various special boards retained responsibility for weapons and equipment development and standardization.[40] Thus, McNair possessed the most experience with packsaddles of any of the various individuals or agencies involved in their development, and he commanded the units that conducted the field tests, but ultimately the technicians in Ordnance branch and industry decided what equipment they would procure and field to Army units.

Meanwhile, McNair's experimentation with mountain artillery packsaddles and extensive field tests drew attention from senior leaders in the branch, including the commandant of the Field Artillery School at Fort Sill, Oklahoma. This led to the school's request for a one-year detail of McNair to Fort Sill, to put into tabulated and easy to understand form the statistical firing data instructors at the school had collected over the previous fifteen months, during which the school fired over 7,000 rounds of artillery during various tests and training events. Due to a shortage of instructors, the school had only collected the data, but possessed no officer on the faculty capable of putting it into useful form. The commandant believed organizing the data into a useful format would fully occupy the time of an officer for one year. He requested McNair by name to complete the task, writing, "Lieut. McNair, as far as I have been able to observe is fitted by disposition and by temperament to accomplish this kind of work in an extremely efficient manner." The War Department approved this request on December 3, 1912, with a report date of February 1, 1913, also directing McNair to travel to France to observe French artillery fire about midway through this one-year detail.[41]

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[40] Ibid., 62-63.

[41] Field Artillery School of Fire Commandant, "Detail of Statistical Officer," November 24th 1912, McNair Papers, National Archives and Records Administration, Washington, D.C; The Adjutant General, "Special Orders No. 283," December 3, 1912, McNair Papers, National Archives and Records

McNair earned permanent promotion to captain of Field Artillery during his detail at Fort Sill, on April 19, 1914. After ten years of peacetime training duty, he soon received the opportunity to apply his hard-earned skills in operational combat assignments. From 1914-1917 he served twice in combat, first as Regimental Commissary, 4th Artillery during the Funston Expedition to Vera Cruz (April to September 1914), and later as a battery commander in the 4th Artillery in support of Major General John J. Pershing's Punitive Expedition to Mexico (July 1916 to February 1917). Between combat tours, McNair returned to the Field Artillery School at Fort Sill, where he continued to work on fire procedures and weapons development.[42]

Before McNair joined the Funston Expedition, Colonel Berry of the 4th Field Artillery requested the War Department assign McNair to his regiment instead of the captain currently slated to fill the intended position. Senior Army officers still use this administrative action (known as a "by name request" or BNR) in their efforts to fill their organizations with officers of known competence or particular ability.[43] The War Department granted Berry's request, and McNair supported the 4th Artillery during the expedition. His efficiency report covering this period includes the following evaluation of his performance during the expedition: "Under the semi-field conditions existing here: Excellent. He has attended to the supply of the regiment in a businesslike way."[44]

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Administration, Washington, D.C; War Department, "Memo Directing Travel to France to Observe French Artillery," July 2, 1913, McNair Papers, National Archives and Records Administration, Washington, D.C.

[42] Examining Board, "Examination for Promotion, Effective Date April 19, 1914," January 13, 1913, McNair Papers, National Archives and Records Administration, Washington, D.C; Adjutant General, "Summary of Efficiency Reports and Account of Services, 1917."; Dan J. Moore, "Efficiency Report of Lesley J. McNair," January 1 to September 15, 1914 (in Vera Cruz April 26 to September 4), McNair Papers, National Archives and Records Administration, Washington, D.C.

[43] Colonel Berry, "Telegram from Colonel Berry, 4th Field Artillery, to the War Department Adjutant General," April 26, 1914, McNair Papers, National Archives and Records Administration, Washington, D.C.

[44] Moore, "Efficiency Report of Lesley J. McNair, January-September 1914." The evaluation report indicates McNair served in the regimental supply and quartermaster sections. His rater for the

Upon his return from Vera Cruz, McNair remained at the School of Fire, where he conducted various tests and experiments seeking to improve methods of fire direction and control. Evidently, he had performed so well as statistical officer that senior leaders at the Field Artillery School managed to retain his services beyond the initial one-year term. In his next annual efficiency report, after serving another year at the School of Fire, McNair's supervisor remarked on his particular expertise in ordnance construction and ballistics theory of field gunnery, and ranked him "among the first 6 captains of field artillery in efficiency." In his final efficiency report at the School of Fire, completed in May 1916 as McNair prepared to deploy in support of the Punitive Expedition, his rater described McNair as "An officer of the highest type, thoroughly qualified and reliable," and rated him "excellent" in all categories.[45]

McNair returned to the 4th Field Artillery for the duration of the Punitive Expedition, serving as a battery commander and leading troops in combat for the first time. While no records appear to exist describing his experience of command in detail, his efficiency report for this period indicates he performed in an excellent manner leading his battery 300 miles into Mexico and back. His rater and senior rater expressed nothing but praise in his efficiency report, judging him excellent in all areas including those related to leading combat troops in the field. Their observations included several comments regarding his general competence, including, "An excellent officer in both theory and practice," and "This officer is in my opinion one of the best equipped, mentally, morally, and physically, in the service." Major General John J. Pershing signed the report under "First Indorsement," concurring with the evaluation of McNair's senior

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period of the report covering his detail at the Field Artillery School wrote: "This officer has been on duty as statistical officer of the School of Fire for F.A. since Jan 1913 during which period he has performed his duties in a most satisfactory and efficient manner."

[45] E. F. McGlachlin, "Efficiency Report of Lesley J. McNair," January 1 to 31 December 1915, McNair Papers, National Archives and Records Administration, Washington, D.C; ———, "Efficiency Report of Lesley J. McNair," January 1 to 10 May, 1916, McNair Papers, National Archives and Records Administration, Washington, D.C.

rater, Colonel Allaire.[46] This demonstrates that they may not have served closely together during the Punitive Expedition, but at a minimum, Pershing read the high praise McNair received in his efficiency report and knew enough about his reputation to endorse the remarks.

These operational assignments further developed McNair's skill as a leader of artillerymen, but more significantly, they steeped the young captain in the principles of traditional American warfighting doctrine. Building on its roots as a frontier constabulary, the turn-of-the-century American Army remained confident of the primacy of the infantry and the power of moral superiority to win battles. Its experiences during the operations in Mexico under Funston and Pershing verified in many American officers' minds the effectiveness of their traditional fighting methods. Meanwhile, a radically new form of warfare took shape in Europe, where large armies adapted their doctrine to the superiority of the defensive enabled by machine guns, massed artillery, and elaborate systems of entrenchments. Meanwhile, the U.S. Army, paying little attention to a war they did not expect to fight, continued to emphasize morale over technology and expected the infantry to win battles with the rifle and bayonet. In the traditional American view, the Infantry provided the main combat force, relying on artillery support only to the degree necessary to enable them to close within rifle range and finish the enemy with a bayonet charge.[47] In this respect, McNair proved unique in his particular expertise with the latest fire techniques and equipment, and his efforts to increase the mobility of field artillery so it could provide effective support to the infantry.

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[46] T. E. Merrill, "Efficiency Report of Lesley J. McNair," July 22 to December 1, 1916, McNair Papers, National Archives and Records Administration, Washington, D.C. Merrill served as McNair's rater; Allaire his senior rater.

[47] John S. D. Eisenhower, *Intervention!* (New York, NY: Norton, 1993), 216; Mark E. Grotelueschen, *The AEF Way of War: The American Army and Combat in World War I* (New York, NY: Cambridge University Press, 2007), 10-25; Allan R. Millett, "Cantigny, 28-31 May 1918," in *America's First Battles, 1776-1965*, ed. Charles E. Heller and William A. Stofft, *Modern War Studies* (Lawrence, KS: University Press of Kansas, 1986), 152-53.

The Punitive Expedition to Mexico in support of Brigadier General John J. Pershing's 8th Brigade proved to be particularly significant for McNair's career. Not only did the expedition offer practical lessons in the employment of mobile artillery; it also gave McNair experience with a complex and difficult mobilization, an experience much written about and one he surely never forgot. It also exposed him to one of the Army's most capable leaders, soon selected to lead the American Expeditionary Force (AEF) during World War I. McNair's service with Pershing began a lengthy association that played a key role in the young officer's career.[48]

McNair's participation in the AEF's preparation for war began immediately upon redeployment from the Punitive Expedition. Upon his return from Mexico, McNair reported in January 1917 to Camp Stewart in El Paso, Texas, where he joined the 1st Division and began pre-deployment organization and training. Working once again for T. E. Merrill and senior rated by the division commander, Major General William L. Sibert, McNair continued to impress his superiors, as demonstrated by the efficiency report he received upon his arrival in France the following August. Rated "excellent" in all areas, this efficiency report highlighted McNair's suitability for service on the General Staff. One cannot tell whether these remarks indicate acknowledgement of a decision already made, or assessments that contributed to his selection to serve with the AEF General Headquarters (GHQ) Staff. Regardless, the report also reflects the excellent reputation McNair developed during his first thirteen years of service, demonstrated by Major Merrill's assessment of his particular skills: "This officer is especially competent in every class of duty that has devolved upon him while under my observation [ten months of combat service]. He has great ability as an organizer and executive which especially fit him for important staff duties in high command in war." However, Merrill's "general estimate" of McNair

[48] Frank Tompkins, *Chasing Villa* (Harrisburg, PA: Military Service Publishing Company, 1934), 262.

indicates he hoped to retain him in the division, as indicated by his comment, “I earnestly recommend that he be given command of one of the regiments of field artillery in our temporary forces, preferably a regiment of new type material.” For his part, Sibert summed up his evaluation of McNair with the recommendation to assign him to “General Staff or command with advanced rank.” Based on his long and impressive service record, McNair was sure to find himself entrusted with significant responsibility as America entered the World War.[49]

[49] T. E. Merrill, "Efficiency Report of Lesley J. McNair," January 1 to August 22, 1917, McNair Papers, National Archives and Records Administration, Washington, D.C.

# CHAPTER THREE

## World War I

### Preparing for a New Kind of War

The United States observed the outbreak of World War 1 with both dismay and detachment. While some citizens supported American involvement in the war, most Americans expressed the determination to remain neutral – a predisposition espoused by President Woodrow Wilson. However, as historian Ronald Schaffer argued, "after the outbreak of war in Europe, Wilson's administration proclaimed American neutrality but began taking actions that made it, before 1917, an undeclared participant." As a result, the government expended a great deal of effort shaping the perceptions of a divided public to gain their support for the war effort. Through propaganda efforts and decisive action to stamp out public dissent, enthusiasm for American participation slowly spread, while dissidents learned to stay quiet, and Americans became mentally prepared to serve, whether at the front or supporting a war economy at home. America possessed perhaps the best-suited economy of the war's major belligerents to support the effort it entailed, but the nation's focus on internal development over the previous decades had done little to prepare it for the demands of rapid military mobilization.[50]

Unlike its success preparing the public, the Wilson administration made little progress readying either the military or industry to fight a major conflict in Europe. By the time America entered the war on April 6, 1917, it had missed the opportunity to mobilize the nation's industrial capacity in support of the war effort. The military also prepared only marginally well, as historian Edward Coffman argued, "during the formative period, which continued into the early

[50] Ronald Schaffer, *America in the Great War: The Rise of the War Welfare State* (New York, NY: Oxford University Press, 1991), xvi, 30-31.

months of 1918, delays, mistakes, and confusion hampered the developing war effort: yet, progress was made."[51]

Transatlantic shipping tonnage in 1917 remained the same as it had been in 1810, and shipbuilders completed only a few new ships, the first of which they finally launched in 1918, in time to support the war effort. Similarly, plans to produce airplanes, tanks, artillery and machine guns all resulted in few if any weapon systems appearing in time to outfit the AEF, which had to rely mostly on French and British equipment in combat. Even the U.S.-made Springfield rifle remained in short supply, requiring many American soldiers to use the inferior British Lee-Enfield instead.[52]

Throughout the mobilization period, the continued existence but unclear status of the Board of Ordnance and Fortification led to dysfunction in weapons and equipment design, procurement, and fielding. The Board continued to perform tests and make recommendations, but they had little effect. In general, military equipment users provided desired performance specifications – which emphasized effectiveness in actual combat conditions – to the engineers in Ordnance Branch, who then worked with industrial leaders to create a system or weapon that achieved an acceptable fit with the field commanders' specifications, based more on the principles of efficiency and mass production. No central control or spirit of cooperation guided the Board's efforts as they had under Schofield's leadership, causing unresolved disputes to linger on for long periods while Army units remained hamstrung in their efforts to modernize. Daniel Beaver argued more effective use by the War Department of the Board of Ordnance and

[51] Edward M. Coffman, *The War to End All Wars: The American Military Experience in World War I* (Lexington: University Press of Kentucky, 1968), 20-21.

[52] Robert H. Ferrell, *America's Deadliest Battle: Meuse-Argonne, 1918* (Lawrence, KS: University of Kansas Press, 2007), 1-11.

Fortification could have led to resolution of such disputes and improved the Army's equipment development and acquisition process as it prepared for participation in the war.[53]

For example, two decades of controversy plagued the issue of fielding machine guns for the cavalry and infantry, beginning at the turn of the century when the weapons finally developed adequate reliability for field use. Ordnance standardized the Vickers-Maxim gun and the Colt Fire Arms Company won the initial contracts to produce the weapons. However, military personnel by that time realized the machine gun offered usefulness for all of the combat arms, but the Vickers-Maxim – a heavy, water-cooled weapon, offered only a defensive capability because it weighed over 100 pounds including ammunition and tripod. The infantry managed to develop techniques to employ the Vickers-Maxim, but the cavalry could not effectively transport it or deploy it quickly in action.[54]

The desire to find a single weapon suitable for both branches led to the examination in 1909 of the Benét-Mercié light machine gun by General William Crozier, Chief of Ordnance. Weighing less than thirty pounds, the weapon was, in Beaver's words, "a technician's dream" – light, cheap, clip-fed, air-cooled, and equipped with a folding tripod and quick-change barrels. Ordnance placed the Vickers-Maxims in storage, replacing them with this apparently ideal weapon, soon nicknamed the "Benny-Mercy," The new machine gun failed in field use on every count. It lacked the defensive power of the heavy Vickers-Maxim, and performed more like an automatic assault rifle than a machine gun. Even clamped onto a forty-pound tripod, the infantry complained of poor accuracy and the inability to provide sustained fire. The cavalry appreciated its portability but otherwise found it unsuitable due to its instability (and resulting inaccuracy) due to its low weight. Finally, the machine gun, machined to very fine tolerances, jammed far too

[53] Beaver, *Modernizing the American War Department*, 64.
[54] Ibid.

easily even in slightly dusty conditions. While individuals saw potential in the light machine gun, Ordnance had placed its bets on a single machine gun that served neither branch's needs.[55]

Beaver highlighted a more fundamental issue than the eventual choice of a particular machine gun for use in the war. The War Department finally solved the machine gun impasse due to the imminent threat of war, acknowledging no single machine gun could satisfy the various capabilities that different branches and applications required of the weapon, and ultimately ordering in May 1917 the Browning water-cooled heavy machine gun and the Browning automatic rifle. This and other last minute expedients did nothing to resolve the root cause of the procurement problem – conflicting views between individual Army officers from the combat arms and Ordnance, the opportunism among private companies seeking to sell military equipment, congressional intervention based on political priorities, and most importantly no single individual or department leading the process. Beaver contended that had the individuals in power grasped the true scope and nature of the problem, they could have used the Board of Ordnance and Fortification to resolve the dysfunction that crippled the pre-war procurement process.[56]

Army training proved similarly deficient, due in large part to the ineffectiveness of Secretary of War Baker and a succession of incompetent Chiefs of Staff of the Army. The Army benefited from the appointment of Peyton C. March as Chief of Staff in March 1917, but he took office too late to make the necessary changes quickly enough to affect the AEF's readiness for combat. Therefore, soldiers received inadequate training resulting from outdated concepts of war, shortages of rifles and heavy weapons, and disruptions in unit cohesion due to a constant turnover caused when soldiers departed unit training early to deploy as replacements to the front.

[55] Ibid., 65.
[56] Ibid., 65-68.

The Army also suffered from an overemphasis on the moral element, demonstrated, as Mark Grotelueschen points out, by the "human-centered view of battle that dominated the Fort Leavenworth courses" leading to "the curriculum's blatant neglect of recent technological developments – including those in such crucial areas as artillery, machine guns, aircraft, and automobiles." Most American officers remained rigidly attached to the dogma of lightly armed infantrymen, rapidly maneuvering by foot, unencumbered by heavy weapons, intent on executing an offensive culminating in a heroic bayonet charge that would drive away a terrified enemy, even as events on the battlefield in Europe proved this view increasingly outdated.[57]

The AEF sought to enable this unique doctrinal approach by placing extremely large numbers of infantrymen in huge units that far exceeded the size of comparable allied formations at every echelon, most clearly embodied in the giant AEF "square" division of 28,000 men, double the size of Allied or German divisions. As Mark Grotelueschen points out, historians have identified several reasons for this organizational decision. These include a shortage of trained officers, Pershing's desire to place Regular Army officers in command of all AEF divisions, and the political priority to maintain AEF uniqueness in organization and doctrine to deter the Allies from breaking up U.S. units for piecemeal employment to reinforce existing British and French units. However, the AEF's organizational decisions primarily supported the tactical approach envisioned in open warfare doctrine, which Pershing and his adherents believed required these massive divisions to create and exploit penetrations in enemy lines on a stabilized battlefield, where poor mobility limited the ability to conduct forward passage of divisions through the lines or support attacks with mobile heavy weapons systems. Battlefield experience since 1914 also led the AEF to expect extremely high casualty rates. Since they believed a

[57] Grotelueschen, *The AEF Way of War*, 14-23. This may reflect the continued influence of military theorist Henri Jomini, who in the mid-nineteenth century discounted the significance of technological developments, arguing they did not change the fundamental principles of warfare.

division must possess the capability to attack an entrenched force, create a penetration, and conduct a pursuit after pushing the enemy onto open ground, AEF leaders believed it must possess enough men to absorb significant losses and keep fighting.[58]

These mobilization and training deficiencies and organizational decisions resulted in the AEF arriving in France sorely unprepared for combat. Although they provided invaluable support to the eventual Allied victory, this resulted as much from the effect on German morale as any battlefield success. Further, while AEF combat performance generally improved with experience, the AEF suffered severe losses, particularly in the Meuse-Argonne, where twice as many American soldiers died than in the U.S. Army's second-deadliest battle (Okinawa, during the Second World War). One can only speculate how many losses a more effective pre-war organization, training, and mobilization process might have prevented.[59]

**Fighting the War**

Secretary of War Newton D. Baker selected Pershing to serve as the overall commander of the U.S. Army in France in May 1917. Baker saw him as the obvious choice, given his recent command experience with the Punitive Expedition, his loyalty to the Wilson administration, and his robust health and soldierly appearance – factors that led Baker to choose him over his closest competitor, Major General Leonard Wood. Pershing also actively campaigned for the position. Pershing returned to America in February, recalled early from the yearlong Punitive Expedition that, by fortunate happenstance, provided a core of seasoned veterans around which to build the AEF from an otherwise poorly prepared Army and National Guard. Upon his return, as S. L. A. Marshall recalled, Pershing

[58] Ibid., 27-28.
[59] Ferrell, *America's Deadliest Battle*, 11-17.

> called a conference of correspondents and said to them: "We have broken diplomatic relations with Germany. That means we will send an expedition abroad. I'd like to command it. Each of you must know some way in which you can help me. Now tell me how I can help you so that you can help me. Here was frank ambition, and nothing wrong with it. The history of America in World War I is written in Pershing's shadow because he wanted it that way.[60]

Marshall went on to describe the enigma that was "Black Jack" Pershing. He overshadowed the story of the war and the efforts of his various peers and rivals in a way unseen in any previous American War, yet he displayed no particularly "deep military wisdom." He inspired confidence in his political superiors, yet displayed an austere, introverted character to his subordinates and soldiers. Further, "he had fundamental qualities that went far in the shaping of an army – patience, sobriety, emotional balance, and an unshakable fortitude." He led soldiers to achieve their best not through ruthless discipline or charisma – he was never "popular with troops" – but through tough training, high standards, and an ethical code of fairness. Nevertheless, Pershing faced a daunting challenge, suffering shortages in every resource the AEF required, including trained soldiers, equipment, and time.[61]

In the years leading up to America's involvement in the war, divisions existed in both government and society with regard to issues ranging from whether the United States should send a military force to France, to how it would form, equip, and prepare such an expedition. When Congress declared war against Germany in April 1917, the United States Army comprised only 5,971 officers and 121,797 enlisted men. Mobilization of the National Guard enabled the expansion of Pershing's American Expeditionary Force (AEF), but the National Guard consisted of only another 174,008 marginally trained officers and enlisted soldiers – far short of its authorized strength of 450,000. The passage of the Selective Service Act in May 1917 established a wartime draft, leading to formation of the National Army and enabling the AEF to

[60] S. L. A. Marshall, *World War I* (New York, NY: American Heritage, 2001), 279.
[61] Ibid.; Coffman, *The War to End All Wars*, 43.

grow in strength to more than two million men at war's end. Nevertheless, it took almost a year from the passage of the act before the first trained and equipped American forces finally arrived in France. In addition to an overall shortage of men, the pre-war Regular Army's officer corps consisted mostly of men senior in age but junior in rank. A system of promotion based on seniority combined with a shortage of positions of higher rank resulted in slow promotions for promising young officers, while senior officers tended to serve long after they had passed their prime. Thus, the U.S. Army's senior leadership consisted largely of officers who no longer possessed the fitness or drive necessary for combat service. Therefore, Pershing faced significant challenges finding qualified officers to fill command and staff positions in the AEF.[62]

The shortage of qualified senior officers in the pre-war U.S. Army presented an opportunity for young and energetic leaders such as the 34-year old Captain Lesley McNair. When Pershing's forces returned from Mexico on 5 February 1917, McNair had to wait only three months before earning promotion to major and reassignment to the General Staff Corps.[63] Major McNair deployed to France as the 1st Division's Assistant Chief of Staff for Training. He first met Major George C. Marshall, the 1st Division's Assistant Chief of Staff for Operations, during this deployment – the two officers shared a stateroom during the voyage across the Atlantic Ocean.[64]

Soon after his arrival in France, McNair earned promotion to lieutenant colonel and found himself reassigned to the GHQ training division (G-5) of the AEF, as the Chief of Artillery Training and Tactical Procedures. McNair continued to impress Pershing with his exceptional performance and military bearing, and Pershing rewarded this performance by

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[62] Forrest C. Pogue, *George C. Marshall: Education of a General, 1880-1939* (New York, NY: Viking Press, 1963), 133-44; Millett, "Cantigny," 149-51; Grotelueschen, *The AEF Way of War*, 26.

[63] Kleber, "McNair," 696.

[64] Larry I. Bland, ed. *"The Soldierly Spirit": December 1880-June 1939, Vol. 1 of the Papers of George Catlett Marshall* (Baltimore, MD: Johns Hopkins University Press,1981), 109.

promoting him to colonel in June 1918 and brigadier general – making him the AEF's youngest general officer at the age of thirty-five – in October 1918. As the senior artillery officer of the GHQ training division, McNair worked closely with Pershing and continued to benefit from his mentorship. This close working relationship resulted in Pershing's influence leaving its mark on McNair, who displayed similarities to Pershing ranging from views on doctrine to leadership style and military bearing throughout the remainder of his career.[65]

Perhaps most significantly, McNair shared Pershing's views on doctrine, regarding both open warfare in general, and specifically the superiority of observed artillery fires to support infantry in the attack. As Boyd Dastrup noted,

> McNair, the senior field artillery officer on the AEF staff, reflected Pershing's thinking. In November 1918, he vehemently criticized European unobserved map firing techniques and advocated the superiority of the American doctrine of observed fire. He explained that the Europeans concentrated on unobserved indirect fire rather than focusing on observed fire and pushing field artillery forward to support the infantry advance. A strong sponsor of indirect fire, McNair wrote that unobserved map fire was causing too many infantry casualties because it seldom engaged obstacles to the infantry advance as observed fire could. Whereas observed indirect fire offered flexibility, unobserved fire was rigid and prohibited adjusting to meet changing tactical requirements like observed fire could, making American technique superior.[66]

Dastrup argues, however, that even though Pershing and McNair agreed regarding the advantages of observed fire, they failed to grasp the true superiority of the method – its ability to paralyze the enemy in depth, an essential capability to enable a war of maneuver. Nevertheless, McNair's support of open warfare concepts and observed fire set him apart not just from the European artillerymen that preferred map firing techniques, but from those officers in his own branch who shared the European view. This demonstrates McNair, from a very early stage in his career, grasped the true potential of field artillery to break the deadlock of stabilized warfare.[67]

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[65] James J. Cooke, *Pershing and His Generals: Command and Staff in the AEF* (Westport, CT: Praeger, 1997), 19-20.

[66] Boyd L. Dastrup, *Cedat Fortuna Peritis: A History of the Field Artillery School* (Fort Leavenworth, KS: Combat Studies Institute Press, 2011), 53.

[67] Ibid.

Pershing held strong opinions regarding the desirable characteristics of an army officer. He believed they should be physically fit, possess stamina, exhibit high standards of appearance, and exude confidence, while also possessing the ability to grasp quickly and communicate with clarity the key points of a situation. As a result, Pershing moved many senior Regular Army officers aside because they did not meet his standards, replacing them with younger and more capable junior officers. As a case in point, Pershing relieved Major General William L. Sibert, an engineer officer selected by Secretary of War Baker to command the 1st Infantry Division. Sibert possessed a high reputation in Washington, but Pershing disapproved of him on many counts: he was old, had no combat experience, demonstrated a poor grasp of training, and lacked confidence. Upon receiving reports that Sibert displayed a disturbing pessimism during a visit by a group of American dignitaries to his command post in France, Pershing finally ordered him to return to Washington on 15 December 1917. This step demonstrated both his lack of patience with substandard officers and his authority to appoint and relieve commanders in the AEF as he saw fit.[68]

Pershing relieved many other officers, including other division commanders. On the same day that he ordered Sibert back to Washington, Pershing relieved Major General William Mann, commander of the 42nd "Rainbow" Infantry Division. Mann was sixty-three, overweight, and not particularly energetic; however, he did demonstrate a propensity to take advantage of his political connections back home to defy Pershing's wishes. While Pershing possessed limited ability to influence congressional representatives, his authority in France was unquestioned, and Mann soon found he had picked a fight he could not win. Pershing had always been critical of

[68] Cooke, *Pershing and His Generals*, 21-25. After inspecting Sibert's division headquarters on 3 October 1917, Pershing wrote in his diary "Sibert: slow of speech and of thought…. Slovenly in dress, has an eye to his personal interests. Without any ability as a soldier. Utterly hopeless as an instructor or as a tactician. Fails to appreciate soldierly qualities, possessing none himself." Donald Smythe, *Pershing: General of the Armies* (Bloomington, IN: Indiana University Press, 1986), 55-56.

National Guard officers, and this episode only served to reinforce his already significant reservations, particularly concerning their appointment to command positions. Fortunately, a highly competent officer, Major General Charles D. Menoher, relieved Mann, and the Rainbow Division went on to serve admirably in combat. Nevertheless, the implications were clear – a stagnating Regular Army officer corps and reliance on National Guard units to facilitate Army expansion led to significant challenges for the AEF regarding officer competency, particularly at senior levels.[69]

Service on the AEF staff exposed McNair to an influential mentor in General Pershing; it also provided a formative experience that significantly affected McNair's ideas regarding Army organization and doctrine. Preparation of the AEF for war required a major transformation of the small American frontier army to a European-style conventional force, and the ensuing expansion meant raw recruits soon vastly outnumbered the core of regular army soldiers and officers. Nevertheless, the Army's traditional view of war fighting lived on in the form of an infantry-centric doctrine championed by Pershing and his like-minded traditionalist cadres as "open warfare." This term took on a particular meaning in the preparation for war, becoming a catalyst for debate both within the AEF and between the AEF and its French and British Allies.

As described in a 1917 platoon training manual, "the terms 'trench-to-trench attack' and 'attack in open warfare' . . . differentiate from an instructional point of view between the methodical attack of highly organized defenses and such attacks as may occur at a later period of an offensive after the main system of the enemy's defenses has been penetrated." This description of open warfare as distinct from trench warfare represents a broad effort by Army traditionalists to resist adoption of European fighting methods developed in the early years of the

[69] James J. Cooke, *The Rainbow Division in the Great War, 1917-1919* (Westport, CT: Praeger, 1994), 4, 20-23. Menoher also inherited Mann's chief of staff, Major Douglas MacArthur, who had served with the 42nd "Rainbow" Division since its formation in August 1917.

war. This resistance resulted not only from the Army's roots in its frontier constabulary traditions, but also supported the broader goal of retaining AEF independence on the battlefield. This goal stemmed from guidance issued by President Wilson on 4 May 1917, who had no desire to see AEF combat units piecemealed out to serve under British and French command. This explains in part why the apparently distinct open warfare and trench warfare actually resembled each other more than they differed. Essentially, according to doctrine trench-to-trench warfare held precedence when units engaged the enemy from static positions at close range. However, upon assuming the offensive, doctrine held that AEF units would transition to open warfare, with the goal of breaking through the enemy's static defenses and pressing the attack to achieve penetration in depth.[70]

Nevertheless, many AEF senior leaders arrived in France convinced that their offensive-minded open warfare doctrine and massive divisions would enable them to break the deadlock of the trenches – an illusion that did not fade until problems began to emerge on the battlefields of France. Once they actually engaged in combat, the effects of the rapid mobilization of AEF divisions began to show. While open warfare dominated American military discourse before the war, its greater complexity exceeded the training capability of the AEF's rapidly mobilized and deployed units, causing most of them to focus on trench warfare methods during both pre-deployment training and on the battlefield. The rapid mobilization that prevented mobilized divisions from preparing adequately for the combined-arms fighting methods that open warfare required led to rigidly planned operations, poorly executed attacks, and ineffective use of supporting weapons. In addition, shortage of communications equipment and limited artillery

[70] Marshall, *World War I*, 282-83; War Department, *Instructions for the Training of Platoons for Offensive Action, 1917* (Washington, DC: Government Printing Office, 1917). For "open warfare" see Grotelueschen, *The AEF Way of War*. This serves as the best available source for analysis of AEF doctrine and operations, supported by extensive notes citing the contemporary doctrine, instructional materials, journal articles, and other sources that drove the debate.

mobility meant attacking infantry lacked sufficient fire support once they moved beyond the range of their supporting artillery. While many division commanders successfully adapted and found innovative solutions to the challenges they faced, this breakdown between the peacetime discourse on warfare and the reality the AEF encountered in battle resulted in massive casualties, highlighting the need to review Army doctrine and unit organization after the war.[71]

**Assessing the War's Lessons.**

Despite the AEF's difficulties conducting open warfare on the Western Front, the Army determined from a series of post-war evaluations that it possessed generally sound doctrine. Both the AEF and the War Department appointed formal boards to analyze the Army's combat experience in detail. The AEF convened more than twenty boards between December 1918 and June 1919, chaired by the most senior, experienced officers serving with the AEF.

The members of the Lassiter (artillery) Board, formed on 11 June 1919, originally included Brigadier General McNair.[72] The Lassiter Board tackled perhaps the single most significant challenge the AEF faced – the difficulty of providing adequate mobile fire support to infantry in the attack. The board made several key recommendations for post-war artillery development intended to increase its mobility and firepower while enhancing its ability to provide timely and accurate fires in support of maneuvering infantry.[73] However, just one week

[71] Millett, "Cantigny," 180-82. Colonel Charles P. Summerall, serving as the senior artilleryman on the Baker Mission, insisted in 1917 that GHQ needed to double the number of guns in support of the infantry, but GHQ did not agree. For more on the artillery debate, see Grotelueschen, *The AEF Way of War*, 36-37; for an explanation of how societies adapt their discourse on war when encountering the reality of warfare, see John A. Lynn, *Battle: A History of Combat and Culture*, 2nd ed. (Cambridge, MA: Westview Press, 2004), 331-41.

[72] William Lassiter, "Report of a Board of Officers Convened Pursuant to Special Orders No. 289-0," December 11, 1918, National Archives and Records Administration, College Park, MD, RG 120, Entry 23, Box 3; The Adjutant General, "General Order 169, Paragraph 9, GHQ, AEF," June 18, 1919, McNair Papers, National Archives and Records Administration, St. Louis, MO.

[73] William O. Odom, *After the Trenches: The Transformation of U.S. Army Doctrine, 1918-1939* (College Station, TX: Texas A&M University Press, 1999), 26-29; Millett, "Cantigny," 182-84.

after the formation of the Lassiter Board, McNair received orders reassigning him as one of the thirty-four members of the inaugural faculty of the Army School of the Line, currently reforming at Fort Leavenworth, Kansas. Thus, instead of assessing these critical lessons of the war on a board in France, McNair would teach these lessons at the Leavenworth schools. He also helped incorporate them into the Army's new doctrine as it sought to develop the means to conduct combined arms warfare – the essence of modern warfare and the means to break the defensive deadlock of the trenches of WWI.[74]

**Reestablishing the Leavenworth Schools.**

As the Army returned home from France in 1919 and closed the staff college at Langres, it formed the School of the Line and the General Service School at Ft. Leavenworth as first- and second-year programs to reestablish the pre-war Leavenworth staff schools. Like its pre-war predecessor, the General Service School concentrated on division, corps, and army-level operations while leaving matters of regiment-level and below to other Army schools. The school relied on a small but hand-selected inaugural faculty chosen from among the AEF's top officers. McNair, having returned after the war to his permanent rank of major, served as a member of the General Service School's faculty of thirty-four officers, whose contributions influenced the army far out of proportion to its size. The members of this faculty established the foundation for an educational system that remained in place throughout the interwar period, building on the preexisting curriculum from Langres to develop an updated yearlong course for a new generation of general staff officers. Their role proved so important that the War Department sent a team from the Inspector General's office in 1920 to evaluate the faculty's performance. The inspection

[74] Peter J. Schifferle, *America's School for War: Fort Leavenworth, Officer Education, and Victory in World War II* (Lawrence, KS: University Press of Kansas, 2010), 38, 87.

team singled McNair out for particular praise after their inspection.[75] Several members of this inaugural faculty, McNair included, eventually earned permanent promotion to general officer rank, and returned to Fort Leavenworth later in their careers to serve as commandant of the Leavenworth schools.[76]

In addition to their influence on the Army's education system, the post-war General Service School faculty carried on the tradition of Leavenworth's involvement in the writing of various doctrinal manuals, including the *Field Service Regulations (FSR)*, building on the foundation provided by the AEF Board findings to write the 1923 *FSR*. This updated manual incorporated the lessons of World War I while addressing changes in military technology since the preparation of the 1905 version, and it became the "authoritative basis for the instruction of the combined arms for war service."[77]

While the 1923 *Field Service Regulations* represented a comprehensive update to pre-World War I large-unit tactical doctrine, the key lesson the Army drew from its experience of open warfare was the conviction that the fundamental characteristics of war had not changed. The innovative spirit represented by motorization, mechanization, and efforts to incorporate new military technologies remained focused on finding ways to fight more effectively according to traditional methods. The infantry, while increasingly viewed as a member of the combined arms

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[75] "Estimate of Efficiency of Officers above Grade of Captain at the General Service Schools, Fort Leavenworth, Kansas," May 22, 1920, McNair Papers, National Archives and Records Administration, St. Louis, MO. The assessment of McNair reads, "This officer is in robust health, has an excellent military bearing and dresses well. In my judgment he has force, energy, tact and capacity combined with a good military education insofar as it relates to his own branch of the service. His general military education needs further development. He has a good organizing ability and excellent judgment. As an instructor he is clear and forceful. He is intensely loyal to his work. As a general estimate he should be classed above the average."

[76] ———, *America's School for War*, 15, 32, 161. As Schifferle demonstrates, "The influence of the immediate post-World War I faculty cannot be overestimated. Officers in this group established a system of education, the subjects taught, and the methods of instruction and wrote many of the manuals and texts that would stay in use until national mobilization in 1940." See ibid., 93.

[77] "Annual Report of the G3, 1923-1924," quoted in Odom, *After the Trenches*, 36.

team, remained the primary means to execute an offensive doctrine emphasizing maneuver, firepower and the human element. It is illustrative that the 1923 *Field Service Regulations* was the first version to contain general principles of war – the "immutable" principles of the scientific, Jominian tradition of military theory.[78]

However, while officers at Leavenworth and the War Department embraced the immutability of certain general principles of war, they distinguished between war – a general term for the phenomenon as a whole – and the practice of specific forms of warfare. They discounted European methods of warfare as inadequate and developed a comprehensive doctrine based on American military tradition and experience. Military theory – often thought of as the sole province of European intellectuals – influenced the Army's post-war revision of both its doctrine and its educational system. A small group of the Army's most influential officers, including Major McNair, guided the Army's interwar transformation process in keeping with the fundamental principles of war – principles they believed the AEF had validated on the battlefields of France, while seeking to understand the evolution of warfare with the advent of new technology and fighting methods. Therefore, American military thinkers like McNair sought ways to employ new military technology and doctrine or maximize organizational efficiency in an effort to develop new war fighting methods, rather than merely update existing methods so that they could fight a future war in fundamentally the same manner in which they had fought the last one.[79]

However, not all officers involved in the post-war discourse saw these matters the same way. Three schools of thought emerged after the war, each arguing for a different interpretation

[78] Ibid., 37-38.

[79] For example, see Lesley J. McNair, "Artillery Firing: Lectures to the Staff and Line Classes, General Services Schools, Fort Leavenworth, Kansas," October 1919, Combined Arms Research Library, Fort Leavenworth, Kansas, Curricular Files, Box #10, 1917-1920.

of its lessons. Traditionalists adhered to Pershing's view that highly mobile infantry relying on the rifle and bayonet would win America's future wars. Firepower advocates, led by Major General Summerall, argued that successful attacks depended upon the use of overwhelming firepower to destroy enemy defenses before the infantry advanced. Finally, a small group advocated a combined arms approach in which infantry would possess a great deal of mobile firepower, including automatic rifles, machine guns, grenades, mortars, 37mm guns, and mobile howitzers; some officers even foresaw the need to develop a capability to provide instantaneous support with heavier weapons. The combined arms approach emerged as the predominant view in the immediate post-war period, and the 1923 *FSR* formally indoctrinated it. McNair, perhaps due to his general staff experience, emerged as one of its most vocal advocates. Thus, the appearance of principles of war in the 1923 *FSR* do not support the interpretation of a stagnant post-war U.S. Army doctrine focused on the trench warfare of the World War.[80]

During the first seventeen years of McNair's early career, he learned how to manage an artillery battery in rough terrain, how to lead men in arduous circumstances, and how to conduct sustained offensive operations on foreign soil. His World War I experience of the theory and reality of open warfare fixed these early military experiences and the American traditions they represented in McNair's mind. A 1921 article he wrote for *The Field Artillery Journal* reveals his early struggle to reconcile the realities of the modern battlefield with the traditional methods that remained at the core of Army doctrine. In this article, entitled "Infantry Batteries and Accompanying Guns," McNair described the need for mobile artillery to accompany the infantry on the attack to enable them to overcome enemy strong points and support weapons that survived the initial bombardment. The article emphasized themes that recurred throughout McNair's

[80] Grotelueschen, *The AEF Way of War*, 356-64; John. B. Wilson, *Maneuver and Firepower: The Evolution of Divisions and Separate Brigades*, Army Lineage Series, ed. Jeffrey J. Clarke (Washington, DC: United States Army Center for Military History, 1998), 130-201; Odom, *After the Trenches*, 48-50.

interwar service, such as balancing the relative benefits of supporting versus attached artillery (i.e. "pooling" of assets versus assigning them directly to subordinate units), proper command structures and appropriate missions for supporting arms, and the need for combined training in common core tasks. McNair closed the article by reiterating this latter theme: "the full effectiveness of infantry batteries and accompanying guns cannot be developed merely through a high state of individual knowledge and training on the part of the infantry and artillery; a team-play is necessary which can be attained only by the two arms actually working together. This combined training should be acquired in the training area rather than on the battlefield."[81]

For the remainder of his career, these ideas guided McNair's efforts to organize and train the army for its next great test in the cauldron of battle. This was true despite the fact that the combined arms view remained unpopular among many officers, some of whom placed the perceived welfare of their branch over that of the Army as a whole. With primacy came priority – for funding, new equipment, and specialized training.[82] While an artilleryman at heart, McNair demonstrated early in his career that he would fight for the strength of the combined arms approach, even if this led him to strive for efficiencies through techniques like streamlining and pooling. Many of his peers vehemently resisted such concepts, often protesting the loss of control this would mean over assets like division artillery or other tactical-level organic units. Nevertheless, McNair's extensive experience led to the conviction that modern warfare required

[81] Lesley J. McNair, "Infantry Batteries and Accompanying Guns," *Field Artillery Journal* XI, no. 2 (March-April 1921).

[82] For one example of a highly critical but well-written narrative describing the debilitating branch bias that hindered combined-arms thinking in doctrine and practice, see Johnson, *Fast Tanks and Heavy Bombers*. By contrast, McNair's efforts at the field artillery center to maximize the effectiveness of the artillery as a member of the combined arms team – despite the protests of asset control-motivated field artillery traditionalists – earned him commendations from both the Director of The General Staff School's extension courses and the Field Artillery School Commandant. See Russell P. Reeder to The Adjutant General, "Report on Visit to the School of Fire at Ft. Sill," 27 Feb 30, McNair Papers, National Archives at St. Louis, MO; William M. Cruikshank to The Adjutant General, "Annual Report of Commandant Wm M Cruikshank, Brig Gen," 19 Jun 33, McNair Papers, National Archives at St. Louis, MO.

combined arms fighting methods, and he doggedly fought to instill this mindset throughout the Army.

McNair served with distinction for almost three years prior to and during World War I under the close supervision of John "Black Jack" Pershing, one of America's most enigmatic and demanding generals. McNair learned a great deal from his mentor. He exhibited the traits General Pershing required of a successful Army officer, and Pershing's leadership left its mark on McNair as well. Pershing demonstrated his approval by personally decorating McNair after the war with the Distinguished Service Medal, in recognition of his outstanding accomplishments as the AEF's chief of artillery training.[83] Shortly thereafter, with Pershing looking on, Marshal Henri Petain presented McNair with the award of Officer of the Legion of Honor.[84]

Upon his return from France, McNair reverted to his permanent rank of major – but unlike many who served with the AEF, he remained an up and comer among the Army's officer corps, beginning his postwar service in the key position of instructor at the Army School of the Line.[85] Here McNair found himself at the forefront of what modern commentators refer to as the interwar mechanization process. His experience in France convinced him of the benefit of close infantry-artillery coordination, leading McNair to view innovation as a means to improve combined arms fighting methods, rather than a rationale for providing priority funding to a particular branch.

McNair's next assignment further broadened his already far-ranging base of experience. Building on several defining aspects of his career history to date, including his artillery expertise,

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[83] Adjutant General of the American Expeditionary Force, "Distinguished Service Medal," 12 March 1919, McNair Papers, National Archives and Records Administration, St. Louis, MO.

[84] Philippe Petain, "The National Order of the Legion of Honor," April 4, 1919, McNair Papers, National Archives and Records Administration, St. Louis, MO.

[85] Kahn, *McNair, Educator of an Army*, 11; Kleber, "McNair," 696.

combat experience, general staff service, and innovative spirit, McNair found himself serving once again on a general staff, but in a very different capacity than in the past. He also soon assumed duty as president of a board testing the capability of several types of military equipment, immersing him in an intense and growing debate that proved central to the Army's modernization efforts. As this next assignment demonstrates, McNair had established by 1920 a reputation as an officer who could handle a wide variety of tasks and a high level of responsibility, while maintaining remarkable objectivity – a set of capabilities that grew both increasingly essential and uncommon within the Army over the coming years.

## CHAPTER FOUR

## McNair, War Planner

### The "McNair Board"

Major McNair departed Fort Leavenworth in December 1920, and arrived in Hawaii after a brief period of leave on 13 February 1921.[86] Like all his peers who missed the opportunity to attend the Leavenworth Schools due to the World War, but later served as instructors there, McNair also departed with credit for graduating, in accordance with General Orders No. 74, which ensured his inclusion on the Initial General Staff Eligible List.[87] When McNair reported for duty, Major General Charles P. Summerall, the Hawaiian Department commander, chose to use him in just this capacity, appointing him to serve as his Assistant Chief of Staff for Operations (ACofS, G3).[88]

After spending the previous twenty years as a company-grade leader, a staff officer responsible for training, or a faculty member at an Army educational institution, McNair possessed no experience as an operations officer or war planner. Nevertheless, he applied the same dedication and energy to this new role as he had to his previous positions, and as always he performed with distinction. Summerall soon entrusted him with a great deal of responsibility,

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[86] E. E. Booth, "Efficiency Report," December 31, 1920, McNair Papers, National Archives at St. Louis, MO; Adjutant General, "Memo in Lieu of Efficiency Report: Travel Status January 1 to February 12, 1921," January 25, 1922, McNair Papers, National Archives at St. Louis, MO.

[87] War Department, "General Orders, No. 74, Initial General Staff Eligible List," December 16, 1920, McNair Papers, National Archives at St. Louis, MO.

[88] Timothy K. Nenninger, ed. *The Way of Duty, Honor, Country: The Memoir of General Charles Pelot Summerall* (Lexington: The University Press of Kentucky,2010), 178-84; William Chamberlaine, "Efficiency Report," June 30, 1921, McNair Papers, National Archives at St. Louis, MO; Summerall, a fellow artillery officer and a division and corps commander in World War I would have remembered McNair from his work on the AEF staff, including unit visits to investigate artillery training. See, for example, Lesley J. McNair to H. B. Fiske, "Visit of Colonel McNair to 37th, 2nd, 1st and 89th Divisions," August 16, 1918, National Archives and Record Administration, College Park, MD, RG 120, Entry 11, Box 1394, G5 Files.

directing him to lead the development of a joint defense plan to counter an attack of Oahu by the naval and air forces of Japan, the nation that currently represented the United States' chief strategic concern. This represented a significant change in perspective and increase in responsibility for McNair, but as in the past, he welcomed the challenge and exceeded all of Summerall's expectations.[89]

McNair approached this daunting task with his usual determination and energy, despite the many challenges that stemmed from the Army's longstanding and heated debates regarding the capabilities of coast artillery and aviation in defending against an attack from the sea. Summerall placed great trust in McNair by assigning him to lead this effort. Both the U.S. and Japan had signed the Five-Party Treaty in 1922, which prohibited fortification of military bases in the Pacific. While America abided by the terms of the treaty, U.S. political and military leaders suspected Japan of secretly fortifying its Pacific military bases in violation of the treaty. Even when the treaty lapsed in 1930, Congress lacked the funds to invest in fortifications in the Pacific. Therefore, from 1922 until the late 1930s U.S. forces relied on the Coast Artillery Corps, along with Army and Navy aviation, to support the ground forces' efforts to defend Oahu against what many believed to be an imminent Japanese attack. Japan presented the major strategic threat to the U.S. in the Pacific, and Navy leaders in particular remained convinced they "would

[89] "Senior Field Artilleryman," *The Field Artillery Journal* 32, no. 12 (December 1942); Kleber, "McNair," 696; Schifferle, *America's School for War*, 92-96. McNair did not serve in the artillery section of the AEF; rather, he served as the senior artillery officer in the G5, training section. See H.B. Fiske to AEF Statistical Section, Memorandum, "Personnel and Allotment of Duties in Fifth Section, General Staff," August 23, 1918, National Archives and Records Administration, College Park, MD, RG 120, Entry 11, Box 1363 - G5 Files. Summerall had good reason to entrust McNair with the presidency of the McNair Board and the responsibility of updating the plan for the defense of Oahu, given the special mention of McNair in an Inspector General's report from the previous month. See Eli A. Helmick to The Adjutant General, "Extract from Report of an Inspection of the Hawaiian Department," 9 Apr 23, McNair Files, National Archives, St. Louis, MO. The extract reads, "Major McNair impressed me as being an exceptionally able man and performing the duties of his office in an able manner."

sooner or later fight Japan," leading them to develop and continually update war plan Orange throughout the interwar period.[90]

Major McNair began the project of updating the Oahu defense plan by presiding over a board consisting of himself, two officers from the Coast Artillery Corps, and one officer from the Air Service. This board (aptly named the "McNair Board") convened to "investigate, consider and report on the powers, limitations and combined training of the Coast Artillery Corps and Air Service in coast defense" as directed by the War Department in a letter dated April 21, 1923. The War Department directed the board to submit its findings by December 1923 to help resolve the growing debate both within the military and among national political leaders over the potential of coast artillery, antiaircraft artillery, and aerial bombers to defend coastal areas against attacks from the sea and air. The McNair Board began its investigation in May 1923 by collecting all available data on coast artillery and aviation capabilities, eventually citing nine references in "Inclosure 1" of the final report. The board then developed and evaluated a detailed test methodology, enlisting the support of units based on Oahu to optimize the methodology and then conduct the actual tests. The board sought both to confirm existing data from the previous tests cited in the report, and to collect additional data to support or deny the conclusions resulting from previous studies.[91]

The board, relying largely on the support of volunteer aircrews and coast artillery personnel, performed two types of tests. The Air Service conducted airplane bombing tests "to determine the accuracy of airplane bombing as a function of altitude and to investigate the

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[90] Henry G. Gole, *The Road to Rainbow: Army Planning for Global War, 1934-1940* (Annapolis: Naval Institute Press, 2003), 8-13; Edward S. Miller, *War Plan Orange: The U.S. Strategy to Defeat Japan, 1897-1945* (Annapolis: Naval Institute Press, 1991), 1-8.

[91] Lesley J. McNair, "McNair Board: Report of a Board of Officers Convened by Special Orders No. 120, Hawaiian Department, May 22, 1923 on Powers and Limitation of Coast Artillery and Air Service," February 11, 1924, National Archives and Records Administration, College Park, MD, RG 395, Entry , 6051, Box 1, 1-6.

subject generally," while the Coast Artillery evaluated "anti-aircraft firing to determine the accuracy of anti-aircraft firing as a function of the altitude of the target.[92] Despite the seemingly distinct nature of the two types of tests overseen by the board, they did not suffer the ill effects of branch bias and lack of cooperation often associated with the postwar period, when the Army found itself short on funds and therefore rarely in agreement about weapons development programs. On the contrary, the board made every effort to not only develop and describe in the report sound methods for conducting bombing and firing tests and calculating the accuracy of fire, but also to eliminate error and bias from the tests. As the board report attests, "In addition to the regular bombing crew, pilot, reserve pilot and bomber, each plane carried a Coast Artillery officer who observed and recorded the time of release of each bomb, the altitude by altimeter, the azimuth of the plane by ship's compass at the instant of the release and the approximate position of the point of impact of the bomb." Further, the on-board observer fired a Very pistol at the moment of release to notify ground observers, who observed the point of impact using standard Coast Artillery azimuth instruments manned by trained observers, both on the ground, and on board the tug or bomber towing the target.[93]

Further, the board made every feasible effort to minimize error, using not only multiple trained observers and the latest observation equipment, but also conducting lengthy preparatory training to standardize bombing methods and improve the proficiency of the four bomber crews that flew the actual test missions. The board recorded the bombing results for each crew separately to enable identification of variations in test results resulting from differences in aircrew skill. This enabled the board to minimize erroneous interpretations in the test results.

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[92] Ibid., 2.

[93] Ibid., 2-6. The board report named every individual who supported the tests, and made particular note of the impartiality, objectivity, and cooperation of the members of the various arms and services involved. See "Acknowledgements," 26-30.

Further, the test participants met regularly to discuss ways to standardize and optimize testing methods, and spent considerable time experimenting with various procedures before beginning the actual tests. This careful preparation resulted in thorough standardization of test equipment and parameters. Factors standardized by the test participants included altitude, airspeed, and procedures for bomb drops, the models of aircraft and bombing sights used, target towing cable lengths, and target types and colors. The board identified challenges associated with the use of dummy bombs, and developed procedures to minimize error caused by their unique characteristics. Finally, participants developed improved maintenance procedures to optimize the performance of bombing mechanisms, and considered the effect of meteorological data and other variables that could influence test results. [94]

Given the care and diligent effort the board committed to the tests, McNair demonstrated admirable objectivity when he wrote in the final report dated February 11, 1924. He closed the report with a tentative conclusion and a call for further analysis: “While it is by no means contended that the tests were exhaustive, they were nevertheless as thorough as possible with the time and means available, and it is believed that the results are a useful contribution in the solution of the problems involved.” In fact, the board report stated the methods developed and preparations undertaken would “prove of continuing usefulness in carrying out similar investigations and more particularly in the training of bombardment aviation and anti-aircraft artillery.” General Summerall clearly agreed with this assessment, writing a letter of commendation that he sent to McNair and the other members of the board, and included in their annual efficiency reports.[95]

[94] Ibid., 2-27.

[95] Ibid., 2-31; Charles P. Summerall to Lesley J. McNair, Letter of Commendation, March 8, 1924, McNair Papers, National Archives at St. Louis, MO. Summerall wrote: "The proceedings show

The McNair board report supported its findings with extremely detailed descriptions of the methods used, the preparations made, and the recorded results of the various tests. After describing the test procedures and data analysis methodology employed, the board report summarized its overall conclusions, which it supported with twelve inclosures totaling ninety-two pages of detailed tables and charts. These enclosures contained the results of each individual bombing run or antiaircraft artillery target engagement, collective results depicted as scatter plots reflecting spherical probability analysis, and detailed descriptions of the equipment used and the mathematics performed to calculate the results. A particularly interesting chart depicted the relative anticipated distances of artillery and aircraft to the various types of ships based on their anticipated deployment in a possible enemy naval assault.[96]

Overall, the board came to very positive conclusions, stating, “The major caliber coast gun is effective and essential against naval targets. Against large targets it is more accurate than the bomber, except beyond ranges of about 25,000 to 30,000 yards.” Further, “The bomber is a powerful means of attacking naval targets at relatively great distances from the coast. Its methods are simple and direct.” However, “Its effectiveness may be impaired by weather conditions and visibility. It is vulnerable to hostile aviation and anti-aircraft agencies; hence it lacks the solidity and dependability of the seacoast gun.” Finally, “The anti-aircraft artillery on land is a thoroughly effective means of defense against the bomber, provided it is available in adequate quantity and that searchlights and listening apparatus are capable of detecting and illuminating the target.” Clearly, the board not only made every effort to include representatives

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thoroughness of study and originality of investigation and an amount of labor tht are worthy of the highest commendation."

[96] McNair, "McNair Board on Coast Artillery and Air Service," See, in particular, Inclosure 8.

from all the affected combat arms in the tests, but also sought to provide a fair and even-handed analysis of the results.[97]

The board also highlighted several observations secondary to the overall results, but useful in considering future efforts to improve the effectiveness of the various means of defense tested. The report pointed out the relative survivability advantage of mobile over fixed coast artillery pieces, and identified the need to develop antiaircraft guns capable of engaging bombers at their maximum bombing altitudes using timed fuse rounds with large burst radii. Significantly, some of the board's most useful insights came from the air service crews who flew the test missions. These included identification of imperfections in bomb release mechanisms and the accuracy of bombsights, supporting the finding that aerial bombing was "an art to a great extent; the perfection of instruments of precision which will render it less dependent on the personal element should be pushed."[98]

As mentioned above, General Summerall commended the board members for their diligent efforts and outstanding results. Furthermore, he endorsed the board report on March 12, 1924, pointing out some of the McNair Board's more enlightening and significant findings. In particular, Summerall pointed out that the results demonstrated significantly better performance of aerial bombing in these tests as compared to the findings reported by Lieutenant Commander Grow, U.S. Navy, in 1923. In Grow's report, which appeared in the *U.S. Naval Institute Proceedings* in December 1923, bombing attacks from 11,000 feet achieved only a fifteen percent rate of hits, while bombing attacks from 3,000 feet achieved a slightly better nineteen percent rate of hits. Using a target similar in size, aircrews flying McNair board missions achieved significantly higher hit percentages, achieving an average hit rate against moving and

[97] Ibid., 27.
[98] Ibid.

stationary targets of sixty-five and one-half percent at 3,000 feet, and twenty-eight percent at 11,000 feet.[99]

Nevertheless, the unbiased and comprehensive findings of the McNair Board rarely appear in the historical record. In what appears to be the only recent work that mentions the McNair Board, the author, David E. Johnson, badly misrepresented its findings. In his highly critical assessment of the U.S. Army's post-World War modernization efforts, *Fast Tanks and Heavy Bombers*, Johnson distilled the lengthy and balanced conclusions provided in the McNair Board report into a few short phrases, making it appear the biased effort of a field artilleryman to demonstrate the coast artillery's superiority over aviation. Johnson wrote:

> In May 1923 the Hawaiian Department convened a board to examine 'the powers and limitations of Coast Artillery and Air Service.' Major Lesley J. McNair, himself an artilleryman, headed the board, which determined that the coast artillery provided a better defense against enemy naval forces than aviation, because air power is often "impaired by weather conditions and visibility' and 'is vulnerable to hostile aviation and anti-aircraft agencies.' McNair concluded that air power 'lacks the solidity and dependability of the seacoast gun.'[100]

In his sparse summary of the McNair Board's efforts, Johnson neglected to mention any details of the board's composition or methodology. He also drastically oversimplified the board's conclusions, selectively quoting only this small fraction of the report that mentions the areas in

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[99] Ibid., 31. Despite the thoroughness of the test methodology and execution, the McNair board's findings soon drew criticism, particularly from the Air Service (see below). One cannot help but note the irony in this criticism when one compares the diligence of the McNair Board to Grow's haphazard and clearly biased report on bombing tests against the battleships *Virginia* and *New Jersey*, conducted the previous year. In his report, Grow neglects to report on pre-test preparations, does not describe the methodology used for conduct of the tests or analysis of the results, and even makes unsubstantiated claims like "no conclusions could be drawn of a comparative nature. It may have been that bombers did not desire to hit the targets or to sink them at once, since it could have easily been done under existing conditions." See H. B. Grow, "Bombing Tests on the 'Virginia' and 'New Jersey'," *U.S. Naval Institute Proceedings* 51/11/250 (December, 1923).

[100] Johnson, *Fast Tanks and Heavy Bombers*, 101. Johnson may have simply failed to do adequate research to recount the McNair Board's activities and findings accurately, since he cites a report entitled "The McNair Board and the Auxiliary Reports, Data and Correspondence, Part I, The McNair Report, the Panama Canal Report," located at the U.S. Air Force Historical Research Agency (USAFHRA). This report may have contained only selected passages of the actual board report, although Johnson certainly could have researched the board's efforts more carefully, since in other sections of the book Johnson cites records from the National Archives and Records Administration at College Park, Maryland, where the full board report is located.

which coast artillery enjoyed advantages over aviation, while neglecting to mention those that discussed aviation's unique capabilities and advantages over the coast artillery. He also failed to point out the significantly better performance of aerial bombers the McNair Board reported compared to Grow's analysis of previous tests.

Johnson also provided a similarly flawed summary of the impact of the McNair board. He merely mentioned the reaction of Major General Mason W. Patrick, chief of the Air Service, to the McNair Board's findings, claiming Patrick "was incensed at the assertion that bombers were highly vulnerable to anti-aircraft fire and that the coast artillery was a better naval defense agency than the Air Service." Johnson argued Patrick came to the conclusion that, "the coast artillery, whose existence was jeopardized by the advent of the airplane, was trying to reassert its primacy in coast defense and perhaps even carve out a new niche as an anti-aircraft force." Johnson did not even mention the inclusion of anti-aircraft artillery in the test, which would have demonstrated the inaccuracy of the previous claim. Johnson concluded, "The McNair Board had little impact because the War Department supported Patrick's assertion "that the development of aviation has rendered 'the continued maintenance of the majority of our Coast Artillery installations uneconomical.'" As the following events show, the McNair Board not only had significant impact – both within the Hawaiian Department and at the highest levels of the government – it also served the very specific purpose of supporting an updated plan of defense of Oahu – none of which Johnson mentioned in his account.[101]

**The Oahu Defense Plan of 1924**

The McNair Board's findings contributed directly to the other major project McNair completed as the G3 of the Hawaiian Department in 1924. The War Department sent guidance to

[101] Ibid.

Summerall between January 1920 and September 1923 to revise defensive projects and plans, and in particular to reassess the Army's role in the defense of Oahu, in support of the updating of the overall War Department Mobilization Plan. In response to this guidance, Summerall directed McNair to update the defense plans for Hawaii, and in particular for the island of Oahu. McNair accomplished this through a detailed staff study titled "Basic Project for the Defense of Oahu," which McNair completed shortly after the McNair Board report, and Summerall approved on February 9, 1924. Part I of the plan consisted of a detailed, forty-three page "Estimate of the Situation," beginning with the following mission statement: "The mission of the Hawaiian Department in a Red-Orange situation is to protect the naval base at Pearl Harbor against naval and aerial bombardment, against enemy sympathizers, and against hostile expeditionary forces, supported or unsupported by a hostile fleet."[102]

The estimate rested on the assumption that Orange (Japan) might pursue one of two possible courses of action in a future war that would affect the Hawaiian Department: "a. Naval action in the Pacific primarily, with only incidental military operations, referred to hereafter as the naval plan." and "b. Military and naval action, referred to hereafter as the military plan." The enemy estimate also anticipated two possible strategic approaches by Orange. If Orange executed the naval plan, it would seek to "eject Blue completely from the Pacific and to close the Pacific ports of Blue. The plan doubtless would contemplate the reduction of the Philippines, Guam, and Oahu. Oahu would be needed by Orange as a naval base." By contrast, the military plan would involve an attack directly against the continental United States, either through Canada or over the western U.S. coast. In either of these "military plan" scenarios, the planners assumed Orange would "be inclined to ignore the Blue forces on Oahu, at least initially." The

[102] Lesley J. McNair, "Basic Project for the Defense of Oahu," February 9, 1924, National Archives and Records Administration, College Park, MD, RG 337, Entry 58, Box 1, 1-43.

planners assessed the military plan would exert the greater pressure on Blue, but "Orange, however, for political, economic or other reasons, might be unwilling to assume so great a burden and decide to adopt the naval plan."[103]

Those familiar with the Rainbow Plans or Plan Orange would probably not find anything atypical about the analysis contained in the 1924 Basic Project for the Defense of Oahu. The estimate of the situation thoroughly evaluates likely enemy and friendly courses of action, to include the plans of action for the various Blue (U.S.) forces in response to the various possible actions of Orange. The estimate shows surprising prescience in its predictions given the early date of its preparation, and correctly assesses that Orange would benefit more from occupying than destroying the military facilities on Oahu. However, for the purposes of this analysis, the most striking characteristic is the fact that Lesley McNair, usually known for his skill in mobilizing, organizing, and training ground troops, led this joint planning effort. Further, he considered thoroughly the wide range of possible enemy and friendly actions, and the many factors like terrain, enemy sympathizers, and possible imposition of martial law involved. Finally, he based the plan not only on detailed staff work, but also on exercises conducted between 1921 and 1923 that augmented and tested against reality the findings of the staff analysis, and on the results of the McNair Board.

McNair's basic plan described a defense of Hawaii relying on 94,000 ground troops, reinforced by additional airplanes and coast artillery, and prepared to enforce martial law and employ poison gas to repel Japanese invasion.[104] However, it also included a number of branch plans and additional considerations, depending on possible variations such as whether the Army would impose martial law, how many reinforcements would arrive in Hawaii and how quickly

[103] Ibid., 1.

[104] Ibid., 1-43 plus annexes. Only one known secondary source mentions McNair's involvement in this planning, and even this source provides very little detail. See Coffman, *The Regulars*, 356-57.

they could deploy, and the location of the majority of America's naval forces at the onset of Orange aggression. As stated in the G-3 Appendix to the plan, signed by General Summerall in February 1924, "The plans of action governing the several basic war plans are set forth in the Basic Project in a more comprehensive and coordinated form than has existed heretofore.[105] Attesting to the high quality of the staff work and exercises supporting McNair's plan, Army Chief of Staff General John J. Pershing approved it with only slight modification in August 1924.[106]

While McNair overcame significant difficulties to develop a feasible and realistic plan of defense, this brief foray into war planning stands in stark contrast to the majority of postings he held over the course of his long career. It also serves to demonstrate the intense and divisive nature of branch and service rivalry that had emerged in just five years since the World War ended. Soon after McNair left Hawaii for his new assignment to work with the Reserve Officer's Training Corps (ROTC), the results of the McNair Board and the issues it studied soon came under scrutiny at the national level. The McNair Board report drew significant criticism, particularly from members of the Air Service. This criticism, exemplified by the findings of the 1925 "President's Aircraft Board," did not bode well for future interservice cooperation as leaders like McNair found their efforts to conduct objective analyses questioned by biased observers.

**The President's Aircraft Board of 1925**

The publication of The McNair Board Report and the updated Plan for the Defense of Oahu marked the apogee of McNair's assignment in Hawaii. His tour of duty there ended

[105] McNair, "Basic Project for the Defense of Oahu, 1924," G-3 Appendix, 1.

[106] Ibid., endorsement by John J. Pershing, General of the Armies, Chief of Staff, in plan front matter.

officially on 11 February 1924, when he took several months of leave before reporting for duty on 30 June 1924 as the Professor of Military Science and Tactics (PMS&T) for Purdue University's Reserve Officer Training Course (ROTC). However, this change of duty did not mark an end to McNair's involvement with the board he presided over in Hawaii or the reaction the McNair Board Report prompted among various military and political leaders. Instead, his efforts as Summerall's G3 soon gained national attention, particularly concerning the ongoing debates regarding the role and capabilities of aviation in the military service. Before shifting focus to McNair's service in the Purdue ROTC program, it seems appropriate to finish the current story by recounting the national-level events that took place in 1925, largely in reaction to McNair's war planning efforts in Hawaii, and which affected him directly in a high-profile event near the end of the year.[107]

The War Department convened a "Special Naval Board" in early 1925 "to report to the president on the development of aviation." This board relied for documentary evidence primarily on the McNair Board report of 1924, since this report contained the results of the most recent and diligently conducted tests on the subject. The Chief of the Air Service, Major General Mason W. Patrick, wrote to the Adjutant General on February 12, 1925, to comment on the McNair Board's findings. General Patrick noted that the Chief of Coast Artillery, Major General Frank W. Coe,

[107] W. F. Hase, "Efficiency Report," 11 February 1924, McNair Papers, National Archives and Records Administration, St. Louis, MO; Charles P. Summerall, "Letter of Commendation for Efficiency Report, 11 February 1924," McNair Papers, National Archives and Records Administration, St. Louis, MO. In his letter of commendation, Summerall also made note of McNair's exemplary work establishing policies and overseeing the administration of the G-3 Section: "An even more difficult task devolved to you in studying the war plans of this Department and in preparing the Basic Project for the Employment of the Troops." In order to complete the revision required by the War Department, you have prolonged your service in the Department and you have labored unceasingly to complete the task before your departure. The Basic Project for the Defense of Oahu which you have submitted gives evidence of thorough study, masterly reasoning, and skillful knowledge of the mission of the command the of the best means to accomplish it. It is a fitting culmination of your service with the command and will remain to reflect credit upon your administration of the G-3 Section."

made the following assertion in his annual report of September 8, 1924: “the bomber is outmatched by the anti-aircraft artillery at all altitudes which can now be reached by service bombers, provided that the target can be seen (Par.58).” Patrick pointed out that to support this assertion, Coe quoted the following passage from the McNair Board report: “The anti-aircraft artillery on land is a thoroughly effective means of defense against the bomber, provided it is available in adequate quantity and that searchlights and listening apparatus are capable of detecting and illuminating the target (Par.63 a).[108]

Patrick stated in his letter to the Adjutant General that he and Coe attended a meeting called by the War Department Assistant Chief of Staff for Operations (ACofS, G3) “for the purpose of coordinating the War Department testimony to be given before the Special Naval Board.” Patrick stated that at this meeting, he pointed out “certain obvious errors in the calculations of the McNair Board which, when corrected, practically nullified the value of the board’s conclusions.” According to Patrick, when he made this observation,

> General Coe admitted certain of the facts presented and I [Patrick] naturally assumed that no further reference would be made . . . to a document which presented conclusions based on calculations of such obvious inaccuracy. I therefore refrained from submitting the report to the War Department . . . believing that the necessity thereafter had ceased to exist.[109]

Patrick went on to state that despite his assumption to the contrary, it seemed “considerable credence is still given to the conclusions of the McNair Board,” and provided a number of somewhat technical criticisms of the McNair Board’s methods and assumptions that he believed led to significant mathematical inaccuracies in the evaluation of the data collected by the board.

To support his criticisms, Patrick referred to the findings of an “expert technician” in the Ordnance Department named Dr. Loring, who conducted a purely mathematical assessment of

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[108] "AG 353; Chief of Air Service to the Adjutant General," February 12, 1925, National Archives and Records Administration, College Park, MD, RG 337, Entry 58, Box 5, File 321-Aviation, 2; McNair, "McNair Board on Coast Artillery and Air Service," 27.

[109] "AG 353; Chief of Air Service to the Adjutant General," 2.

the McNair Board data without considering the "fundamentally erroneous assumptions" that, according to Patrick, led the board to false conclusions. Patrick listed six "corrections" provided by Dr. Loring (listed as "b." through "g."). In the first three "corrections" that Patrick quoted from Loring's report ("b." through "d."), Loring found that the board: "endeavored faithfully and impartially" in its conduct of an extended test to answer the War Department's questions; gave unanimous support to the findings reported; and revealed no indications of bias or unfairness against any arm of the service. In the next two ("e." and "f."), Loring found that the results obtained by both the Air Service and the Antiaircraft Artillery "were not the best that could be expected with the latest equipment." In his final point ("g."), Loring found that "the report of the McNair Board may not do full justice to the possibilities either of the Air Service or of the Antiaircraft Artillery," although he did not believe this resulted from any unfairness to one service in favor of the other.[110]

Upon receipt of this letter from Major General Patrick, the War Department forwarded it to the Office of the Chief of the Coast Artillery, Major General Coe, for comment. One interesting difference in Coe's response is that unlike Patrick's, it included point "a." from Dr. Loring's assessment of the McNair Board report: "a. That the board was made up of representatives of several branches of the Service and included an Air Service Officer." One cannot help but wonder why the Chief of Air Service left this particular point out of his reference to Dr. Loring's assessment. In fact, since Loring only looked at the data and not the detailed description of the methodology and assumptions supporting the analysis of that data, his observations do not account for two key facts. He could not have known that, in addition to the one Air Service officer who served as a member of the board, four aircrews volunteered many hours of their time training for and perfecting the methods of the tests before they actually

[110] Ibid., 5.

measured any data. Further, he did not know that all the test participants met frequently to refine test methods and assess training progress before conducting the tests. Therefore, many members of the Air Service participated in the process, benefiting from the preparatory training both in individual flying and bombing skills and as a service in developing updated bombing techniques and maintenance procedures. Most significantly, these aircrews' long-term participation in this collaborative process gave them many opportunities to voice objections to the methods or assumptions guiding the tests, had they desired to do so.[111]

Regardless, after quoting all seven of Loring's "corrections" to the McNair Board report, Coe argued, "the report of the McNair Board is entitled to weight as the impartial and dispassionate conclusions of a diligent and able board of officers and that quotations from this report when so described are entitled to weight as the best information now available." Finally, Coe concluded that while they represented the best findings currently available, the McNair Board's conclusions should not serve as "the approved conclusions of the War Department." Thus, the adjutant general made the following assessment, approved by the Secretary of War, of the input provided by Majors General Patrick and Coe: "Matters of controversy have not yet been decided by the War Department."[112]

In September 1925, President Calvin Coolidge ordered Curtis D. Wilbur, Secretary of the Navy, and Dwight D. Davis, Acting Secretary of War, to appoint a group of retired military officers, judges, and congressional representatives to form the "President's Aircraft Board." This came as a response to the ongoing and increasingly heated military debate regarding air power, combined with speculation in the popular media concerning the capabilities of the Air Service in defense of America against foreign attack. A handwritten note on the front cover of the final

[111] _____, "McNair Board on Coast Artillery and Air Service," 2-4, 27-30; "AG 353; Chief of Air Service to the Adjutant General," (2nd Ind.), 5.

[112] "AG 353; Chief of Air Service to the Adjutant General," 6, 1.

board report reveals the primary motivation behind formation of the board. The note reads, "Released for morning papers Dec 3."[113]

The President's Board heard the testimony of ninety-nine witnesses. Aviators accounted for more than half of the witnesses because, in the board members' view, "there has been a widespread impression among flying men that their point of view and professional opinions have not been enough considered, that large matters of policy have been determined by men without flying experience." Further, the board made it clear to these "flying men" that they desired their testimony to reflect their own opinions, "whether or [not] those opinions coincided with the opinions of the departments." However, even this board faced great difficulty in finding clear answers to the matters in contention. On the third page of their report, the President's Aircraft Board wrote that they encountered throughout their proceedings significant conflict in the testimony of the ninety-nine witnesses they questioned. Further, they expressed surprise that this conflict involved not only matters of opinion, but also questions of fact. However, they found that in most cases "the apparent differences in fact are merely different conclusions resulting from partial statements of fact."[114]

After a brief discussion of the background to the controversy, the board presented their findings by dividing the report into two parts. The first part addressed several of the primary questions regarding matters of controversy, while the second recommended actions the President should direct with respect to the Army, the Navy, and industry as the main supplier of aeronautical materiel. A number of interesting conclusions, approved unanimously by the board, appeared in the report. The board recommended a continued separation between military and

[113] President's Aircraft Board, "Report of President's Aircraft Board," November 30, 1925, National Archives and Records Administration, College Park, MD, RG 337, Entry 58, Box 5, File 321-Aviation, handwritten note on front cover of report.

[114] Ibid., 3.

civilian aviation, since any such union would only breed distrust of the intentions of commercial aviation as it sought to extend its domestic reach. However, the board also warned against the false notion that investment in a large air power would amount to a "peace movement." On the contrary, the board pointed out that despite the natural sea barriers America enjoyed, it must still invest adequately in its defense while sustaining its policy of avoiding becoming embroiled in a European-style arms race. Perhaps more importantly, the board cautioned against the belief that the appearance of a new style of weapon could "change the ultimate character of war. The next war may well start in the air but in all probability will wind up, as the last war did, in the mud."[115]

The board also made several recommendations for encouraging the growth of both civilian and military air strength and capability, including encouraging commercial uses of aviation, improving existing aviation law, insurance, and government oversight, encouraging investment, and basing decisions regarding military aviation strength on realistic assessments of potential enemy aviation capability. While the board agreed that the nation currently faced no significant threat of aerial attack from another nation, they did not discount the possibility of such a threat in the future, or the need to prepare to counter it. Finally, the board did not recommend formation either of a separate Department of National Defense encompassing the existing military services, nor did it recommend creation of a separate air force equivalent to the Army and Navy, as either action would run counter to the principle of the military services "acting as integral parts of a single command."[116]

In the second half of the report, focused on recommendations regarding the Army, Navy, and industry, the board recommended changing the name of the Air Service to the Air Corps, and

[115] Ibid., 6-7.
[116] Ibid., 8-15.

considering it equivalent to the other branches of the Army, like the Artillery, Infantry, and Cavalry. However, it did not recommend supporting the Air Service's requests for removal from the control of the War Department, arguing that aviation officers' frustrations associated with serving under and competing for promotion against non-flying officers did not outweigh the need to maintain unity of command. They also did not support the assertion that the military should make sufficient investments in aviation technology to replace all aircraft with the latest models. In short, the board found that "obsolete" did not equate to "unsafe," and that sufficient investment could be made to continue improving military aviation technology without constantly maintaining a fleet comprised of only the most modern and capable aircraft available.[117]

Many other, relatively minor recommendations followed in the second section, but perhaps the most significant and prescient statement appeared in the closing paragraph of the report. After stating that the members of the board did not all initially agree on the matters under deliberation, they ended their report with the following statement: "We have reached a unanimous conclusion because we have approached our task in a spirit of mutual accommodation and understanding. The same spirit may prove helpful both to those charged with the grave responsibility of developing the policies in regard to the use of aircraft in national defense and to those who encounter the hazards of actual operations in the air."[118]

This spirit of mutual accommodation failed to materialize among the various military branches or services. Far from unique to questions of air power, similar disputes over funding, equipment capabilities, doctrinal roles, unit organization, and command hierarchies continued to hamstring the Army, particularly in the realm of mechanization and the attempt to turn the ideal concept of "combined arms" into a reality. Neither the McNair Board nor the President's Aircraft

[117] Ibid., 16-30.
[118] Ibid., 30.

Board did anything to forestall the increasingly volatile interbranch and political rivalries infecting both the War Department and national-level leaders in 1924-25, which only grew worse as such debates and struggles for limited funds continued in the coming years.

Awareness of all the details – not a highly selective sampling of interpretations and data points – regarding this little-known episode in McNair's early career provides a new perspective on his depth of experience and commitment to detailed, unbiased experimentation. McNair's peers and immediate superiors recognized him as a meticulous, hard-working, objective, innovative, and intellectually gifted officer. One can only imagine how frustrating he must have found this whole episode and how it must have affected his views as he faced similar challenges throughout the remainder of his career.

**The Billy Mitchell Trial**

One final event that transpired in 1925 deserves mention here because of Major McNair's little-known but direct involvement. On November 20, 1925, just ten days prior to the release of the results of the "President's Aircraft Board," McNair received orders from the War Department's Adjutant General directing him to travel to Washington on temporary duty to the Trial Judge Advocate, to testify at the court martial of the famous advocate of air power, Billy Mitchell.[119] Put simply, Mitchell found himself facing a court martial due to his ever-increasing stridency in claiming America lacked a competent Air Service, and would continue to lack one as long as it remained subordinate to the Army. While most historians of early twentieth century

[119] Adjutant General, "AG 201; Adjutant General to Major Leslie J. McNair, FA," November 20, 1925, McNair Papers, National Archives at St. Louis.

American military history probably have some familiarity with the Mitchell court martial, the historical record indicates most are probably unaware of McNair's involvement in the trial.[120]

As they prepared their case, the prosecution learned that Mitchell visited Hawaii during the same period that the McNair board prepared for and conducted its tests of Air Service, Coast Artillery, and Anti-Aircraft capabilities. After his visit, Mitchell based many of his assertions about the supposed ignorance of non-flying military men regarding the potential of airpower on what he claimed to have seen in Hawaii. His criticism and misrepresentations of the Hawaiian Department's attitude toward airpower infuriated Major General Summerall, who unsuccessfully sought appointment as president of Mitchell's court martial. However, given the centrality of what he had supposedly witnessed in Hawaii to Mitchell's claims, the Adjutant General ordered both Major McNair and Major General Summerall to testify at Mitchell's court martial. Their testimony provide vital to the prosecution's case, enabling them to demonstrate the intentional misrepresentations and inaccuracies in many of Mitchell's statements.

For example, Summerall refuted Mitchell's claims that he observed a chronic lack of resources for the Air Service in Hawaii due to its non-flying superiors' lack of willingness to provide it adequate support, demonstrating that he had done just the opposite, redistributing resources from other branches of service within the Hawaiian department to augment the Air Service. Further, McNair's (and Summerall's) testimony refuted Mitchell's claims that during his visit to Hawaii in 1923, no plans for the defense of Oahu existed. As McNair pointed out, during this time the Hawaiian department not only had a plan for the defense of Oahu, but McNair and his operations staff had already begun work updating it, resulting in the revised plan

[120] For more on McNair's testimony in the Mitchell trial, see Burke Davis, *The Billy Mitchell Affair* (New York: Random House, 1967); Michael L. Grumelli, "Trial of Faith: The Dissent and Court-Martial of Billy Mitchell" (PhD Dissertation, Rutgers, 1991); Robert William Page, Jr., "Billy Mitchell: Cause Celebre of American Air Power" (Master of Arts, University of South Carolina, 1961). Few sources on the Mitchell trial specifically name McNair as a witness for the prosecution.

they published in early 1924. McNair also refuted Mitchell's supposed "prescience" in predicting the possibility that Japan might initiate a war against America with some form of sneak attack against a vulnerable base like Pearl Harbor or the Panama Canal. He pointed out that these predictions held striking similarities to the planning assumptions in a 1920 document entitled *Joint Army and Navy Action in Coast Defense* – one of many references McNair and his staff used in developing the updated plan for the defense of Oahu. [121]

McNair also demonstrated that during his tour there, the Hawaiian department recognized Pearl Harbor, and particularly the oil storage tanks there, as key vulnerabilities that defense plans must account for. Mitchell had long claimed a monopoly on this insight, but McNair exposed Mitchell's claims not only as unoriginal, but also as a willful misrepresentation. His testimony demonstrated that simple ignorance could not explain Mitchell's false statements, since Mitchell had made no effort to interact with the joint team involved in the McNair board or Oahu defense planning when he was in Hawaii. Mitchell chose to remain very secretive during his visit, and McNair made it clear that Mitchell could have known about current and ongoing defense planning had he chosen to. Instead, he consistently refused to divulge why he was there. In doing so, Mitchell passed up the opportunity to talk to key people who could have divulged the true nature of the situation in Hawaii, choosing instead to spread rumor and falsehood upon his departure.[122]

The criticism that McNair's plan for the defense of Oahu attracted from men intent on furthering the interests of their branch or service illustrates the severity of the problem of branch

[121] Grumelli, "Trial of Faith", 234, 64n21; Davis, *The Billy Mitchell Affair*, 315-19; while these secondary sources briefly describe McNair's testimony, the full transcript appears to only be available in the National Archives: Lesley J. McNair, "Testimony of Major Leslie J. McNair, Field Artillery," National Archives and Records Administration, College Park, MD, RG 337, Entry 58, Box 5, File 321 - F.A.

[122] _____, "Testimony of Major Leslie J. McNair."

bias, particularly in an era of increasing budget constraints. Always the selfless servant, McNair, along with his fellow board members, devoted six months of his career to an objective, detailed, and cooperative inter-service study of the ability of existing weapons systems to contribute to the defense of Oahu from a naval assault. In stark contrast to this objective, diligent, and cooperative effort stands the example of Billy Mitchell, a man who snuck around Hawaii gathering intelligence like an enemy spy. Mitchell later claimed no defense plans existed when defense planning went on in frenzied activity all around him. He also failed to recognize the fact that McNair included Air Service personnel in this planning effort, and recognized them by name for their contributions. Mitchell also asserted that the Hawaiian Department ignored and under-resourced the Air Service when in fact Summerall reallocated resources from already under-funded ground units to support Air Service development.

This brief episode in Lesley McNair's career represents but one of the many fascinating periods in his four decades of service that remain unknown to most historians of the early twentieth century Army. Another development that could potentially put McNair's plans for a career in the Army in jeopardy first emerged during his tour in Hawaii. In his 1922 annual physical examination, his hearing test revealed slight hearing loss in his left ear; however, the report indicates the doctor identified "no pathology," and recommended no further action. His 1923 exam indicated the same reduced hearing, but as his 1924 exam notes, once again the doctor gave no treatment advice and ordered no additional tests. However, the 1924 report does indicate that the doctor noted of McNair's ears, "Drums slightly thickened," and advised McNair continue the "Regular examinations by E. E. N. T. Clinic" that he had begun on his own

initiative after the previous year's exam. Otherwise, the examining doctor noted no mental or physical deficiencies that would limit McNair's continue service in garrison or field duty.[123]

The long, slow grind of the postwar years that must have seemed interminable to McNair and his peers tends to receive quick and broad-brush treatment from modern writers. Some choose to ignore it, but far worse, others choose to cite selectively events from the period to support a certain argument. The McNair Board and its aftermath serve as an important example, given the stark contrast between the objectivity, methodological rigor, and spirit of cooperation inherent in the board's efforts, contrasted with the narrow, biased, and poorly researched representation of events presented in one recent work on the Army's modernization efforts after the World War. Nevertheless, the peacetime Regular Army after the World War provided many diverse experiences to those officers who remained in the service. After four years of intensive experience as an operations officer and war planner, McNair received orders to report to Purdue University, where he served as Professor of Military Science and Tactics. At Purdue, McNair gained his first experience of training civilians in the art of soldiery.

[123] William Chamberlaine, "Report of Annual Physical Examination of Officers, 1922," February 10, 1922, McNair Papers, National Archives at St. Louis, MO. Chamberlain did refer McNair to a medical board due to a low specific gravity reading on his urinalysis, but further tests found normal specific gravity, leading the board to certify McNair as physically qualified; E. R. Schreiner, "Report of Annual Physical Examination of Officers, 1923," April 26, 1923, McNair Papers, National Archives at St. Louis, MO; ———, "Report of Annual Physical Examination of Officers and Warrant Officers, 1924," January 10, 1924, McNair Papers, National Archives at St. Louis, MO.

## CHAPTER FIVE

### Professor of Military Science and Tactics at Purdue University, 1924-28

While military officers such as Lesley McNair debated the meaning of the Army's experience in World War I and prepared for the likelihood of another war, much of American society rejected the idea of American involvement in another European war. Simultaneously a pacifist movement spread from Europe across the globe. Pacifism arose in Europe as a reaction to the war's death toll, combined with the perception that the major powers' political and military leaders lacked the appropriate regard for the value of human life. Popular literature, poetry, and music recorded the misery and suffering caused by the war, as memorials appeared on battlefields and in cities around the world. Indicating the widespread power of the pacifist movement, sixty-one countries, including the United States, signed the Kellogg-Briand Pact of 1928, which outlawed war as a means to settle international disputes.[124]

Well before this symbolic event, the U.S. Congress acceded to the public's longstanding distrust of a large military by significantly reducing the Army's size and budget. With the passing of the 1920 National Defense Act (NDA), Congress limited the size of the post-war Army to 297,717 personnel. Cuts in appropriated funds further reduced actual personnel strength to 175,000 in 1920. By 1923, the Army reached a low of 118,750 men. In the event of a war America could not avoid, Congress envisioned mobilization of a sizable National Guard and Organized Reserve to augment the small cadre of regulars.[125]

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[124] Michael R. Matheny, *Carrying the War to the Enemy: American Operational Art to 1945*, Campaigns and Commanders, ed. Gregory J. W. Urwin (Norman, OK: University of Oklahoma Press, 2011), 45-46.

[125] Coffman, *The Regulars*, 292-94. Congress kept Army strength below 120,000 until 1936, when it approved funding for an increase to 165,000.

The Regular Army officers who remained on active duty after the war did not accept this optimistic vision of the future. They understood the fact that war existed throughout history as one of the few constants of human culture, no matter the cost to the combatants who waged it. Further, they knew the risk involved in relying on mobilization of reservists in time of war. As McNair witnessed while on the AEF staff, National Guard units often required as much training as units formed of inductees, and their officers rarely exhibited the necessary skills to command large organizations in combat. Fortunately, a small but dedicated pool of mid-level officers chose to remain on active duty even though they soon came up against "The Hump" – a stall in promotions caused by senior officers remaining on active duty for want of better career opportunities. This meant that mid-level officers typically spent more than a decade at the grades of captain and major.[126]

Fortunately, the 1920 NDA included several initiatives intended to improve the readiness of both the National Guard and the various reserve forces the Army would depend on in time of war. In addition to serving as the nation's immediate defense force, the Act called on the Regular Army to train this large civilian force. The Army would do this, in part, through the Reserve Officers Training Corps (ROTC). While its origins date back to the nineteenth century, the ROTC program saw its first formal implementation in the 1916 NDA, passed as a measure to accelerate American preparedness for participation in World War I. The 1920 NDA renewed and updated ROTC's charter after the war. By 1923, the program comprised 104,000 cadets, and 49 percent of Army personnel had served in positions that involved training civilians, whether the

[126] Ibid., 233-41. Personnel caps and budget cuts, combined with the economic downturn that led to the depression, created what Edward Coffman calls "The Hump." This lengthy period of stalled officer promotions occurred because of a logjam of senior grade personnel who chose to remain in service for ten to fifteen years, forestalling any hope of mid-grade officers gaining promotion. Field grade officers typically remained on active duty in the interwar era due to dedication to the Army's mission, since they possessed little hope of upward mobility in the rank structure.

ROTC or a similar program.[127] After leaving Hawaii, Major McNair found himself serving in the first such duty position he would perform during the interwar years.

McNair reported for duty at Purdue University in Lafayette, Indiana on May 1, 1924, after four months of leave. His service with the ROTC marked the beginning of a ten-year stretch of assignments as either an administrator or student at some form of military training institution. However, Purdue provided a new challenge for Major McNair, who found himself training civilians for the first time. His only similar experience to that point, working with recently mobilized National Guardsmen during World War I, left him with a negative view of the potential of civilians inducted into military service. In contrast to that experience, McNair's assignment at Purdue gave him a chance to provide thorough peacetime military training to a large group of civilian officer cadets– an arrangement that enabled far greater effectiveness than attempting such training in the midst of a large-scale mobilization.[128]

In addition to training cadets during his four years at Purdue, McNair also interacted with a variety of senior college officials, local and state politicians, and civilian activists. This provided a broadening experience for a mid-grade officer whose service over the previous twenty-one years consisted primarily of duty at isolated outposts and during combat deployments. McNair embraced the varied challenges of this new assignment, and made great strides in developing Purdue's ROTC program into a first-class organization. This experience enhanced McNair's reputation as an officer who could handle the diverse responsibilities of senior leadership, while making Purdue's ROTC department one of the nation's best.[129] This

[127] Ibid., 234-35.

[128] "The Debris, 1927," http://earchives.lib.purdue.edu/cdm4/document.php?CISOROOT=/debris&CISOPTR=22281 (accessed 2 July 2011).

[129] "Reports of the President and Other Officers of Purdue University," in *Bulletin of Purdue University* (Lafayette: Purdue University, 1928), 111.

period of his career also provides great insight into McNair's personal and professional views because of the high volume of articles he produced during his tour – articles that expressed his strong opinions about pacifism, the need for national military preparedness, and the importance and nature of military training in colleges and universities.

ROTC traces its roots to the earliest days of the Republic. Based on the American tradition of decentralized power and distrust of large standing armies, national defense depended after the revolution on a citizen army. The militia system, formalized by law in 1792, identified all male citizens aged between eighteen and forty-eight years as potential soldiers. However, training remained a local responsibility, and no formal system existed for the development of officers to lead militia forces. This situation resulted from a uniquely American dilemma. The citizenry demanded an officer corps that exhibited high standards of professionalism and personal conduct, but simultaneously resisted the maintenance of a standing army large enough to threaten civil liberties and civilian control of government. Thus, military leaders found themselves forced to seek an appropriate balance between these opposing views.[130]

Seeking a feasible means to generate a pool of capable officers to lead the various local militias, Captain Alden Partridge, a former superintendent of the U.S. Military Academy at West Point, established in 1819 the first private institution dedicated to officer training. The American Literary, Scientific, and Military Academy (later renamed Norwich University) sought to graduate men trained as military leaders but instilled with American democratic values. While many Norwich graduates entered service in the Regular Army, the majority remained in the civilian community. By seeding communities with these graduates, Partridge sought to improve

[130] Gene M. Lyons and John W. Masland, "The Origins of the ROTC," *Military Affairs* 23, no. 1 (Spring, 1959): 1; for more on post-Revolution American suspicion of the potential dangers of a large standing army, see Michael Neiberg, *Making Citizen-Soldiers: ROTC and the Ideology of American Military Service* (Cambridge, MA: Harvard University Press, 2000), 12-18.

the effectiveness of local militias by increasing their officer training standards to a level similar to the United States Military Academy at West Point. By contrast, the southern military academies established in the first half of the nineteenth century – most notably the Virginia Military Institute and the Citadel – focused more on character development by reinforcing southern military traditions than on increasing the militia's effectiveness.[131]

A rift began to form between West Point, which increasingly limited entrance to the sons of America's established elite, and the less formal military training programs at other colleges and universities. The intense socialization process endured by West Point cadets caused the public to view them as a distinct subset of American society. Graduates' predilection to interact and marry within the small but growing circle of former graduates and their families reinforced this perception. This led to both increased tension between professional military men and citizen-soldiers, and Regular Army officers' distrust of enlisted men. The formation of the United States Naval Academy in 1845, a military academy rooted in an even more elite tradition than that of West Point, only exacerbated this tension. Thus, as Michael Neiberg explains, on the eve of the American Civil War,

> two trends dominated decisions regarding American military personnel. The first was a perceived functional need, consistent with the prevailing social structure, for a small, highly professionalized officer corps drawn from an increasingly small group at or near the top of the American social structure. The second, contradictory, trend was a cultural preference for citizen-soldiers, ill-prepared and unprofessional though they were, to act as a counterbalance to the antidemocratic tendencies Americans feared in their own officer corps.[132]

However, the early years of the Civil War highlighted the value of military training at civilian colleges and universities, because the Confederacy, which drew on a much larger pool of such institutions than did the North, initially benefited from its surplus of competent officers. By contrast, the North, which had access to fewer formally trained officers, made up the difference

[131] Lyons and Masland, "Origins of ROTC," 1-2.
[132] Neiberg, *Making Citizen-Soldiers*, 19.

by appointing civilians (mostly those with political connections) to lead many of its military formations. To resolve this shortage of competent officers, the Congress included in the terms of the Land Grant Act of 1862 the requirement for colleges and universities founded under the act to include military instruction in their curricula.[133]

While this initiative seemed promising, the training suffered due to a lack of War Department interest or standardization. For example, Congress and the War Department neglected to specify whether colleges should make military instruction compulsory for all students, and failed to provide clear guidance on the program of instruction. Colleges received no details as to the required content of the military training curriculum, or even the number of years of training students should complete. The War Department made no effort to assign the best officers to training duty at colleges, and officers saw such duty as an unpleasant diversion from the typical career path. After graduation, the War Department did not even keep track of the whereabouts of military training program graduates.[134]

Nevertheless, by 1900, forty-two colleges and universities offered some form of military instruction. At this early stage, the program offered no scholarships and enjoyed little support from the War Department. For decades, institutions with military education programs had relied primarily on faculty members who possessed prior military experience to serve as instructors. In several supplementary acts after the Civil War, Congress authorized the detail of Regular Army personnel to assist with this military training, but by 1898, only one hundred officers served in this capacity across the country. Therefore, while colleges increasingly viewed military training

[133] Lyons and Masland, "Origins of ROTC," 3; of the 20,000 officers the Union estimated in 1861 it would need to fight the war, West Point and Norwich combined could only provide1,500 - see Neiberg, *Making Citizen-Soldiers*, 20-21. Sources often refer to the Land Grant Act of 1862 as the Morrell Act, named for its main proponent, Vermont Representative Justin Morrell – a friend of Alden Partridge's and an admirer of his military training program at Norwich. See Neiberg, 21.

[134] Lyons and Masland, "Origins of ROTC," 3; Barry M. Stentiford, *The American Home Guard: The State Militia in the Twentieth Century* (College Station: Texas A&M University Press, 2002), 16.

as their civic responsibility, they chafed at the lack of support they received from the War Department. The program did benefit, looking back, from improved standardization during the latter half of the nineteenth century, and generated a steadily growing number of officer graduates.[135]

After America's difficult mobilization to fight the Spanish-American War, Secretary of War Elihu Root sought to rationalize military policy around two primary goals: the development of a system to maintain military preparedness, and the creation of a federally controlled reserve force.[136] Two key acts passed by Congress in 1903 stemmed from these efforts. The General Staff Act established the position of Army Chief of Staff and provided for a military planning group in the War Department, improving the nation's ability to anticipate and prepare for war. The Militia Act increased the federal government's authority to train and enforce discipline among National Guard units, providing for a trained reserve that the president could mobilize quickly when needed. In step with these initiatives, the War Department slowly began to pay more attention to the military training programs on offer in the various land-grant colleges. For example, after the Spanish American War the War Department began an annual competition in which they inspected university military training programs, selecting ten each year for recognition as "distinguished institutions." The selected programs could then each nominate one cadet for commission in the Regular Army.[137]

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[135] Lyons and Masland, "Origins of ROTC," 3-4; David L. Leal, "Students in Uniform: ROTC, the Citizen-Soldier, and the Civil-Military Gap," *PS: Political Science and Politics* 40, no. 3 (July, 2007): 479.

[136] Lyons and Masland, "Origins of ROTC," 4.

[137] Ibid., 5; the emphasis in Progressive Era America on efficiency and rationality played a significant role in the turn-of-the-century Army and Navy modernization and organization efforts - see Neiberg, *Making Citizen-Soldiers*, 22-23; for more on Progressive Era bureaucratization of America and Modernization Theory, see Robert Wiebe, *The Search for Order: 1877-1920* (New York: Hill & Wang, 1967).

By 1912, Secretary of War Henry L. Stimson and Chief of Staff General Leonard Wood sought to extend the opportunity for post-graduation federal service to more cadets, by offering reserve officer commissions in the Regular Army to several hundred students each year. However, this effort garnered little congressional support. Wood recognized that increased War Department oversight of college military training programs relied in part on removing these programs from the control of the Department of the Interior, where it had resided since passage of the Land Grant Act of 1862. While Wood enjoyed support from a number of senior college officials, it would take the threat of another war to motivate Congress to create the federal officer reserve he envisioned.[138]

As the likelihood grew that America would enter the World War that had engulfed Europe in 1914, a change in strategic thinking occurred based on the realization that America could no longer count on the oceans to shield the nation from enemy attack. This led the General Staff to present a strategic analysis to Secretary of War Lloyd Garrison in 1915 entitled "A Statement of a Proper Policy for the United States." Predating the better-known "Rainbow Plans" drafted after World War I, the Proper Policy laid the foundation for strategic plans to protect America from attack by sea. It also articulated the requirement for a competent officer corps, eventually leading to the establishment of the ROTC program. Based on an evaluation of the threat posed by contemporary European armies, the Proper Policy estimated the requirement for a force of "500,000 trained and organized mobile troops at the outbreak of the war," plus another 500,000 available within 90 days. Further, the policy estimated that the Army would need "at least 500,000 troops to replace the losses and wastage in personnel incident to war."[139]

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[138] Lyons and Masland, "Origins of ROTC," 6-7.

[139] Ibid., 7-9; "War Department Annual Reports, 1915, Vol. 1," http://books.google.com/books?id=X4hNAAAAYAAJ&pg=PA209&dq=report+of+the+secretary+of+war,+war+department+annual+reports,+1915,+vol.+I&hl=en&ei=yzQaTufOPM7RiAKF3KTSBQ&sa=X&

The report relied on the assumption that any forces not on active duty and required to fulfill the projected strength requirements must come from federal organized reserves, not National Guard troops. The War Department reasoned that a well-trained response force not only must respond quickly to federal orders, but must also receive standardized training – something difficult to accomplish if the nation relied on the National Guard to provide those forces. The limitations of units assigned in areas with different climates, and subject to a wide variety of state-controlled training plans, made reliance on the National Guard for federal defense seem unjustifiably risky. Since wholesale disbandment of the National Guard posed equally significant disadvantages, including fierce resistance from Congress, the War Department settled on the compromise solution of relying on organized reserves to provide the required troop strength anticipated by the Proper Policy. The planners also concluded that these organized reserve troops would require Regular Army officers to train them in the event of mobilization. Thus, the Proper Policy served as the strategic planning document that established the requirement to develop a new source of reserve officers who could earn Regular Army commissions. These officers would serve on active duty for several years and then revert to reserve status, prepared for federal mobilization should the need arise. Finally, War Department planners determined that existing military training programs in colleges and universities provided the best source of the officers required, provided they received adequate support and resources from the federal government.[140]

It took the threat of war to provide the impetus needed to formalize that expansion. When war broke out in Europe in 1914 America sought to remain neutral, but as the conflict wore on

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oi=book_result&ct=result&resnum=3&ved=0CDMQ6AEwAg#v=onepage&q&f=false (accessed 10 July 2011).

[140] _____, "Origins of ROTC," 7-9; "War Department Annual Reports, 1915, Vol. 1," http://books.google.com/books?id=X4hNAAAAYAAJ&pg=PA209&dq=report+of+the+secretary+of+war,+war+department+annual+reports,+1915,+vol.+I&hl=en&ei=yzQaTufOPM7RiAKF3KTSBQ&sa=X&oi=book_result&ct=result&resnum=3&ved=0CDMQ6AEwAg#v=onepage&q&f=false (accessed 10 July 2011), 129-30.

and the likelihood of avoiding the conflict diminished, Congress passed the National Defense Act (NDA) of 1916. This act fundamentally altered the nature of federal authority over the National Guard in time of war, while establishing America's modern military structure – a structure that differed in reality from that codified in the NDA. As historian Barry Stentiford has pointed out, after passage of the NDA America's military consisted of "the Regular Army, the Volunteer Army, the Officer's Reserve Corps, the Enlisted Reserve Corps, and the National Guard when in federal service. In truth, only the Regular Army and the National Guard actually existed."[141]

Nevertheless, the act did significantly increase both the size and formalization of college and university military training programs, standardizing them in the form of the ROTC. These programs shared the common goal of training officers in preparation for the possibility of a future American military mobilization. The newly established ROTC program formalized the nation's many longstanding and diverse military instruction programs by delivering a standardized curriculum intended to prepare students for combat service as officers in the organized reserve and National Guard. Thus, the ROTC system represented the realization of the reforms Secretary of War Elihu Root and Army Chief of Staff Leonard Wood envisioned at the turn of the century.[142]

As Michael Neiberg has written, "ROTC served as an effective compromise that offered something to all interested parties." It enabled the War Department to standardize and regulate the military training that officer candidates received. It provided a more effective curriculum for instructors who desired to increase the quality of training they provided. The National Guard saw the program as an excellent source of officers, since the colleges trained mostly locals who

[141] Stentiford, *The American Home Guard*, 17.
[142] Leal, "Students in Uniform," 479.

would either take National Guard commissions or serve on active duty for a few years before reverting to Guard or reserve status in their home state. Finally, ROTC provided the War Department with an affordable means to accomplish the dramatic expansion of officer training necessary to support the large-scale mobilization envisioned by the Proper Policy. Such an expansion relying on growth of military academies would have exceeded the available funding many times over.[143]

Neither did the fundamental provisions of the Proper Policy emerge intact in the 1916 NDA. The concept of an all-federal reserve envisioned by the War Department planners faced considerable resistance from the National Guard operating as a powerful political lobby. When the dust settled, a compromise emerged in which the National Guard not only remained intact, but also grew in size and stature, in exchange for the provision that the president possessed the authority to mobilize and federalize the National Guard in time of war. In return, the War Department shouldered the responsibility of providing equipment, training, and pay for National Guard Units in training. In sum, this represented a victory for the War Department, because this resource and training burden brought with it the authority to enforce federal standards in the conduct of National Guard training – the next best alternative to a separate federal organized reserve. The National Guard, in keeping with America's militia tradition, remained the primary source of national defense forces to supplement the Regular Army in time of war, but for the first time the National Guard had to meet federally-determined training standards. The concept of a federal reserve force also survived the debates surrounding passage of the Defense Act, in the form of the Volunteer Army and the Officer' and Enlisted Reserve Corps, but these organizations existed in peacetime only on paper. Therefore, the War Department recognized a need for a professionally trained officer corps to take command of these units upon mobilization.

[143] Neiberg, *Making Citizen-Soldiers*, 22-24.

To provide the officers required to lead this organized reserve, the 1916 NDA created the ROTC program as originally envisioned by the War Department.[144]

While the ROTC program formed by the 1916 NDA came too late to provide a significant percentage of the officers who served during World War I, at least 50,000 officers who deployed with the American Expeditionary Force received military training from land-grant colleges. Similarly, the expanded ROTC codified in the 1920 NDA provided only 100,000 officers for service during World War II – a small minority of the total officer pool required during the mobilization effort. However, George C. Marshall reported after the war that, "without these officers the successful rapid expansion of our Army . . . would have been impossible." [145] Thus, ROTC proved a fruitful program, and one that soon emerged as a common experience for Army officers who served during the interwar period.[146]

When Major Lesley J. McNair reported for duty as the new professor of military science and tactics at Purdue University, he joined the ranks of officers responsible for leading one of the nation's many new ROTC programs. As designed by the 1920 NDA, ROTC departments offered both a two-year program for freshmen and sophomores – a compulsory program at many universities, including Purdue – and an advanced program for juniors and seniors who desired to continue military training and earn a commission upon graduation, whether in the Army Reserve, the National Guard, or possibly in the Regular Army. Purdue conformed to this basic academic structure, while operating since 1919 as a purely motorized field artillery unit. This made Purdue's ROTC program a perfect fit for Major McNair – a highly respected artilleryman with

[144] Lyons and Masland, "Origins of ROTC," 11.
[145] Ibid., 12.
[146] Coffman, *The Regulars*, 235.

years of experience conducting experiments in new field artillery techniques – a practice he would continue at Purdue.[147]

This assignment also vastly increased McNair's exposure to civilian leaders and the public media. Other than his appearance at the Billy Mitchell Trial, the young artilleryman had previously maintained a low public profile, even when serving as a general officer on the AEF staff. However, his assignment as the professor of military science and tactics at Purdue placed McNair in a position involving interaction with civilian trainees and community leaders, directly in the midst of the growing interwar pacifist debate. Perhaps surprisingly, considering his previous low-profile demeanor, McNair engaged in this debate with passion and eloquence, writing articles and delivering speeches at Purdue that recognized the virtue of pacifism as an ideal, but pointed out the necessity to maintain military readiness to confront the dangers presented by the real world.

When the time came, Congress only halfheartedly implemented the 1920 NDA – due to a combination of factors including pacifist sentiment, isolationist leanings, and economic concerns. As described above, the NDA approved an active force only slightly over half the size of that recommended by senior military leaders, but congressionally mandated force caps and budget cuts further limited the Army's size to less than a quarter of the 500,000 men the War Department hoped to retain in the Regular Army. These constraints often put men like McNair,

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[147] John W. Masland and Laurence I. Radway, *Soldiers and Scholars: Military Education and National Policy* (Princeton, NJ: Princeton University Press, 1957), 252; W.G. Hinckley, "How Purdue Features Military Cermonies," *The Field Artillery Journal* 16, no. 2: 187; McNair's Regular Army staff at Purdue consisted of approximately twenty enlisted men and eight officers, all field artillerymen; see "The Debris, 1925," http://earchives.lib.purdue.edu/cdm4/document.php?CISOROOT=/debris&CISOPTR=21775 (accessed 2 July 2011); Purdue's ROTC program almost doubled in size between 1919, when it comprised one regiment of 830 men, and 1928, when it comprised three regiments of 1,369 men. See "The Debris, 1928," http://earchives.lib.purdue.edu/cdm4/document.php?CISOROOT=/debris&CISOPTR=20807 (accessed 3 July 2011). By 1928, Purdue contributed more artillery Reserve officers annually than any other school.

when serving in positions that involved interacting with civilians, in direct contact – and often conflict – with leaders of the pacifist movement. Fortunately, at Purdue McNair found an ally in college president Dr. Edward C. Elliot, who believed that America required a strong national defense, and provided unwavering support to Purdue's ROTC program.[148]

McNair wrote several articles while at Purdue that reveal his perspective on the growing pacifist movement in America and his conviction in the importance of military training in civilian institutions after the World War. As Edward Coffman describes in *The Regulars*, "Americans traditionally had little interest in and less respect for soldiers in peacetime. Many civilians may have lived through the 1920s and 1930s without ever seeing one, while a few may not even have known of their existence."[149] McNair recognized this indifference or ignorance among much of the American public only added to the challenge the pacifist vocal minority posed to the spirit of civic duty he believed necessary to prevent the interwar officer corps from falling into a lethargy that could lead to its physical and intellectual stagnation. Some officers who remained in service after the war did indeed lack drive and stayed on active duty long after they lost their youthful vigor. However, a large pool of mid-grade officers strove to maintain high standards of training throughout the interwar years while working to incorporate new technologies and fighting methods into Army doctrine and organizations. These officers remained devoted to their cause even though many found themselves frozen at their post-war rank for thirteen years or more, waiting for promotion opportunities that did not materialize

[148] Elliot accepted in 1942 appointment as Director of the Division of Professional and Technical Employment and Training of the War Manpower Commission. See "Purdue in the Nation," from "The Debris, 1943," http://earchives.lib.purdue.edu/cdm4/document.php?CISOROOT=/debris&CISOPTR=27892 (accessed 3 July 2011).

[149] Coffman, *The Regulars*, 323.

because senior officers served well into their fifties and sixties.[150] While at Purdue, McNair took great strides both to maintain the vitality of the Regular Army officer corps and to instill Purdue's student body with a belief in the benefits and importance of military training.

The first article McNair wrote while at Purdue, entitled "Military Training at Educational Institutions," appeared in 1925 in *The Purdue Engineering Review*. In the article, McNair described the nature and value of military training at civilian institutions. He responded directly to those critics of the ROTC who believed students could more effectively use the time devoted to military training in colleges studying academic subjects – particularly the "wondering freshman and indignant sophomores" compelled to participate in ROTC. He pointed out that Purdue's president, Dr. Elliot, who had received military training while a student at the University of Nebraska, asked similar questions of his commandant, Lieutenant John J. Pershing. While McNair remained unsure whether Elliot found Pershing's answers to his questions satisfactory, he pointed out that Elliot had emerged in the 1920s as one of the nation's most ardent supporters of military training for college students.[151]

McNair first explained the organization and history of the ROTC, mentioning its roots in America's militia tradition and its progression from the informal program of the nineteenth century to the NDA-formalized system established in 1920. Emphasizing the program's role in national military preparedness, McNair pointed out that despite its voluntary nature, the senior ROTC program existed in 1925 at 127 institutions across America, with 82,761 students in training. In fact, even more schools desired to form ROTC programs of their own, but could not because the War Department lacked the required funds. However, with another 42,743 students

[150] Ibid., 240. Jacob Devers and George Patton remained majors for fourteen years, while Mark Clark and Matthew Ridgeway stalled at the rank of captain for thirteen years.

[151] Lesley J. McNair, "Military Training at Educational Insitutions," *The Purdue Engineering Review* 20, no. 2 (1925): 6.

enrolled in Junior ROTC programs in high schools and other institutions across the country, the nationwide total of students receiving military training in 1925 exceeded 125,000.[152]

McNair then described the various motives that led institutions to establish ROTC programs, and the two main qualities students developed as a unique benefit of participation. He argued that colleges such as Purdue provided military training from both a sense of patriotism, and a desire to produce good citizens. More important, however, military training prospered in institutions of higher education because it had proven its worth as component of adult education. In other words, ROTC did not benefit students merely by preparing them for war, but also by providing general educational benefits that resulted primarily from two intangible forms of character development. McNair identified these two benefits as discipline, which he pointed out as equally important to all successful adults, whether a civilian or a soldier, and leadership, which also serves as an important component of any adult's character.[153]

To illustrate his point, McNair pointed out that many students graduated college after an average or sub-par academic performance, only to surpass their peers in their civilian careers. He attributed these cases largely to the benefits of leadership and discipline, and pointed out that Dr. Elliot himself had stated that only the Military Department, among all those at Purdue, included leadership training in its curriculum. Thus, McNair sought to demonstrate that the benefit of military training extended not just to those students bound for active service, but also to the large majority of ROTC students who planned to remain in civilian life after graduation. He argued their military training provided all ROTC participants discipline and leadership skills, contributing to the self-confidence necessary to put their "book learning" to maximum use.[154]

[152] Ibid., 6-7.
[153] Ibid., 7.
[154] Ibid., 7, 18.

Also in 1925, McNair made an early foray into engaging the public media by writing a letter to the editor of the *Army and Navy Journal*. Perhaps emboldened by his participation in the Mitchell Trial and the publicity over his Oahu defense tests and planning, McNair wrote this letter in response to a congressional bill, taking a position on the question whether the War Department should adopt a selective promotion system for Army officers. The letter exhibits the maturity and confidence of an officer willing to engage in debate on military matters not only with fellow military officers, but also among civilians. It also reveals his expertise in matters well outside the purview of the typical artillery officer, and his deeply held convictions regarding the Army's need for committed, high-quality officers. In his letter, he provided a detailed and well-reasoned argument in support of the principle of a selective promotion process, but disagreed with the system proposed by the bill currently before Congress.[155]

McNair's argument for modifying the proposed selective promotion system centered on the relative benefits of such a system depending on the officer's rank. For example, he supported the system of selection for general officers and pointed out its broad acceptance throughout the Army, noting, "We have far abler general officers by selection than we would have by seniority." He then made the case that, based on the vital importance of the positions they held, the Army should also select its colonels – men it relied on to serve in key positions including brigade command and division chief of staff – using a selective promotion system. In particular, McNair argued this would minimize the common experience among contemporary officers of observing regiments in training in which lieutenants-colonel or even majors possessed greater potential for brigade command than that of the actual commander.[156]

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[155] _____, "Letter from Lesley J. McNair to the Editor, Army and Navy Journal," January 4, 1925, RG 337, Entry 58, Box 1. A selective promotion system involves promotion decisions made not only based on seniority, but also taking into consideration individual officer duty performance.

[156] Ibid.

However, McNair argued the situation changed at grades below colonel. While he admitted, "the grade of captain, the company commander, is, like that of colonel, of disproportionate importance," he pointed out that in his own experience many officers who made excellent company commanders failed to rise to the demands of higher rank. Many such men remained mired in the details that consumed the company commander's attention, "forever fussing with details and interfering with their subordinates." On the other hand, because often a captain "is only beginning to find himself as an officer," average company commanders often made effective colonels since their "real ability develops later." Thus, McNair concluded merit-based selection of captains for promotion "should be undertaken with hesitation," and such a system should not govern promotion of lieutenants.[157]

Considering the question of promotion by selection (reward for individual merit) as a whole, McNair therefore supported the method in principle, as a change that would serve the good of the Army. However, he recognized limitations in the application of a merit-based promotion system to all ranks of officers, despite its apparent benefits. He noted three main concerns with the proposed selection process. These included the possibility of improper outside influence, the tendency of officers serving on promotion boards to favor subordinates with whom they had served, and the imperfection of information that could lead to inaccuracies in an officer's personnel file.[158]

To avoid these pitfalls, McNair recommended a number of "safeguards," which he argued would prove effective only when formalized by law. Many of the safeguards he

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[157] Ibid.

[158] Ibid. Ironically, the inaccuracies that concerned him affected McNair's own files. Many early twentieth century references confuse Lesley McNair with William McNair, an unrelated and older field artillery officer. The other and far more common error, seen in contemporary records and modern secondary sources alike, consists of the incorrect spelling of McNair's first name as "Leslie." This error proved so ubiquitous that McNair eventually gave up correcting it in erroneous signature blocks on various documents he signed.

recommended still exist in today's officer promotion system. McNair's recommendations included providing promotion boards clear and standardized criteria to govern their selection decisions. He believed boards should rely only on official (not personal) records, and base their promotion decisions on an officer's full history of performance under a variety of supervisors rather the completion of one exceptional assignment or the receipt of several glowing evaluations from the same supervisor. McNair also suggested the Army use a selective promotion system among officers who had served ten years or more and achieved the rank of captain, recommending a graduated use of promotion by selection depending on rank. Under McNair's proposed system, the Army would promote all general officers based on merit, but only half of all colonels, and only ten to twenty percent of lieutenants colonel and majors. He also argued such a system could only avoid branch bias by determining how many officers a board would promote from each branch before each selection board met. Finally, McNair recognized that even with the most stringently applied control measures, governed by law, such a system might prove unpopular "with the majority of the Army, for the majority will be adversely affected individually. It is inevitable that the most carefully devised system will result in some injustice and some heart-burning, but it is nevertheless believed that the net result would be greatly increased efficiency."[159]

The following year, 1926, McNair turned his attention to the problem of pacifism and its effect on military training in an article he wrote for *The Purdue Alumnus* titled "Pacifism at Purdue University." Purdue had recently earned recognition by the War Department as a "Distinguished College" for the sixth time (a distinction it earned during every year of McNair's tenure as PMS&T), standing out that year in comparison to other colleges' programs by a wider margin than ever. Clearly, Purdue possessed a high-performing and motivated body of ROTC

[159] Ibid.

cadets. Nevertheless, not everyone at Purdue supported the idea of compulsory military training in college. The first significant evidence of opposition to the ROTC program came to McNair's attention shortly after the college's 11 November 1925 Armistice Day observances. The guest speaker for the event, Colonel Paul V. McNutt, a member of the Officers Reserve Corps and Dean of Law at Indiana University, focused his remarks on pacifism, of which he had begun to see, in McNair's recollection of his speech, "unmistakable signs of activity."[160]

One Purdue ROTC cadet recalled McNutt in a 1926 *Field Artillery Journal* article as "a fine example of a leader of men, tall, of fine physique, piercing black eyes and a voice that commands attention and respect." Singling out McNutt's address as one of the best given that day, Cadet Major W.G. Hinckley highlighted the Dean's remarks regarding his concern with pacifism:

> I have been troubled of late by a serious matter. Certain groups of individuals, some of them honest and well-meaning,-- some of them not, are seeking to exact a pledge from persons of military age never again to serve this nation in time of war and to destroy their love for this nation as a nation. I have no abuse for those who are honest and well-meaning. I agree with them that the abolition of war is a consummation devoutly to be wished. I emphatically disagree with them as to the means of achieving that end.

Hinckley quoted McNutt on several points that supported his anti-pacifist position. McNutt reminded the more than 4,000 attendees of the Armistice Day events that America, as a rich nation in "a distracted, bankrupt, but armed world," must remain vigilant in its national defense. He recalled the dismal failure of America's efforts to lead its neighbors in disarmament in the past, only leaving the nation open to the threat posed by its more powerfully armed neighbors, including Mexico. McNutt particularly disagreed with the assertion that military preparedness

[160] _____, "Pacifism at Purdue University," *The Purdue Alumnus* 13, no. 7 (1926): 5.

made America a nation of "militarists," arguing that neither he nor any other soldier who had seen war wanted to experience another one.[161]

However distasteful the experience of war, McNutt rejected the concept "that the abolition of war can be brought about by the disarmament of America alone or by the taking of a slacker vow by the youth of this land." Disarmament would only lead to lawlessness within America and vulnerability to attacks from abroad. Reminding the audience of the sacrifice of America's fallen, McNutt states "I know what our soldier dead would say to the slacker vow. . . . 'Be prepared. If the danger comes, fight on, fight on to victory.'"[162] In his *Alumnus* article, McNair describes a debate that ensued in the "Student Opinion" column of the campus newspaper, *The Exponent*, over the several days following the Armistice Day observances. First, a student criticized McNutt's remarks and military training at Purdue. Another student soon joined in with an editorial opposing military instruction in colleges, leading to growing debate among the student body and, in McNair's opinion, "definite indications of a desire to agitate the question of compulsory training."[163]

Two individuals added fuel to the fire over the coming months. First, leaders among the Purdue faculty and student body received in January 1926 copies of a 31-page pamphlet written by Winthrop D. Lane and published by "The Committee on Military Training," a group that included Jane Addams, Carrie Chapman Catt, John Dewey, W.E.B. DuBois, and James Weldon Johnson. As McNair describes it, the pamphlet recited "in detail the progress of military training in educational institutions since the World War, asserting that the War Department is making great strides in militarizing the country." McNair quotes a particularly troubling passage from the

[161] Hinckley, "How Purdue Features Military Cermonies," 185-86.
[162] Ibid., 186.
[163] McNair, "Pacifism at Purdue," 5.

pamphlet, which states, “the deep danger of military training is not that it teaches a boy how to handle a rifle, but that it leads him to **think** in the **psychology of war**.”[164]

Close on the heels of the appearance of Lane’s pamphlet, the executive secretary of the National Council for the Prevention of War, Mr. Frederick J. Libby, spoke three times in Lafayette, Indiana on 28 February 1926. In his *Alumnus* article, McNair points out that Libby spoke, “twice from pulpits and once at the Y.M.C.A.” In these speeches Libby voiced his advocacy of the United States’ joining the league of Nations and abolishing compulsory military training in colleges and all military training in high school. He also, as McNair puts it, “did not advocate disarmament, but opposed ‘pyramiding of armament,’ whatever that means.” Anticipating the impact Libby might have on the Lafayette community and the student body at Purdue, McNair arranged for ROTC cadets to attend Libby’s presentations. Overall, these attendees “were surprised at the weakness of his arguments, although impressed with their subtlety.” To pin Libby down on some of these more subtle points, McNair had members of the ROTC Order of Military Merit (junior and senior honors students) prepare written questions. Libby sent written replies not long after he left Lafayette.[165]

Libby’s responses demonstrated his standing as a pacifist based on Christian principles, his belief that “the Monroe Doctrine is being stretched too far nowadays,” and his conviction that while America should not disarm, it also should not increase armaments because “It is the psychology accompanying increase of armaments that is endangering future peace.” Libby’s solution returned to armament reduction by international agreement –in short, making America’s security subordinate to the international community’s desire for peace. McNair followed this summary of Libby’s responses to his students’ questions with a description of the reaction

[164] Ibid., 5; emphasis in the original.
[165] Ibid., 6.

among the student body at large. During the week following Libby's visit to Lafayette, *The Exponent* contained multiple attacks from students opposing his pacifist, internationally focused stance on national security. Only one person stepped forward in defense of Libby's position – a local preacher who criticized *The Exponent* as prejudiced for publishing only views that ran counter to those expressed by Libby. Eventually, debate shifted away from Libby's remarks to the more general question of compulsory military training at Purdue. However, after Libby's visit students found the Lane pamphlet, previously made available only to select members of the faculty and student leadership, distributed to everyone on campus – both faculty and students.[166]

McNair next provided examples of similar events taking place at "practically every campus where there is military training," usually led by local ministers with the support of national organizations like Libby's, and generally opposing military training on the grounds that colleges should seek ways more in keeping with Christian ideals to avoid wars in the future. One leaflet these organizations distributed to students prior to college enrollment, intended to urge them to oppose military training, referred to "the Military Problem" on campuses, and argued, "All groups might profitably take steps to abolish the requirement of compulsory military training in colleges as undemocratic and Prussian." This leaflet provided a list of pacifist references that included *War: Its Causes, Consequences and Cure,"* by Kirby Page, author of the infamous "Pacifist Pledge":

> Let the churches of America say to their own government and to the peoples of the earth: We feel so certain that war is now un-Christian, futile and suicidal that we renounce the whole war system. We will never again sanction or participate in any war. We will not allow our pulpits and classrooms to be used as recruiting stations. We will not again give our financial or moral support to any war. We will seek security and justice in other ways." McNair called this "Treason under the guise of religion![167]

[166] Ibid.

[167] Ibid.; quote referred to by McNair as "The Pacifist Pledge" found in Kirby Page, *War: Its Causes, Consequences and Cure* (New York: George H. Doran company, 1923), 203-04.

McNair next revealed links between the pacifist, anti-military training movement, and American communist and socialist organizations. One individual in particular on which he focused, Paul Blanchard, served as publisher of *The Amalgamated* – the union newspaper of The Amalgamated Clothing and Textile Workers. As described in the Lusk Report of 1925, prepared by a committee of New York legislators, Blanchard not only fomented strikes among Amalgamated union workers; he also spoke in February 1926 at Wyoming University against compulsory military training in colleges. McNair pointed out the similarity of Blanchard's argument to Libby's, both of which emphasized the supposed damaging psychological effect of military training on the young men who received it. However, McNair also brought into question the notion that Christian ideals motivated Blanchard, quoting from a recent issue of *The Amalgamated*: "It is up to the workers of this city to break up this criminal union (of the employers). They are digging graves for themselves and we will see that they are ducked into them. They try to do all in their power to crush and disorganize you, but we can stand and overpower the whole damned bunch." Apparently, not all opponents of military training in colleges drew their motivation from Christian-inspired pacifist tendencies.[168]

McNair ended the article on a positive note, pointing out first that America emerged from the War with Spain having learned valuable lessons that strengthened the nation's defenses. While this did not prepare America for the immensity of the task it would face during World War I, a war "the pacifists assured us would never occur," it left the country better prepared than it had been in 1898. Since the end of the World War the nation had struggled with the tension between pacifist tendencies, and the knowledge among senior political leaders that America must remain prepared for war. Despite the delay in passage of the 1920 NDA, and the relatively low funding and personnel strengths for which it provided, President Coolidge had firmly supported

[168] McNair, "Pacifism at Purdue," 7.

the act and ensured its continued funding even as he sought disarmament through international agreement.[169]

Focusing on Purdue itself, McNair highlighted the support provided to ROTC by Dr. Elliot. In a letter to McNair dated 28 January 1926, Elliot wrote,

> Here, at Purdue University, the R.O.T.C. is regarded as an integral and valuable element in the plan of technical education, to which this institution is primarily devoted. However, entirely apart from the question of the specific training of men for reserve military commissions, and entirely apart from the relation of the military training to engineering instruction, I consider that the R.O.T.C. contributes largely and efficiently to the development of those essential qualities of which dynamic character is composed – the sense of personal responsibility, the inspiration of leadership, and a recognition of the eternal place of order and organization in human society. . . . I have always considered that this training had an equally important aim of giving to the young men, who are fortunate to receive it, something in sharp contrast to the present day tendencies toward personal irresponsibility and lawless individuality; making them realize that strength of character depended upon certain common realities of life rather than upon sentimental preachments.

Pointing out that Elliot wrote this letter before the pacifist stir caused by Libby and the Lane pamphlet, and not in response to them, McNair added his own assessment. He pointed out that America had pacifists before the World War, and despite their views falling victim to the facts of that war, pacifists remained active upon its conclusion. He assessed the situation at Purdue as "quiet after the recent exposure of the fallacy of Mr. Libby's views, but the fact must not be overlooked that the basic cause of the agitation, these national pacifistic and communistic organizations, are still very much alive. The pacifist strives to influence and exploit public opinion by propaganda. The best antidote is an enlightened and thoughtful public opinion." In this well-researched and written article, McNair made great strides in administering the antidote to Libby and the pacifist tendencies he sought to spread.[170]

While the ROTC programs at Purdue and some other universities across America faced pacifist opposition, professional officers like McNair successfully defended their programs.

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[169] Ibid.
[170] Ibid., 8.

McNair's *Alumnus* article demonstrates the brief spike in pacifist activity at Purdue and the effort required in countering it, but this represented only a small minority of the difficulty Regular Army officers faced in their efforts to maintain military preparedness and secure government funding for Army personnel, equipment, and training in the 1920s. Nevertheless, dedicated regular Army officers and students across America continued ROTC training with War Department support, however minimal based on the limited implementation of the 1920 NDA. However, one event in 1926 would demonstrate just how integral to the success of Purdue's ROTC program Dr. Elliot judged McNair's leadership.

Having arrived at Purdue in the fall of 1924, McNair had served less than two years when the chief of the Field Artillery Branch, Major General William J. Snow, sent Dr. Elliot a letter on 10 March 1926 informing him he would soon have to relieve McNair for pressing duty at Fort Bragg. Snow said in his letter that he recognized the disruption this would cause to Purdue's ROTC program, but he assured Dr. Elliot only McNair could suitably perform the work required by the Field Artillery Board. He needed McNair to lead the board's effort to update the field artillery drill regulations, and he assured Elliot he would provide the best possible officer available as a replacement.[171]

The day after he received this letter, Dr. Elliot forwarded it to Acting Secretary of War J.R. Hines, voicing his strong objections to the planned relief of McNair. Elliot noted the dramatic improvements McNair had achieved in his short time at Purdue, having "completely demonstrated his distinctive fitness for the many and different tasks belonging to our corps, which numbers more than fourteen hundred men and is the largest light artillery organization in the country." Elliot explained McNair arrived to find the detachment in disarray from the

[171] "Minutes of the Purdue University Board of Trustees, 14 April 1926," http://earchives.lib.purdue.edu/cdm4/document.php?CISOROOT=/bot&CISOPTR=8838&REC=1 (accessed 3 July 2011).

frequent changes of leadership preceding his assignment, but due to his "strong character, his personal force and his technical competency, Major McNair developed a morale and standards of performance which have the hearty approbation of the University and the State." Because of the recent challenges Purdue had faced with the rising specter of pacifism, and McNair's skillful handling of this challenge, Elliot feared McNair's early relief would result in far more than mere degradation in the program's quality. Rather, Elliot believed losing McNair at this critical juncture could make the provision of military training at Purdue unsustainable. In short, Elliot believed the early departure of McNair could lead to the end of Purdue's ROTC program, and he conveyed this concern in very clear terms to the acting secretary of war.[172]

Dr. Elliot's strident objections soon achieved the desired effect. On 18 March, just one week after Elliot wrote his letter, Acting Secretary of War Hines responded with a brief note, granting Elliot his wishes. Hines assured Elliot, "The Department appreciates the valuable services being rendered by Major McNair at Purdue University, in view of which it is not contemplated relieving him until the completion of his normal tour of duty at his present station." Two days after Acting Secretary of War Hines wrote his letter to Dr. Elliot, Major General Snow also wrote a letter confirming he would not move McNair early. Snow wrote:, "the situation as to personnel has changed somewhat so that an excellent officer, upon whom I did not count, has become available to me for the special work I contemplated using Major McNair for; and, accordingly, I shall leave him with you." This brief exchange demonstrates the outstanding reputation McNair had achieved by 1926, within his branch, at Purdue, and even at the level of the Secretary of War.[173]

[172] Ibid.
[173] Ibid.

Prior to his departure from Purdue in 1928, McNair wrote two articles, one published in Purdue's 1928 *Debris*, and the other in the February, 1928 edition of *The Coast Artillery Journal*, summing up his experience of four years training ROTC cadets. In his *Debris* article, McNair commended Purdue's program for its achievements during his tenure there, giving full credit to the student officers for earning recognition as a Distinguished College in the three consecutive annual inspections the War Department conducted under his tenure. He also declared the program equally likely to earn distinction in the 1928 inspection, which McNair would miss by about a month.[174]

McNair also addressed Purdue's struggles with the nation-wide pacifist movement to eliminate military training in colleges, pointing out "The University was by no means immune to these activities, but the authorities and the students were quick to reject the unsound propaganda." In fact, the struggle "served a useful purpose, however, in stimulating discussion of the principles and objects of military training." With the height of the debate well behind them, McNair found the students "increasingly thoughtful and responsive as to the educational possibilities of the training," recognizing the broad range of benefits it provided. Specifically, he found the sophomore class benefited in particular from this process of reflection. One "more of a liability to The Corps than an asset," the sophomore class achieved a generally improved attitude toward compulsory military training. McNair assessed the sophomore class, once "indifferent" or even "troublesome," in 1928, "by their proficiency, their budding leadership, their example and their numbers, are collectively the backbone of The Corps." As evidence, McNair pointed out

[174] _____, "Why Military Training in College," *The Purdue Engineering Review* 23, no. 4 (May 1928): 5; While the War Department no longer recognized Distinguished Colleges starting in 1928, Purdue earned a mark of "excellent" in every category during its inspection of 1-2 May 1928. See "The Debris, 1929," http://earchives.lib.purdue.edu/cdm4/document.php?CISOROOT=/debris&CISOPTR=19865&REC=2 (accessed 10 September 2011), 148.

that batteries with fewer sophomores than their peers tended to perform comparatively worse in training. Thus, McNair's ROTC program at Purdue emerged from the pacifism struggle a stronger unit, capable of more effective collective training, and composed of a cadre of cadets more dedicated to the ROTC mission and their own individual training than before the debates of 1926.[175]

In his article for *The Coast Artillery Journal*, titled simply, "The R.O.T.C.," McNair sought to achieve two basic goals. First, he described the ROTC program and the nature and need for further training and development of its graduates. Second, he requested support for the program from members of the National Guard and Reserves, primarily to fight pacifist tendencies wherever they appeared, and solicited their representatives to ensure ROTC continued to receive the funding it required. He described the quality of the ROTC officer, based largely on the more than 830 hours of military training received over four years in the program. Regarding this latter topic, McNair emphasized the breadth of ROTC training, beginning in the first two years with a focus on basic drill and soldier skills, and culminating in the final two years emphasizing practical experience in leadership development. In short, McNair argued, "Never before in our history have we produced officers so carefully schooled, except at the national academies."[176]

Regarding the latter points, McNair provided an assessment many citizens and perhaps many reservists likely found bold, if not truly surprising. He makes his thoughts on pacifism particularly clear:

> As to the spasmodic attacks against R.O.T.C. by pacifists, reds, pinks, chronic objectors, and publicity seeker, amateur, and professional, the line of action is simple and clear: *inform the*

[175] _____, "Why Military Training in College," 5-6.
[176] _____, "The R.O.T.C.," *The Coast Artillery Journal* 68, no. 2 (February, 1928): 172.

> *people*. Once the cloud of misinformation, exaggeration, and false logic is dissipated, there need be no fears as to the verdict of the great mass of Americans.[177]

To support this point, McNair provided several key points of fact. Military training at colleges, regardless whether required or elective, did not derive from any legal requirement or War Department coercion; it existed solely as a matter of institutional policy at each school. Further, the colleges decided the specifics of the training programs, conforming only to the general guidance that they should focus the first two years on individual discipline, and the second two years on leadership. He argued that the success of the program stemmed mostly from the fact that both the colleges and the government derived significant benefit from ROTC; the former experienced dramatic educational benefits among program participants, while the government gained a pool of highly trained reserve officers for potential duty if the need arose for national defense. Finally, McNair debunked the common misperception that the government funded college ROTC programs. In fact, in Purdue's case, not only did the college receive no government funding for ROTC, the program cost Purdue $8,000 per year – a cost the college gladly paid due to the evident benefit accrued to both the individual cadets and the institution.[178]

However, McNair expressed concern that – despite prior congressional support for the program – future developments could spell trouble for its continuation. While colleges received no direct funds, they did depend on the large stocks of equipment remaining in the wake of the World War. Once depleted, these stocks would require replenishment for ROTC programs to continue providing realistic training, and this would require congressional funding "In spite of the very proper considerations of economy," and the looming increased "pinch of the budget." Thus, McNair sought both to educate readers of his article for *The Coast Artillery Journal* on the nature and successes of the ROTC program to date, and the impending budget crisis that posed a

[177] Ibid., 173.
[178] Ibid., 173-74.

significant threat to the program. He asserted that the Army could only avert this threat with a concerted effort by the portion of the populace who understood and supported the need for national preparedness, which required trained officers – and much of the informed public served in the Guard or Reserves in some capacity.[179]

A physical challenge resurfaced near the end of McNair's tour that made problematic McNair's professional advancement. Prior to departing Purdue, McNair's hearing loss significantly worsened, from a reading of 15/20 in his left ear – consistent throughout the previous several years – to a reading of 4/20 (he continued to test 20/20 in his right ear). This led the examining doctor to recommend McNair report to Walter Reed General Hospital for further treatment, which the Adjutant General, B. B. Parrott, approved on August 8, 1927. McNair proceeded to Walter Reed where, after a comprehensive examination conducted while on inpatient status from August 11-27, the Ward Surgeon documented McNair's hearing loss, including the addition of tinnitus to his symptoms, and recommended his return to duty, with no further action. McNair remained cooperative and frank (as described by one of his doctors) throughout the examination, and admitted his hearing loss began shortly after his graduation from West Point. With his condition fully documented, McNair returned to Purdue to finish his final year of duty there.[180]

McNair earned promotion to the permanent rank of lieutenant colonel on 9 January 1928, after serving only seven years as a major, or about half as much time in "the hump" as many officers during the interwar period.[181] Furthermore, McNair had developed into far more than merely a field artillery officer with little or no experience outside his basic branch. His first

[179] Ibid., 174.

[180] Ward Surgeon, "Diagnosis Card, Walter Reed General Hospital," August 28, 1927, McNair Papers, National Archives at St. Louis, MO.

[181] The Adjutant General, "Orders and Oath of Office for Promotion to Lieutenant Colonel," January 9, 1928, McNair Papers, National Archives at St. Louis, MO.

twenty years of service included a diverse range of duty positions that made full use of his wide-ranging skills and interests. He served a four-year branch detail in Ordnance soon after graduating from West Point, and the Army put that experience to use in a number of field equipment tests prior to World War I. On the AEF staff, he not only oversaw artillery training among all the AEF's combat formations; as a general staff officer he performed many tasks to improve overall AEF effectiveness, even leading an effort to resolve problems with current methods for the fitting of soldiers' boots upon initial entry. His exceptional performance on the AEF staff earned him several promotions, leading to his distinction as the AEF's youngest brigadier general. After the war, he served as a member of the individually selected inaugural faculty of the General Service School at Fort Leavenworth, not only developing the field artillery curriculum, but also working with thirty-three peers from a variety of branches to reestablish a post-war system of field-grade officer education in the States.

Upon his assignment in 1921 to the Hawaiian Department, McNair stepped well outside of his field artillery experience to serve as Brigadier General Summerall's operations officer. During this assignment he gained extensive war plans experience, developing a comprehensive plan of defense for Oahu. He also put his innovative spirit to use, conducting detailed and objective tests of aviation's ability to defend the island from aerial and naval attack – tests that soon garnered attention at the highest levels of the U.S. government. Upon departing Hawaii, he led one of the nation's largest and most highly regarded ROTC programs at Purdue University, demonstrating not only the ability to train field artillery cadets, but also to engage in high-level debate with civilian and government leaders on a wide range of topics. These included analysis of a potential officer promotion system based on merit, assessing the merits of military training in civilian universities, and confronting the dangers pacifism posed both to national defense, and

to military training programs across America. McNair proved so effective in his duties at Purdue that the university's president, Dr. Edward Elliot, believed at the height of the pacifist movement in 1926 that Purdue's ROTC program might not survive its anti-military training campaign without his leadership. In short, by 1928 McNair no longer fit the mold of the typical officer of field artillery. After twenty-four years of service, he had developed a degree of maturity and experience that made him stand out among his peers as a multi-talented and highly respected officer. His next assignment as a student at the U.S. Army War College provided him a chance to expand further the range of capabilities he had developed.

## CHAPTER SIX

### The Army War College, Class of 1928-29

McNair received the opportunity to build on his war planning experience in Hawaii as a student in the U.S. Army War College class of 1929.[182] As did all Army War College attendees after the World War, McNair worked on various student committees updating actual U.S. war plans throughout the year of instruction. As Michael Matheny has explained, after its reestablishment in 1919 the War College "began as an adjunct to the War Department's General Staff to assist in the preparation of war plans. Unlike the General Staff School [at Fort Leavenworth], the War College worked with real war plan scenarios." The college emphasized joint training, including not only the various military services but also the political and economic considerations involved in national military mobilization.[183] However, during McNair's post-World War service at Fort Leavenworth, in Hawaii, and at Purdue University, both the Leavenworth Schools and the Army War College underwent significant changes. While many studies exist that describe the evolution of the curriculum at Leavenworth, few authors have written such analyses of the War College, leaving a gap in historical understanding of the role the War College played in senior officer education in the 1920s and 1930s.

The War Department defined the post-WWI organization and curriculum of the War College at the direction of Secretary of War Baker, who summarized the most significant challenges the nation faced in mobilizing for the World War in his annual report for 1919:

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[182] War Department, "Special Orders No. 198," August 28, 1928, McNair Papers, National Archives and Records Administration, St. Louis, MO; McNair's pre-AWC physical exam made note of his hearing loss, neither deeming him permanently incapacitated for field service nor recommending sending him before a reitrement board. H. C. Fisher, "Report of Physical Examination," January 10, 1929, McNair Papers, National Archives and Records Administration, St. Louis, MO.

[183] Matheny, *Carrying the War to the Enemy*, 57-58.

> It has been made specially apparent that General Staff officers for duty with the War Department and for larger expeditionary forces should have broader knowledge, not only of their purely military duties, but also a full comprehension of all agencies, governmental as well as industrial, necessarily involved in a nation at war, to the end that coordinated effort may be secured from all these agencies, and that they may be employed economically and efficiently both in the preparation for and during war.[184]

Secretary Baker recognized that most of the War Department's challenges associated with mobilizing for and fighting the First World War stemmed from economic and industrial issues related to mobilization for war, and the logistical requirements associated with changes in military technology. Tactics and doctrine also posed a significant problem, but one the War Department could deal with more easily and quickly. The War Department sought to resolve the most significant challenges by educating the Army's future senior officers to deal with them before another mobilization situation arose, at the Army War College.[185]

Baker asserted that the prewar officer education system had proven "inadequate and duplicatory in many respects." Therefore, he directed a comprehensive review of the entire Army officer education system, aiming to improve school curricula, and reorganize the school system as required. Thus, the first Army War College commandant after the World War, Major General James W. McAndrew, reviewed the school's entire curriculum. Upon reflection, he realized that he could best achieve the goals Secretary Baker identified by reorganizing the faculty and developing a new curriculum based on the staff organization of the AEF, rather than that of the pre-war organization of the War Department. Fortunately, it turned out the 1920 NDA established a new War Department based on similar logic, resulting in a post-WWI War Department organized much like the AEF staff, and closely aligned with the Army War College

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[184] U.S. War Department, "Annual Report of the Secretary of War, 1919," 27. Quoted in George S. Pappas, *Prudens Futuri: The US Army War College, 1901-1967* (Carlisle Barracks, PA: The Alumni Association of the U.S. Army War College, 1980), 89.

[185] Originally named the General Staff College in 1919, the War Department renamed the institution the Army War College in 1921 "to avoid confusion with the Command and General Staff School at Fort Leavenworth." Matheny, *Carrying the War to the Enemy*, 55.

curriculum and faculty, worked out by McAndrew between 1919 and 1921. As historian George Pappas has pointed out, "McAndrew's visionary decision enabled retention of the core curriculum of the Army War College basically unchanged from 1919 to 1941." However, modifications of the Army's officer education system did occur during this period, causing several significant changes both at the Leavenworth schools and at the Army War College in the decade before McNair's arrival there.[186]

For example, the challenges that McNair struggled with while PMS&T of Purdue's ROTC program also affected Regular Army officer education. Facing the same budget constraints as ROTC, both the Leavenworth schools and the Army War College experienced War Department modifications to their organization and curricula in an effort to gain efficiencies. As the War Department made adjustments, the schools updated their curricula to support their new educational goals, which evolved in line with their organizational structure. Isolationism and pacifist sentiment contributed to the budget limitations through its influence on congressional decisions regarding Regular Army personnel caps, which led many to perceive a reduced need for military training because only about half as many officers served on active duty as originally envisioned by the authors of the 1920 NDA. Just as pacifists sought to eliminate military training at Purdue and other civilian colleges, the isolationist American public saw no need for lengthy and expensive military schools to train officers for leadership during mobilization and war. They believed America had no need to prepare for such activities given America's inward political and economic focus during the 1920s. Thus, budget constraints forced senior Army officers to look for efficiencies even as they struggled to keep the professional military education system alive.

[186] Pappas, *Prudens Futuri*, 89-93; Harry P. Ball, *Of Responsible Command: A History of the U.S. Army War College* (Carlisle Barracks, PA: The Alumni Association of the United States Army War College, 1983), 180-206.

The clearest manifestation of this challenge emerged when General of the Armies Pershing convened a board of officers in February 1922 to assess the organization and mission of the Army's entire senior officer education system. Pershing appointed Brigadier Edward F. McGlachlin, who had replaced McAndrew as commandant of the War College in July 1921, to chair a board of officers appointed to determine how to restructure a school system designed for an army of 280,000 (as specified in the 1920 NDA), when Congress clearly intended to ensure that the Army never achieve that actual strength. With Regular Army numbers dropping quickly, falling below 150,000 by mid-year, Pershing wanted to optimize the Army schools for actual Army officer strength, to increase efficiency and reduce wasteful spending. As Harry Ball explained, "Fundamentally, the problem was money."[187]

The McGlachlin board's evaluation of the Army schools at Fort Leavenworth and the War College convened on February 20, and soon devolved into a struggle between two competing priorities. While budget cuts and personnel caps pointed to a need to seek efficiencies, existing war plans called for a minimum number of trained officers, which the Army could not produce under some of the recommended courses of action. Colonel Hugh A. Drum, Commandant of the School of the Line at Leavenworth, proposed perhaps the most drastic reductions, recommending disestablishment of the Army War College by combining it with Leavenworth's General Staff School, preferably holding the combined course at Leavenworth. Drum believed the combined school could cover the subjects already in the curriculum plus those topics currently taught at the Army War College pertaining to the theater of operations. Thus, the

[187] _____, *Of Responsible Command*, 180. The nation's celebration of the Allied victory in World War I soon turned to disillusionment, leading to congressional rejection of Wilson's goal to include America in the League of Nations, and Presidential candidate (and Wilson's successor) Warren G. Harding campaigning on the slogan "Return to Normalcy." Thus, in the 1920s America wanted peace and a return to isolationism, and saw no need to spend heavily on what many deemed an unnecessary defense force. See Matheny, *Carrying the War to the Enemy*, 45.

new combined school would teach subjects applicable to echelons ranging from army corps through theater army, while the School of the Line would teach topics pertaining to army divisions through corps. For those aspects of the Army War College curriculum dealing with matters of mobilization relating to industry, war plans, and the Zone of the Interior, Drum suggested the War Department could teach these subjects to thirty-five officers detailed annually to their headquarters for a work-study program.[188]

Representing the other side of the debate, Brigadier General William Lassiter, War Department G-3, reminded Pershing that the approved mobilization plan required 1,650 general staff trained officers: 800 from the School of the Line, 500 from the General Staff School, and 350 from the Army War College, based on the specific topics covered at each school. Lassiter remained convinced mobilization plans justified retention of all three schools with the established numbers of graduates, regardless of reductions in overall Army personnel strength. Further, he advised against expedients such as Drum's "understudy" program of officers detailed annually to the War Department. Neither he nor any of the Army War College faculty believed that arrangement would enable those officers to master the complexities associated with mobilizing the nation for war or provide enough trained officers even if the program proved effective.[189]

When McGlachlin submitted his board results to Pershing on March 30, they included a majority report, a minority report from Colonel Harold B. Fiske, chief of the War Department G-3 training branch, a dissenting opinion from McGlachlin, and several less contentious dissenting views. Despite this lack of consensus, the board did agree on one key point – it did not

[188] Ball, *Of Responsible Command*, 181. Ball opined that Drum may have made sincere recommendations, or may have merely sought to put forward a recommendation that protected the Fort Leavenworth schools, protecting his organizations even if at the cost of the Army War College.

[189] Ibid., 182.

recommend closing the Army War College. In fact, contrary to Hugh Drum's recommendation, the majority report recommended leaving the War College in situ, while combining the two schools at Leavenworth into a single Command and General Staff School (CGSS) to provide a single year of instruction in command and general staff duties from brigade through corps level. McGlachlin opposed this recommendation, intent on finding a solution that would generate enough trained officers each year to lead an effective mobilization should the need arise. He argued for retention of both schools at Leavenworth, with the School of the Line focused on the division, and the General Staff School on the corps and field army.[190]

McGlachlin also dissented regarding officer career timelines. He argued for a minimum of four years' service between an officer's graduation from the Leavenworth schools and selection to attend the Army War College, while the majority report recommended only a two-year gap. McGlachlin believed extending the gap to four years would minimize the competition and jockeying for position that took place at present. McGlachlin observed that students reporting to the War College shortly after graduating from Ft. Leavenworth arrived "subdued, lacking in initiative and expression, and inclined to 'play the instructor,' attempting to do what is wanted rather than come to independent conclusions on the basis of study and reason." He believed that four years of service with troops after attendance at the Leavenworth Schools would provide time for the officer to develop the necessary maturity and experience needed to gain the maximum benefit from the more open-ended problems they would work on in their War College committees.[191]

McGlachlin raised a significant pedagogical issue by pointing to the similarities and differences that existed between the two schools. For example, both schools used the applicatory

[190] Ibid., 182-83.
[191] Ibid., 183-84.

method of instruction, although quite differently. Historian Peter Schifferle has defined the applicatory method at Leavenworth as "the use of large lectures, smaller conferences that engaged students in dialogue with instructors, formal committees of ten students and two instructors, and graded problem-solving exercises."[192]

The Army War College faculty's use of the applicatory method varied from that of their counterparts at Leavenworth in two key ways. The best-known difference centered on Leavenworth instructors' use of school solutions as tools against which to compare and grade students' solutions to the many tactical problems they worked on. The accounts of many historians and some graduates contributed to a generally negative historical interpretation of the Leavenworth school solution. Many historians of the interwar period, particularly those critical of the U.S. Army of the 1920s-1930s, define the Leavenworth school solution in similar terms to those used by Jörg Muth: "the sole example for a correct approach to and result of every exercise."[193]

Schifferle argued that school solutions did not represent the sole acceptable solution; nor did a student automatically fail an exercise for developing a solution that varied from the school solution. Rather, a group of instructors, often with the assistance of students, developed the school solution, gaining their department heads' approval before use in conducting and grading exercises, where they merely served as examples of satisfactory solutions. Instructors did sometimes mark points off for seemingly insignificant oversights, and some may have leaned too much on the school solution to determine students' grades. However, the senior faculty intended school solutions to provide an acceptable means for solving a problem, to facilitate discussion

[192] Schifferle, *America's School for War*, 100.

[193] 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, TX: University of North Texas Press, 2011), 131.

and comparison with alternatives the students developed, and most instructors used them as intended. Sometimes the school solution illustrated an error in a student's solution, or merely provided an alternative solution, while in other cases it supported the student's logic. Regardless, the faculty continually updated school solutions to incorporate changes in doctrine, insights gained through faculty discussions, and particularly good ideas developed by students.[194]

The Leavenworth Schools also differed from the Army War College in that Fort Leavenworth students performed most of their practical work individually. The curriculum provided few opportunities for team building or even learning from peers. The faculty intended the students to master doctrine, primarily through lectures by and discussions with instructors. This practice undoubtedly led to a less effective program of instruction than one that emphasized team building and group learning.[195] However, it also suited the needs of the Leavenworth schools, for many students received their first formal education for service at division and higher echelon units. Given most Leavenworth students' lack of experience in large units or general staffs, they needed to learn the basics before attempting to engage in group discussion and committee work. In short, the Leavenworth schools served an entirely different purpose than the Army War College.

While both schools used curricula that emphasized military history and logistics, Col. H. B. Crosby, Army War College assistant commandant, noted the fundamental difference in the Army War College approach in his orientation lecture to the 1924-1925 class:

> I believe I speak the truth when I say that no one helps his rating by blindly accepting the views of the faculty on any subject. This is distinctly a college – where we learn from an exchange of ideas and not by accepting unquestioned either the views of the faculty or the views of the student. At Leavenworth we accepted and should have accepted the principles and doctrines laid

[194] Schifferle, *America's School for War*, 111-14.

[195] Ibid., 115-16. Schifferle calls this "One possible grave weakness in the curriculum at Leavenworth."

> down by the faculty of that school. Here we reach our own conclusions, faculty and student, following a full and free discussion of the subject.[196]

Crosby makes an important but subtle point in this quote when he says students at Leavenworth "accepted and should have accepted the principles and doctrines laid down by the faculty."[197]

Crosby grasped the fundamental difference between the Leavenworth schools and the Army War College; at Leavenworth, many students encountered the doctrinal concepts covered in the curriculum for the first time, and they needed to learn and demonstrate their understanding of that doctrine. Functioning as the Army's common language, doctrine provided the foundation for how units would operate; the goal was to establish a common understanding that provided the essential ability to anticipate friendly units' and fellow commanders' actions and communicate in a standard set of terms. Thus, the school solution may have frustrated students who objected to the implication that they represented the only way to solve a problem or accomplish a task. However, the school solution actually provided a method that reflected current doctrine, enabling all students to develop a vital common understanding of that doctrine. Before one can diverge from doctrine effectively, one must understand it. Officers developed the latter skill at Leavenworth, before learning the former skill at the Army War College. As Matheny puts it, "Leavenworth was about training; the War College was about education."[198]

Another standard-bearer for the traditional narrative of U.S. Army ineptitude during the interwar period, David E. Johnson, has criticized the Army officer education system in his much-cited book, *Fast Tanks and Heavy Bombers*. Unfortunately lumping together what happened at the Leavenworth schools and the Army War College, Johnson has written, "The Army school

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[196] H. B. Crosby, "Orientation Lecture to the Army War College Class of 1924-25." Quoted in Matheny, *Carrying the War to the Enemy*, 57.

[197] Ibid.

[198] Ibid. Matheny is correct in principle, in that the Leavenworth experience provided a chance to learn existing doctrine, as compared to the War College, which encouraged of innovative problem solving; however, as described below, the War College involved both education and training.

system, rather than serving as an agent for change, focused almost completely on accepted doctrine." After describing the echelons each school focused on, Johnson claimed: "Collectively, the schools focused on developing officers who could supervise the mobilization, fighting, and supplying of a mass army along World War I lines." Johnson then argued, "Although the Command and General Staff School at Fort Leavenworth, was generally viewed as the 'source of Army doctrine and procedure,' it was clearly a captive of the Army's sanctioned doctrine. Instruction remained riveted on conservative doctrines, largely ignoring emerging, competitive perspectives such as mechanization and air power."

Johnson made a common and fundamentally flawed argument by conflating correlation with causality. He failed to acknowledge the need to establish a common understanding of the Army's accepted doctrine among the tiny core of Regular Army Officers that would oversee the rapid expansion and training required during a large-scale mobilization like the one they had experienced in the previous war. More important, he did not understand or acknowledge the significant differences between the missions and instructional methodologies that distinguished the Leavenworth Schools and the Army War College. In particular, in his goal to prove the Army's neglect of emerging technologies in its officer education system, he failed to mention the many lectures and committee work Army War College students took part in at Carlisle Barracks, which included significant emphasis on topics like air power, mechanization, and motorization – the very subjects he claimed the Army school system neglected.[199]

[199] Johnson, *Fast Tanks and Heavy Bombers*, 223-24; as an example of Johnson's oversight, the 1928-29 Army War College G-3 Course dedicated one committee to current and future Air Forces, antiaircraft artillery, and joint employment, and another to the study of mechanized forces. See John L. DeWitt, "Course at the Army War College, 1928-1929. G-3. Outline of the Course. Committee Directives. September 4, 1928, to October 6, 1928," September 4, 1928, Military History Institute, AWC Curricular Archives, 1928-1929.

In his effort to prove the neglect of emerging technologies in the Leavenworth curriculum caused Army officers' ignorance or distrust of their potential, Johnson failed to grasp the fundamental difference between the purpose of the Leavenworth and the War College experience. At Leavenworth, officers learned the language and procedures of their profession, leading naturally to a focus on matters already covered in existing doctrine. At the War College, usually after two to four years' service in the field, officers explored topics both applicable to higher-level command and staff work, and related to emerging doctrine and nascent technologies. Army officers have long known that one must first understand doctrine before consciously diverging from it. All mid-level officers require the former skill, and the Leavenworth Schools focused on instilling it in its students; not all officers required the latter skill, and those that did learned how, in the 1920s and 1930s as today, at the War College or other post-Leavenworth educational institutions.

While the McGlachlin board did agree on the issue of school reorganization, other issues in addition to time between attendance at Leavenworth and the War College remained in dispute. Harold B. Fiske, Chief of the Training Branch of the War Department G3 and a member of the McGlachlin board, authored a "minority report" that Ball described as "an interesting scheme." Fiske proposed a functional alignment of the school system rather than one based on which echelons each school focused on in its curriculum. He recommended Leavenworth return to its pre-war focus on "the serious study of battle, where tactical doctrine would be developed, taught, and disseminated to the Army." The War College would focus on "the management of raising, training, supplying, sustaining, and moving armies and all components of armies. For the elite of the elite, there was to be the study of high command." While interesting, one can only speculate

how this scheme might have worked, since the Army remained committed to a school system delineated by "branch of service and tactical echelon," Ball concluded.[200]

In May 1922, having weighed the various recommendations and dissenting views produced by the McGlachlin Board, Pershing made his decision. He concurred with the consolidation of schools at Leavenworth into one institution to be named the Command and General Staff School (CGSC), to which selective entrance would enable 250 officers per year to attend. He also decided on a two-year period between graduation from CGSC and selection for the Army War College. In terms of curricula, CGSC would instruct its students on matters pertaining to echelons through the army corps, and the War College would focus on the field army and other elements making up the theater of operations. Ball pointed out that a fundamental shift underpinned these decisions – one that bore a strong similarity to the last War College reorganization. Reflecting the 1907 curriculum redesign, Pershing shifted the Army War College's focus from "preparation for war" to a curriculum that devoted at least equal attention to "conduct of campaigns." In other words, Ball argued:

> after Pershing's decision, the study of the totality of the phenomenon of war had to compete with study of the combatant phase. Pershing's decision was not necessarily wrong, but it was limiting. To use Elihu Root's terms, Pershing moved the War College away from the study of the great problems of national defense and toward the narrower problem of military science.[201]

The education system focused on the doctrinal lessons derived from the AEF's WWI experience and sought to correct perceived problems arising from that experience.

By 1922, the War College had adjusted its curriculum and reorganized its faculty to align with the consolidation of the Leavenworth schools, and to match the organization of a wartime general staff, with G-1, G-2, G-3, and G-4 courses that "taught lessons in personnel, intelligence, operations, and supply, respectively. Courses in war plans and command rounded out the early

[200] Ball, *Of Responsible Command,* 184-85.
[201] Ibid., 185-86.

curriculum."[202] The student committees reviewed and proposed updates to existing war plans for the War Department through practical exercises conducted in each course by individual committees of students through use of the applicatory method.[203]

During McGlachlin's tenure as commandant, he sought to improve both joint interoperability and military interaction with civilians in other government departments and leaders of industry. He launched a fundamental shift in focus, rejecting McAndrew's view that the War College should focus on preparing its graduates for the primary role of general staff officer and espousing the view that it should prepare graduates for large unit command. As Pappas has noted, McGlachlin adjusted the curriculum in what he viewed an "unremitting attempt . . . to impress the College with the idea that Command is the great thing in war, the true determinant of success or failure, and that the General Staff officer, while a part of the command, is but an adviser, an agent, a subordinate coadjutor of the Commander."[204] Thus, recent graduates of CGSC encountered a curriculum at the War College based on an educational philosophy that bore little in common with Leavenworth's, and aimed for very different educational outcomes. However, while parts of America recoiled from the notion of war, these institutions, each in their own way, ensured a generation of officers remained steeped in the Army's doctrine and the demands of national mobilization.

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[202] Matheny, *Carrying the War to the Enemy*, 57-58.

[203] According to one senior officer's testimony, instructors at the Army War College encouraged original thought and respected opinions and ideas based on sound reasoning, even if they conflicted with current doctrine, or dealt with issues for which no doctrine existed. John L. DeWitt, "Orientation, the Army War College Course, 1928-1929," September 4, 1928, Military History Institute, AWC Curricular Archives, 1928-1929, 2.

[204] Pappas, *Prudens Futuri*, 115. Pappas argues McGlachlin's influence on the College extended well beyond his tenure there, demonstrated by the later performance of prominent graduates who attended the school after he shaped the curriculum, which remained consistent with his philosophy through the 1920s.

Somewhat contrary to Pershing's guidance, McGlachlin retained his basic philosophy for the War College's chief aims. Pappas credited McGlachlin for a "reorientation of the entire purpose of that curriculum. His insistence that preparation for war in time of peace and the actual conduct of a conflict were not the prerogatives of the military services alone but concerned equally the civilian departments of the Government and the industry of the nation gave to the course of instruction a distinct flavor of what today would be termed 'international relations and political science.'"[205] He also sought to eliminate what he and others viewed as the overemphasis on competition among students by adopting a pass-fail grading system and encouraging cooperative work. In response to high attrition rates during his first year as commandant, McGlachlin took measures to end age waivers (the War Department G-1 had, in previous classes, issued numerous waivers overriding the 52-year old student age limit), and apply more stringent selection criteria.[206]

McGlachlin made significant strides during the 1922-23 class. He selected a student body that possessed a greater variety of experience and background than previous classes. He also shifted the nature of the education away from what Ball described as a "magnified applicatory method to a version of the contemporary graduate school, characterized by individual study and research, a gathering in seminar ('committee work' at the War College), and a reinforcing lecture program." Ball concluded that by the end of the academic year, "the War College had begun moving in a direction quite different from what had become the traditional system of training officers by immersing them in the applicatory method." While the college still lacked

[205] Ibid.
[206] Ball, *Of Responsible Command,* 191-94.

comprehensive examinations and the requirement to write a thesis, groups rather than individuals worked together to find solutions to problems.[207]

Historian Michael Matheny has stressed that the consolidation of the two schools at Leavenworth into one meant that, "the overlap between the two institutions [CGSC and the War College] in operational art virtually ceased." While the Army War College continued to use the same doctrine and texts dealing with large unit operations as at CGSC, it "persisted on its own path of educating students through exercises, lectures, and conferences on joint and combined operations." Meanwhile, the consolidation at Leavenworth led to the production of more graduates, but – most scholars assert – few critical thinkers capable of innovative group work. CGSC instilled doctrine as a common language and way of thinking; the education required to create practitioners of operational art awaited CGSC graduates at the Army War College.[208]

The officer education system continued to evolve even as McGlachlin implemented Pershing's guidance and applied his own philosophy as commandant of the War College. Soon after Pershing modified and approved the recommendations of the McGlachlin Board, he appointed Harold Fiske to review implementation of these decisions. Fiske's assignment was to eliminate overlap between the CGSC and War College curricula. Aided by McGlachlin's assistant commandant, Colonel Edgar Collins, Fiske recommended a program that made no significant changes to the one currently in place under McGlachlin's supervision. However, the Fiske Board did delineate the boundary between CGSC and the War College along unit echelon, rather than functional lines. The Board recommended the following War College Mission statement: "To train officers for (a) high command and staff to include units higher than army corps, (b) the War Department General Staff duty and duty in the office of the Assistant

[207] Ibid., 194.
[208] Matheny, *Carrying the War to the Enemy*, 73-74.

Secretary of War, (c) Corps Area Command and General Staff duty." Pershing approved this mission, which also made clear the echelons in which graduates would serve by adding to the Board's recommendations the following statement: "The War College course will include the tactics of a typical army, acting independently or within an army group, covering phases of concentration, advance, deployment, combat and pursuit, with the general details of supply incident thereto."[209] With this guidance, the War College assumed responsibility for all matters related to preparation for war, from the tactics and logistics of several echelons of Army organizations, to joint operations, to the complexities associated with economic and industrial mobilization.

Pershing ordered the new mission supplemented by his guidance to take effect during the 1924-1925 academic year. By then a new commandant would oversee its implementation. The War Department reassigned McGlachlin to command the Panama Division, effective upon graduation of the 1923 class (McGlachlin chose to retire instead), and selected Major General Hanson E. Ely as his successor. It remains unclear whether McGlachlin's relief stemmed from a difference of philosophy with Pershing or the more routine general officer reassignment cycle. Ball has written: "it was Ely who had convinced Pershing that the War College should teach field army operations, and that time for this instruction could be provided by reducing the time devoted to the G-1 and G-4 courses. Ely now had the opportunity to prove his thesis." Based on the timing of Ely's relief of McGlachlin, the curriculum for 1923-1924 remained essentially the same as McGlachlin planned it – Ely therefore concerned himself with implementing the many changes slated to take effect during the 1924-1925 class – one that posed numerous challenges.[210]

[209] Ball, *Of Responsible Command,* 194-95.
[210] Ibid., 195-97.

First, the new curriculum would add the necessary content to address field army and army group operations. Further complicating matters, the 1924-1925 War College class would be the first to contain graduates from the two different Leavenworth configurations, with half being graduates of the two-year course, a quarter being graduates of the one-year course, and another quarter having no Leavenworth experience at all. Notably, little room remained in the curriculum for training officers for service in the office of the Assistant Secretary of War because the increased focus on tactics shunted aside topics related to industrial mobilization. Therefore, while Matheny correctly noted that Leavenworth served more for indoctrination and the War College provided instruction in operational art, neither school focused on preparing officers for the demands of national mobilization for war, risking challenges much like those faced in the difficult preparation for AEF deployment to participate in World War I.

During his four-year tenure as commandant, Ely adjusted the curriculum in an effort to cover all the required elements, while providing at least a basic introduction to the issues related to industrial mobilization. The creation of the Army Industrial College in 1924, considered a CGSC equivalent but devoted to the education of about thirty-five procurement branch officers per year, helped seed each War College class with a small number of students possessing a reasonably sound background in mobilization issues. Meanwhile, the War College curriculum focus on mobilization narrowed almost exclusively to issues of manpower by 1927. However, the War College did benefit from an increasing emphasis on war planning committee work on actual War Department "rainbow plans," even though these exercises neglected considerations of strategy, assuming "simply that a war had begun and that the object of war was obviously, victory."[211]

[211] Ibid., 198-99.

Several other modifications, successes, and failures occurred under Ely's watch. However, indisputably when the final class graduated under his supervision as commandant, the War College remained in a quandary, torn between competing priorities. In his effort to cover all the required curricular topics adequately, Ely recognized that the requirement to prepare students both for service on the War Department General Staff and to deal with the challenges of running a field headquarters left little time to confront issues of national mobilization. By 1927 he still had not found an adequate balance, and little evidence of McGlachlin's broad-approach philosophy remained. By Ball's estimate, "all of Ely's four years were test years. It was Ely's successor who finally articulated the role of the War College in a way that brought an end to experimentation and set the War College on a bearing that remained relatively constant."[212]

Major General William D. Connor of the Corps of Engineers replaced Ely as commandant in November 1927. Thus, Connor had been the commandant for one year before McNair arrived at the War College as a member of the 1928-29 class. Army Chief of Staff Charles P. Summerall, who had replaced Pershing's successor John L. Hines in November 1926, made no changes to Pershing's guidance during Ely's tenure as commandant.[213] However, in 1927 he began to make changes at both Leavenworth and the War College, partially reversing Pershing's decisions. To resolve several problems caused by compression of the School of the Line and the General Staff School at Leavenworth into the single-year Command and General Staff School, Summerall directed lengthening of that course to two years beginning in 1928. He did not return responsibility for field army operations to CGSC; that instruction remained the responsibility of the War College. However, he approved a new Army War College mission, including a fundamental shift that differentiated between two basic types of activities – training

[212] Ibid., 205-06.
[213] Ibid., 198.

and instruction. This distinction recognized that certain duties related to conducting Army and joint operations on a general staff required specific skills, and the War College bore the responsibility of providing the necessary training to ensure its graduates possessed those skills. By contrast, other duties (for example, those related to War Department or Assistant Secretary of War staff duties), required more than simple proficiency in certain skills, and the War College could only go so far in providing instruction to help its graduates develop the necessary intuition and insight.[214]

Connor received these instructions in December 1927, a month after assuming duties as commandant. However, with the 1927-1928 class already in place, Connor left their curriculum essentially unchanged, while working with his faculty to determine how to make the necessary adjustments for the following year. Two faculty members in particular, Troup Miller (a G-3 instructor) and Walter C. Sweeney (head of the G-1 department) provided Connor detailed and influential advice. Miller wrote a succinct history of the curriculum since 1919, using it to support his argument that war-planning instruction had gradually emerged as the primary topic in the curriculum, at the expense of both field operations and command. Sweeney made the important point that, as Ball put it, "past rhetoric about 'command versus staff' and 'operations' tended to obscure the fundamental problem facing the War College. That problem, as Sweeney saw it, was that the War College had two related but nonetheless distinct fields of interest. One field was the preparation for war; the other was the conduct of war." Based on Sweeney's advice,

[214] Ibid., 210-11. Interestingly, the War Department assigned within the realm of instruction two fields not previously under the War College's explicit purview: "to instruct in those political, economic, and social matters which influence the conduct of war [and] . . . in the strategy, tactics, and logistics of large operations in past wars, with special reference to the World War." The latter modification to the War College's mission indicated a return to the history-based instruction favored by McGlachlin, which gradually disappeared from the War College curriculum during Ely's tenure as commandant. AG to Commandant, 22 December 1967, File 74-50, Army Regulation 350-5, Change 5, 30 January 1931, par. 3f(1), as quoted in Ball, *Of Responsible Command*, 211.

Connor seems to have pursued a curriculum redesign founded in a Clausewitzian conception of war, and he intended the redesign to lead not just to a rational curriculum, but also to one with rationality easily apparent to the students.[215]

In March 1928, Connor issued guidance to his faculty regarding how they would modify the curriculum for the 1928-1929 class. This mostly involved streamlining both the curriculum and faculty organization. They would divide the course itself into two phases; "Preparation for War," and "Conduct of War." They would cut the faculty from seven sections to four: G-1, G-2, G-3, and G-4 (eliminating Command, Assistant Secretary of War, and War Plans divisions). Connor expressed his logic for the faculty realignment as logical based on the operation of actual units which, when operating effectively, could manage all activities pertinent to the preparation for and conduct of war in the four primary staff sections (based on the original French model). Connor also had no qualms about eliminating the Command section. He held strong views regarding the much-debated topic – whether command required special training. Connor believed the same education would prepare an officer for service on a general staff or large unit command; the characteristics required of a commander stemmed more from natural qualities than anything learned in a classroom. He believed the schools should produce competent officers, and the Army's fielding of competent commanders relied on an effective selection process.[216]

Connor made other less significant changes to the War College curriculum. For example, he added more industrial mobilization problems to the curriculum, and increased the length of the war plans course by six weeks. Thus, McNair and his peers participated in multiple

[215] Ibid., 211-12. Ball notes Sweeney likely drew this insight from the War College Library's translation of Carl von Clausewitz's *vom Krieg*, in which Clausewitz distinguishes between the sole two activities related to war – preparation for war, and war itself. Ball quotes an earlier version, but for the relevant passage see Carl von Clausewitz, *On War*, trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1984), 127.

[216] Ball, *Of Responsible Command*, 212-13.

committees, enjoying several opportunities to serve in peer leadership positions while working on actual war plans that involved not just military, but also industrial and political planning considerations.[217]

The War College assistant commandant, Colonel J. L. De Witt, provided an orientation to the 1928-1929 class on 4 September 1928. His orientation consisted of "a general outline of the course, its scope, the organization for and the methods of work." He also addressed the recent changes caused by the consolidation of the Leavenworth schools into the Command and General Staff School, describing the new War College mission as consisting of four main goals as prescribed in Army Regulations 350-5:

> (a) To train officers in the conduct of field operations of the army and higher echelons; and to instruct in those political, economic and social matters which influence the conduct of war.
>
> (b) To instruct officers in War Department General Staff duties and those of the Office of the Assistant Secretary of War.
>
> (c) To train officers for joint operations of the Army and Navy.
>
> (d) To instruct officers in the strategy, tactics and logistics of large operations in past wars, with special reference to the World War.[218]

DeWitt summed up the school's purpose in simple terms – the faculty sought to prepare officers of proven potential for service on the General Staff of the War Department, or on the general staff or as the commanders of large units, and to conduct effective joint planning and operations with their fellow officers in the U.S. Navy.[219]

DeWitt also told the incoming class, "the work of the Faculty and the students should be so intimate and closely interwoven that all will get the benefit of the experience of his fellows. Apart from the course, the bringing together of so many men from all the activities of the Army and Navy is in itself most beneficial." DeWitt made it clear the faculty considered the students

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[217] Ibid., 209-19; Gole, *The Road to Rainbow*, 18-19, 29-32.
[218] DeWitt, "AWC Orientation," 1.
[219] Ibid.

"selected officers of proven efficiency, as demonstrated by their records." Therefore, the school was not concerned with testing or weeding out of the students – its sole focus was to educate and train them so they could reach their maximum potential.[220]

DeWitt addressed the use of the two terms "train" and "instruct" in the War College mission, demonstrating that he, like Connor, understood differences in interpretation of these terms existed among U.S. military officers. As DeWitt put it,

> Exception may properly be taken to the words "train" and "instruct", they being synonymous as used, because the course here can hardly be expected to actually "train" an officer, but rather to give him an opportunity to gain a fundamental knowledge of the basic principles essential to the performance of Command and General Staff duties. The education of a General Staff officer must embrace a familiarity with what is necessary to qualify and officer for high command, for the education of the higher leader and of the General Staff officer must be along the same lines: the suitability, however, of an officer so educated for either duty is dependent on his temperament and his natural qualities.[221]

DeWitt emphasized the importance in an institution like the War College of encouraging initiative and original thought so long as individuals based their ideas on sound reasoning and mastery of the relevant facts. He described the instruction the students would receive as indirect rather than direct, with the faculty planning courses and supplying references, while giving the students full latitude to reach their own opinions, conclusions, and recommendations. DeWitt then briefly described the organization of the course. He explained the breakdown of the course into two approximately equal parts. The first, Preparation for War, would last about five months and "terminate in the actual preparation of one or more war plans." The second, Conduct of War, would take place over the next four months, culminating in "one or more joint Army and Navy operations."[222]

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[220] Ibid., 1-2.

[221] Ibid., 1.

[222] Ibid., 1-4. Later in the orientation, DeWitt emphasized that while some debate surrounded the division of the curriculum into command instruction and staff instruction, this did not imply a fundamental difference between the two. Rather, he pointed out that every function the General Staff performed comprised a command function, but the General Staff itself possessed no command authority;

DeWitt next described the individual study project, which required that each member of the class prepare an individual study on a subject of the student's choosing (once approved by the Commandant). DeWitt explained these studies should be broad enough to "require General Staff action in that it is of interest to the Army or Navy, or both." He also told the students they should choose topics that addressed questions "that now need attention or will need attention in the near future, i.e., what you consider as one of the more important problems facing the Army or some branch thereof." He emphasized that each study's "solution of its questions should contribute something of value to the betterment of national defense."[223]

DeWitt made some very interesting comments about committee work that not only revealed the nature of the War College's educational environment, but also demonstrated its similarity to the best modern professional military education (PME) institutions. Explaining that the students would complete much of their work in general staffs or committees, DeWitt emphasized the criticality and challenging nature of this type of work. In particular, he highlighted the role of the chairman, who must lead his committee while "lacking the powers of command" – referred to today as peer leadership, and requiring "tact, judgment, patience, and forbearance." By providing all students opportunities to serve as either committee or sub-committee chairmen or leaders of staff sections, the faculty would teach its students the similar but distinct skills of coordination and cooperation.[224]

DeWitt pointed out that the faculty would disregard rank when making these assignment decisions, and "the injection of it into consideration after assignments are made is productive of harm." He also emphasized the importance of creativity and initiative in committee work,

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for this, the relied on the commander. Therefore, every General Staff officer must learn to think, act, plan, and lead like a commander, even when not in a command position. This teaching philosophy remains relevant in America's modern officer education system. See ibid., 10.

[223] Ibid., 5.

[224] Ibid., 5-6.

stating, “The officer who wants to follow a model has not an aptitude for General Staff work.” He stated many students might complain that they needed more time to complete their committee projects, but not only did the college have to fit many topics into a relatively short period, but the students would benefit from learning to work under pressure. Michael Matheny has emphasized that the work conducted in these committees contributed significantly to the War College students’ understanding of operational art by making them effective staff officers, capable not just of combat leadership, but also of conducting detailed war planning as leaders or staff officers working in a cooperative spirit.[225]

McNair’s War College education began with the Preparation for War course, conducted in sections aligned with those of a general staff. The Operations and Training Division (G-3) sub-course came first, beginning with an orientation on September 4, 1928 from the Director of the G-3, Colonel E.H. Humphrey, a cavalry officer. The first two weeks consisted of a series of lectures on topics including “The Development of the War Department General Staff and its Relation to other War Department Agencies,” “The Joint Army and Navy Board and the War Plans Division of the War Department General Staff,” “Naval Organization,” and the “War Department General Mobilization Plan.” Committee work began on September 14, 1928, with eight committees running concurrently, culminating in committee presentations and assessments involving the entire class at the end of the course. The committees focused on a variety of topics, including: (1) plans and preparations for the Franco-Prussian War; (2) plans and preparations for the Russo-Japanese War; (3) development of rules, regulations, and procedures for map maneuvers and field exercises; (4) U.S. War Department plans and preparations for wars of the United States from the Revolutionary War through the World War; (5-7) German, British, and

[225] Ibid., 6-7; Matheny, *Carrying the War to the Enemy*, 57-58.

French land forces plans and preparations for the World War; and (8) British and German naval war plans and preparations for the World War.[226]

During the approximately two weeks of committee work, the students also participated in a variety of conferences where they gained insights that contributed to the findings in their final committee reports. The conferences addressed topics including the future organization and employment of Air Forces, War Department mobilization and concentration plans, peacetime U.S. military policy and defense requirements, and the organization, equipment, and employment of mechanized forces in future wars.[227]

McNair first served in Committee 3, chaired by Lieutenant Colonel T. W. Brown of the Infantry, tasked to study "Rules, regulations, and procedures for the conduct of Map Maneuvers (War Games) and Field Exercises at the Army War College." As described in the G-3 Course Orientation, Committee No. 3 served a unique purpose. Given the commandant's intent to increase the emphasis on the Conduct of War Course during the 1928-1929 academic year, Humphrey directed Committee No. 3 to conduct its work with the intent of improving the quality of war games and exercises planned to take place in the second half of the year.[228] The committee produced a thirty-page report, consisting of a synopsis and two detailed supplements. Basing their research on both the particular needs and facilities of the War College, and observations from students and faculty who had participated in prior maneuvers and war games,

[226] John L. DeWitt, "Course at the Army War College, 1928-1929, G-3, Outline of the Course and Committee Directives," September 4, 1928, Military History Institute, AWC Curricular Archives, 1928-1929, 1-2.

[227] Ibid., 3-8. These records demonstrate the officer education system did not neglect these topics in the 1920s and 1930s as some works suggest, perhaps due to excessive focus on Leavenworth school curricula rather than balanced analysis that includes a comprehensive review of topics covered at the Leavenworth Schools, the Army Industrial College, and the Army War College.

[228] E. H. Humphrey, "Course at the Army War College, 1928-1929. G-3. Orientation.," September 4, 1928, Military History Institute, AWC Curricular Archives, 1928-1929, 2-3.

the committee developed a set of recommendations specific to the war college, but also applicable to the general role of map maneuvers and field exercises in military education.[229]

Supported by a two-page bibliography that supplemented the committee's review of the War College Mission and the Commandant's Directive to the class, the members completed their report with unanimous approval. It contained the following section describing the "Place of Map Maneuvers and field exercises in military education."

> The committee's conception of the place of map maneuvers and field exercises in military education is that they serve best as a means of giving practice in the application of the principles of strategy, tactics, and logistics to the solutions of concrete military problems, and also that they serve as a means of testing proposed military operations, thus determining the soundness and adequacy of the plans for said operations.[230]

The committee relied on a conference involving the whole War College class, in which their peers identified the common problems they had experienced with various war games and field exercises during their previous assignments. The report contained nine common observations, but emphasized a few key issues that revolved around umpiring. Successful, productive war games and exercises relied primarily on results delivered in a competent and timely manner by a single, well-prepared umpire. This required both adequate training and preparation of individual umpires, and effective exercise design to enable umpires to familiarize themselves with the situation, make fair and consistent decisions based on commonly understood rules, and deliver their decisions rapidly to avoid artificial delays in execution.[231]

The conference yielded several additional observations. Officers expressed frustration with the frequent shortage of sufficient information about the enemy, even when blue forces acted appropriately to obtain it. Many had experienced "unsound situations, due usually to a failure to carry the preliminary play far enough to discover them." This usually led umpires to

[229] T. W. Brown, "Course at the Army War College, 1928-1929, G-3: Report of Committee No. 3," October 4, 1928, Military History Institute, AWC Curricular Archives, 1928-1929.
[230] Ibid., 2.
[231] Ibid., 3.

inject unrealities "into the situation to prevent the error impeding the play. Dissatisfaction and loss of interest among the players" usually resulted from this problem. The conference participants also objected to the practice of jumping ahead to a new phase of the operation for the sake of time management, rather than letting operations play out to their logical conclusion. They lamented the frequent neglect of logistics considerations in exercise design and execution. Finally, they remarked on the routine failure to provide adequate maps and other necessary materials to all war game or exercise participants, including umpires. The committee highlighted the most significant observation in the first paragraph of the section summarizing the conference findings: "The success or failure of an exercise depends largely upon the personality of the umpire. Careful selection of umpires is essential."[232]

The committee concluded that Leavenworth's "Methods of Training (Provisional)" of 1925 covered the topic adequately and advised the faculty make the manual available to all appropriate parties participating in future War College war game and exercises. To correct deficiencies in execution noted by the committee, they recommended several basic changes, all involving umpire procedures. These included timing the exercises appropriately to ensure umpires possessed adequate knowledge of the situation to make logical decisions, assigning a single umpire with the authority to render timely and final decisions, and ensuring umpires conducted sufficient preliminary play to ensure the war game would not devolve into an unrealistic situation. The committee also recommended assigning additional umpires to various supporting units, rather than organizing them along functional lines (i.e., G-1, G-2) which inevitably led to situations in which umpires had to make decisions in situations for which they found themselves unprepared.[233]

[232] Ibid.
[233] Ibid., 4.

The committee not only provided a detailed bibliography of existing documents necessary to run a war game or exercise effectively; they also wrote in Supplement No. 1 of their report a guide to "The Conduct of Map Maneuvers at the Army War College." This supplement described in detail the duties of the umpire, assistant umpire, and players, and procedures for the conduct of war games and exercises. Two particularly helpful charts at the end of the supplement depict the organization and coordinating relationships of the umpire, his staff, "red" and "blue" liaison sections, and the players, intended to maximize efficiency and effectiveness of the umpiring process.[234]

Finally, in Supplement No. 2, "Compilation of Reference Data," the committee provided a standardized set of data to guide the decisions of umpires. This data dealt with issues ranging from damage credited to aircraft based on conditions such as altitude and target type, effectiveness of anti-aircraft artillery, space and time requirements for movement of various unit types, logistic requirements and loss calculations based on the type of combat action, and combat effectiveness of various ground units. Despite their report's level of detail, the committee members acknowledged they had not developed a comprehensive list of data. In fact, they provided a list of additional data the War College faculty and student body should compile and add to the supplement to improve the completeness and accuracy of the data for use in future war games and exercises. Nevertheless, the committee provided remarkably detailed data given the time available, the small size of the committee, and the fact that no actual large-scale maneuvers of the sort simulated at the War College had taken place since before the Great War. This

[234] _____, "Course at the Army War College, 1928-1929, G-3: Report of Committee No. 3, Supplement No. 1," October 4, 1928, Military History Institute, AWC Curricular Archives, 1928-1929.

supplement also includes a detailed, full-page bibliography of additional sources, from doctrinal manuals to joint board results and test results, to improve the quality of umpire decisions.[235]

By the end of the G-3 course, McNair benefited from many lectures on a wide range of current topics, and participation in a number of student conferences to support ongoing committee work. He possessed a unique expertise gained through his immersion in a detailed study of the conduct of war games and exercises as a member of a five-man committee assigned to study this topic. McNair's committee produced a detailed report that described common problems with war games and exercises, and identified the root causes of those problems. Most importantly, the committee recommended solutions, preparing both a guide to the conduct of maneuvers and a detailed set of data to facilitate umpiring – the most important, and typically the most flawed component of previous exercises, both at the war college and in the students' previous experience.[236]

Upon completion of the G-3 Course in early October, McNair and his classmates moved on to the G-1 (Personnel) Course. While shorter (only two and a half weeks, compared to over a month in the G-3 Course), the G-1 Course covered a great deal of ground, almost exclusively related to personnel-related mobilization issues. These centered on procurement (either voluntary or through some form of conscription or selective service), the role of the Reserves and the National Guard in time of war, and the issue of personnel replacements and morale in deployed armies. Following the same pattern as the other courses, the G-1 Course included a series of lectures, mostly from senior personnel in the War Department G-1 and the Adjutant General's office. However, the lecture series also included a diverse range of other speakers. A representative of the Navy Personnel Office spoke about naval personnel plans. The Chief of the

[235] _____, "Course at the Army War College, 1928-1929, G-3: Report of Committee No. 3, Supplement No. 2," October 4, 1928, Military History Institute, AWC Curricular Archives, 1928-1929.

[236] _____, "AWC 1928-29, G-3 Course: Report of Committee No. 3."

Militia Bureau discussed federalization of National Guard forces in time of war. The Judge Advocate General explained the legal relationship of the War Department to the other departments of government. Finally, Mr. C. R. Dooley, a representative of industry, discussed America's civilian wartime personnel concerns, since the World War had demonstrated the competing priorities of mobilizing men to fight, and keeping men on the production lines so industry could produce adequate war materiel.[237]

Following the lectures, the students participated in a series of conferences on the topics outlined above. Just like in the G-3 Course, the findings of these conferences supported the work of the student committees, of which eleven convened to study some aspect of personnel mobilization for war. While each committee reported on a significant issue related to personnel acquisition and retention (in both the military and industry), two of them stand out as particularly interesting. The first, Committee No. 5 on "Reserve Systems for the Regular Army and National Guard," bears particular significance because McNair served as its chair. The second, Committee No. 7 analyzed the issue of "Replacements," a topic the War College faculty deemed a major problem that the Army had never solved satisfactorily and must solve before undertaking any future large-scale mobilization.[238]

In accordance with the G-1 Course committee directives, McNair's Committee No. 5 conducted "A study of reserve systems which might be adopted to make up deficiencies in the present peace strength and organization of the Regular Army and National Guard and thus provide more adequate forces for immediate and effective employment in the outbreak of an emergency." The directive pointed out that reductions in the size of the Regular Army and

[237] John L. DeWitt, "Course at the Army War College, 1928-1929. G-1. Outline of the Course. Committee Directives. Orientation. October 8, 1928, to October 27, 1928.," October 8, 1928, Military History Institute, AWC Curricular Archives, 1928-1929, 1.

[238] Ibid., 1-11.

curtailment of the development of the National Guard meant the nation would suffer "an acute shortage of trained men available for active operations at the outbreak of a war." Therefore, the committee should determine whether the Army could overcome this challenge through a system of reserve forces "obligated to join the organized forces when emergency requires." The directive also highlighted the fact that "G-3 is greatly interested in this study also, and the G-3 viewpoint should not be lost sight of in reaching conclusions."[239]

In his *History of the United States Army* Russell Weigley provided a succinct explanation of the problem McNair's committee confronted. Observing that "America in the 1920's was dedicated not only to the dream that wars had ended forever, but even more strongly to the more prosaic fetish of economy in government. The goals of the National Defense Act of 1920 broke down because Congress and the executive gave them lip service but little practical support." Therefore, not only did the Regular Army receive funding adequate to support only slightly more than half its authorized strength – the National Guard and Organized Reserves suffered as well. Limited appropriations meant the National Guard also only reached about half its authorized strength throughout the 1920s. Further, while the ROTC system provided a pool of Reserve officers, its Organized Reserve Enlisted Reserve Corps "was practically nonexistent because there were no means of recruiting it."[240] McNair's committee faced a daunting challenge since the Army could do little to resolve these issues.

McNair organized his committee into four subcommittees, the first three composed of two officers each, and the fourth made up of five officers. The first subcommittee studied the reserve systems of foreign armies, the second the reserve system of the U.S. Navy (including the Marine Corps), and the third the reserve system of the National Guard. The fourth subcommittee

[239] Ibid., 4, 10.

[240] Russell F. Weigley, *History of the United States Army: Enlarged Edition* (Bloomington, IN: Indiana University Press, 1967), 400-01.

required several more officers because of its particularly challenging task – it sought to "develop a system which will provide an enlisted reserve for the Regular Army, including a draft of necessary legislation and an estimate of the annual cost involved."[241]

The first (and shortest) subcommittee report found that of several foreign nations' reserve military systems studied, "the reserve system of Great Britain is the most nearly applicable to the needs of the United States, since it is based on voluntary recruitment. The various categories are based on state of training and degree of availability. Most categories receive training annually. All are paid."[242] The subcommittee, consisting of Majors Harding Polk and Troy H. Middleton, came to this conclusion after comparing the recruitment and reserve systems of eight countries – seven of which relied at least to some degree on compulsory systems, although in some countries, soldiers could choose whether to continue voluntary service in the reserves after their compulsory period ended. The subcommittee used pre-war data for Germany, since the Treaty of Versailles forced them "into the Voluntary classification with a standing army with no reserves and a long period of enlistment." Since in the event of a future war no reason existed to assume Germany would continue to abide by these constraints, the subcommittee chose to rely on pre-war statistics for their study instead of data drawn from the system imposed after the World War.[243]

The subcommittee summarized the overall workings of the systems they compared in two charts. The first chart depicted key data regarding the seven countries it analyzed that employed

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[241] Lesley J. McNair, "Course at the Army War College, 1928-1929. G-1. Report of Committee No. 5. Subject: Reserve Systems for the Regular Army and National Guard," October 24, 1928, Military History Institute, AWC Curricular Archives, 1928-1929.

[242] _____, "Course at the Army War College, 1928-1929. G-1. Synopsis of Report. Committee No. 5.," October 24, 1928, Military History Institute, AWC Curricular Archives, 1928-1929.

[243] Harding Polk, "Course at the Army War College, 1928-1929. G-1. Supplement No. 1 to Report of Committee No. 5. Subject: The Reserve Systems of Foreign Countries," October 24, 1928, Military History Institute, AWC Curricular Archives, 1928-1929.

reserve systems based to some degree on compulsory service: Holland, Belgium, Switzerland, Italy, France, Japan, and Germany. The chart compared the age range at which countries deemed men liable for service, the age of conscription, the period of active training, the total numbers of men in both the active force and reserves, and the number of years men spent in the reserves after active service. Interestingly, the subcommittee found that Switzerland possessed the best-trained Army, even though only 494 personnel served on active duty, with over 300,000 in reserve status. The chart also indicated that all countries recognized various classes of reserves depending on age limits, used some form of voluntary service after the compulsory period ended, conducted periods of active training for reservists who remained in "1st class," and did not all induct and train the entire pool of available conscripts each year. [244]

Only Great Britain used a purely voluntary reserve system. For all recruits, this system included a total of at least twelve years of service, consisting of three to nine years of "service with colors" (active duty service in the Regular Army or Territorials) with the remainder of the twelve-year commitment served in a reserve status. The subcommittee summarized the overall workings of this system in a separate chart, depicting the various career paths a soldier could follow depending on whether he chose to serve with the Regular Army for some period before transition into the reserves, or served initially with the "Territorials" (Militia). Regardless which path a soldier chose, once on reserve service they all attended one twelve-day camp and twenty drills annually, and all received pay for this service. If recalled, all soldiers returned to active service at the rank achieved upon transition to reserve status. Despite its purely voluntary nature, the subcommittee found this system had enabled Great Britain to "produce about 100,000 Class I Reserves. The system appears sound."[245]

[244] Ibid.
[245] Ibid., 2-3, Chart No. 2.

The second subcommittee studied the reserve system of the U.S. Navy and Marine Corps. Led by a Marine, the subcommittee consisted of Lieutenant Colonel W.N. Hill and Major W.M. McCaughey. In a very short report (three pages with a five-entry bibliography), the subcommittee pointed out that in 1925 the Navy Department produced the Naval Reserve Act. Once it became law in July 1925, the act created three classes of reserve forces within the Navy: the Fleet Naval Reserve (F), the Merchant Marine Naval Reserve (M), and the Volunteer Naval Reserve (V). The Fleet Naval Reserve, divided into five sub-classes, consisted of approximately 18,700 men and, depending on sub-class, required personnel to perform some period of ship duty for pay annually, and remain ready to augment the active Navy if required. The Merchant Marine, serving a commercial function but prepared to augment the Navy's transport fleet if required, had "no analogous class in the Army." Finally, the Volunteer Naval Service sought to provide additional personnel for use in time of emergency. This force had no annual service requirements and received no pay, even when attached to divisions of the Fleet Naval Reserve for voluntary training.[246]

The Marine Corps Reserve, also formed under the provisions of the Naval Reserve Act of 1925, consisted of two parts: the Fleet Marine Reserve and the Volunteer Marine Corps Reserve. Much like the Navy's Fleet Reserve, the Fleet Marine Reserve consisted of four classes depending on prior rank and time of service. Also like in the Navy system, class determined pay when serving on active duty for annual training periods. The Volunteer Marine Corps Reserve differed only from the Navy's in that enlisted men must pass a physical examination to join. Otherwise, no annual training requirements (or pay) stemmed from service in this Reserve force. Combining both categories, by 1928 the Marine Corps had formed a reserve consisting of 500

[246] W. N. Hill, "Course at the Army War College, 1928-1929. G-1. Supplement No. 2 to Report of Committee No. 5. Subject: The Reserve System of the Navy and the Marine Corps," October 24, 1928, Military History Institute, AWC Curricular Archives, 1928-1929, 1-2.

officers and 8,400 enlisted men, but of that total, about 5,000 enlisted men served in the Volunteer Reserve and had received no training.[247]

The subcommittee concluded, "The Naval Reserve System is sound and workable." They found it had produced sizable numbers of men ready to augment the active Navy and Marine Corps in time of emergency. However, the committee members recognized "some of the features of the Naval Reserve system are not desirable for the Army, especially that which provides for the former enlisted men of 16 or 20 years service being held in the reserve with 1/3 to 1/2 of their base pay. This would be an expense that would be considerable and constantly increasing." The class found most useful as a model for an Army Reserve transferred men who had completed only four years of active duty to the Reserves, with minimal obligations for training (and similarly low pay) along with the commitment to mobilize if needed and rejoin the active force. Thus, the report concluded with the statement that the Navy and Marine Corps Reserve systems provided suitable models on which to base an Army Reserve system.[248]

The third subcommittee found itself tackling a rather more contentious and problematic issue – that of the reserve system for the National Guard. The subcommittee soon discovered two rather significant issues. First, the National Guard was recruiting personnel to serve as reservists to augment National Guard units in the event of mobilization when a viable Army Reserve system did not yet exist for the Regular Army. Second, many of the National Guard's recruits served as reservists either aligned to augment an existing unit, or unaligned, when 368 units (out of 3,894 total units in the National Guard Program) remained unformed. Although plans existed to create these remaining unformed units by 1933, the board found the allocation of recruits as

[247] Ibid., 2-3.
[248] Ibid., 3.

reservists aligned with existing units a waste of personnel resources when several hundred authorized units remained unformed.[249]

Further, the board pointed out that while federal law provided for a system of reserves to bring the National Guard up to full strength in time of emergency, and made provision for these reservists to attend field training as opportunities and funding allowed, "as a matter of fact, funds are never available. Since men receive very little training before becoming eligible to enter the reserve and receive no training while in the reserve, it would appear that the value of a reservist over a new recruit is quite small." The board interviewed "officers on duty in the Militia Bureau, officers who have been on duty with the National Guard, State Adjutant Generals, and National Guard officers" to support their findings. Three key weaknesses of the current system of National Guard reserves emerged from their research. Lack of pay deterred recruits from entering the reserve or from conducting training once inducted, National Guard unit commanders lacked the time to recruit active personnel and reservists, and "The enrollment of reservists has not been pushed from above as no trouble is anticipated in filling up units in case of emergency."[250]

The subcommittee found that the lack of pay served as the major deterrent to building up a National Guard Enlisted Reserve. However, it did not recommend provision of funding for National Guard Reserves given the fact that the Regular Army currently lacked any enlisted reserve system, and the need for reserves for the Regular Army outweighed any similar need for the National Guard. In short, any resources committed to forming an enlisted reserve should go toward creating a reserve system for the Regular Army first. They also pointed out that aligning

[249] Paul C. Paschal, "Course at the Army War College, 1928-1929. G-1. Supplement No. 3 to Report of Committee No. 5. Subject: The Enlisted Reserve System of the National Guard," October 24, 1928, Military History Institute, AWC Curricular Archives, 1928-1929, 1-5.

[250] Ibid., 3.

National Guard Reserves primarily to units prioritized by the War Department as most likely to activate early would not prove feasible, since the alignment of National Guard reservists remained a state function, and any federal attempt to influence state control would violate the constitution.[251]

Based on these observations, the subcommittee came to a number of conclusions. It found that the existing system did not provide nearly enough reservists to bring National Guard units up to full strength in time of emergency, and since assigning recruits to reserve status did not aid in the creation of authorized but unformed National Guard units, "The value of a National Guard reservist over a new recruit is very small." Further, while the current National Guard reserve system cost the Federal Government nothing, it also provided negligible benefit. Therefore, the National Guard should assign any soldiers it recruited to fill existing units and form authorized but unformed units. In the unlikely event that the federal government budgeted funds to provide pay for reservists, those funds should go towards funding a Regular Army reserve system, a need that far outweighed the need for National Guard reserves. The committee's final recommendation read, "It is recommended that no change be made in the present provision of law or regulations for an Enlisted Reserve for the National Guard until an enlisted reserve for the Regular Army has been provided."[252]

McNair's fourth subcommittee faced a much tougher challenge – the design of a reserve system for the Regular Army, to include draft law that, if enacted, would put the proposed system in place. The subcommittee of five officers, including one from the Navy, began it study by evaluating the Regular Army's missions (both peacetime and in time of war), its current

[251] Ibid., 4.
[252] Ibid., 5-6.

strength, its readiness to accomplish its missions, and the implications for the formation of an Army Reserve.[253]

The subcommittee began its report with a section titled "Facts bearing on the study." The facts provided begin with the Army's stated mission in peace and in war, and then detail the current strength of the Army and the impact of that reality on the Army's ability to accomplish its mission. In accordance with Army Regulation 135-10, the Regular Army bore the responsibility for a mission made up of five parts:

> (1) To provide adequate peace garrisons for the coast defenses within the continental limits of the United States.
>
> (2) To provide personnel for the development and training of the National Guard and Organized Reserves.
>
> (3) To provide the necessary personnel for the overhead of the army of the United States wherein the duties are of a continuing nature.
>
> (4) To provide adequate garrisons in peace and in war for our overseas possessions.
>
> (5) To provide an adequate, organized, balanced, and effective expeditionary force which will be available in emergencies, within the continental limits of the United States or elsewhere, and which will serve as a model for the organization, discipline and training of the National Guard and Organized Reserves.

The report also included an extract from the Secretary of War's report for 1925, which stated that, "the primary mission of the Regular Army is to provide a defensive force capable of defending the country on the outbreak of war against any force which could likely be brought against it before the civilian components could be prepared for battle." The subcommittee report ended this summary of the Regular Army's missions with the statement that "All of the missions cited above are of vital importance and no single one of them can be safely neglected."[254]

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[253] J. E. Ardrey, "Course at the Army War College, 1928-1929. G-1. Supplement No. 4 to Report of Committee No. 5. Subject: Reserve System for the Regular Army," October 24, 1928, Military History Institute, AWC Curricular Archives, 1928-1929.

[254] Ibid., 1.

However, the realities of fiscal constraint and isolationist influence meant that the Regular Army found itself in 1928 in a position in which it could not with confidence claim readiness to accomplish its assigned missions. In fact, the subcommittee next addressed the difference between the numbers of reserves needed to bring the Army up to wartime strength given its authorized personnel strength, compared to its actual manning levels. The subcommittee acknowledged the total numbers of personnel the Army might need in a crisis would vary widely depending on which of its many missions the nation called on it to execute. Nevertheless, since "the present strength is entirely inadequate for the fulfillment of the peace-time missions of the Regular Army," the whole system rested on a false fundamental assumption. Instead of an Army capable of its peacetime role and needing reserves only for augmentation in the case of a national emergency, any system of reserves the subcommittee devised must account for those routine missions for which the Regular Army currently found itself unprepared, as well.[255]

For example, the subcommittee wrote, "Since our coast defenses are now undermanned and partly inactive, the mission of providing adequate garrisons for these defenses for war purposes is included in this discussion." The unpreparedness of the coast defenses represented only the tip of the iceberg. Of the 17,728 officers and 280,000 enlisted men currently authorized, the Regular Army only consisted of 12,000 officers and 115,000 enlisted men assigned. Further, a recent War Department decision to increase the strength of the Air Corps by 15,000 men "is now being made at the expense of the other branches of the army." Thus, reaching the planned initial Regular Army war strength of 450,000 required an increase of 223,000 men, rather than 153,000 given a Regular Army at its full assigned strength. Complicating matters even more, the Regular Army did not currently possess its authorized force structure of nine army divisions:

[255] Ibid., 1-2.

"three infantry divisions are entirely inactive, leaving but six infantry divisions at less than peace strength." Thus, mobilization would require not just reinforcing understrength divisions. Rather, it would face the much more daunting task of bringing six divisions up to strength while forming three new divisions – one third of the total force.[256]

This led the subcommittee to a logical but disturbing conclusion. Any acceptable system of reserves would have to bring the Regular Army up to at least the strength of 450,000 designated in the 1920 NDA. However, due to the current severely limited force structure of the Army, "the strength at present provided for by appropriations cannot be made to provide such a reserve [one sufficient to increase the Regular Army to its wartime authorized strength] without making the already inadequate Regular establishment merely a training machine for turning out reservists." In other words, the subcommittee recognized that, at its current strength, the War Department could not employ any significant portion of the Regular Army to fight while receiving and training additional reserve forces; rather, it would have to use the Regular Army as trainers and cadres for units almost wholly consisting of untrained or poorly trained reservists. Therefore, the subcommittee argued any system of reserves must provide for at least 91,000 fully trained personnel, ready immediately to join their designated units to help train the expected masses of untrained reservists. Any viable system of reserves must enable the Regular Army, at whatever strength it currently existed, to focus on dealing with the national emergency that prompted mobilization, rather than simply serving as trainers for new recruits. As the subcommittee saw it, "The only limit which should be placed on numbers to be provided is that imposed by the ability of a force of 115,000 men to turn out trained reservists without detriment to peace-time missions."[257]

[256] Ibid., 2.
[257] Ibid., 2-3.

Having described the challenges the current environment posed to the Regular Army and any system of reserves contemplated, the subcommittee next listed the "Conditions which must be met by any system which may be adopted." The system must provide at least enough personnel to deal with a minor emergency, and ideally enough to deal with a major one. It must provide the required reserves in the most economical manner possible, without relying on any further reduction in or placing any additional burdens on an already understrength Regular Army. It should "in no way hinder the development of the National Guard and Organized Reserves" or interfere with their recruiting efforts. It should include a system of periodic training to maintain the combat readiness of reserve forces, and require a service commitment sufficient to keep the reserve strength at the required level over the long term. Finally, the subcommittee recognized the fact that the Congress would not approve any system based on compulsory service, so it acknowledged the system must rely on volunteers, and therefore must include a system for paying reservists for periods on active duty served to conduct required training.[258]

The subcommittee referred to the findings of the other three subcommittees to look for the best model on which to base an Army Reserve system. Given the current socio-political climate, the subcommittee realized it must recommend a system the nation could sustain at acceptable cost and with minimum disruption to the Regular Army's ability to perform its missions. In its report, the subcommittee wrote, "consideration has been given to the systems in effect in foreign armies with special reference to the British system, and to the Navy, Marine Corps and National Guard reserve systems." Therefore, the subcommittee recommended an interim solution based on the best aspects of the U.S. Navy and Marine Corps' systems, pending implementation of a long-term system based on that of the British Army.[259]

[258] Ibid., 3-4.
[259] Ibid.

Under the interim system, the Army would offer enlistments directly into the reserve to soldiers who had completed at least a first-term enlistment and "held honorable discharges with character at least good." This met the primary criteria that reservists must possess sufficient training to remain ready for immediate field duty – something the Army could not replicate through any abbreviated training process. Similarly, they did not recommend ROTC units as sources of enlisted reserves since they provided officer-specific training and generated reserve officers. Neither did they recommend Civilian-Military Training Centers (CMTC) as sources of enlisted reservists as they did not provide sufficient training and even if they did, the produced far too few trainees to generate the required numbers of enlisted reservists.[260]

As a long-term solution, the subcommittee recommended a system much like the British one. Soldiers would enlist in the Army with a dual commitment: an initial term with the Regular Army, followed immediately by a reserve period, during which the soldier would receive $24 per year plus a $100 bonus if called onto active duty for training or administrative purposes to defray travel and other costs. The subcommittee did not recommend periodic or annual training since they believed this would prove too disruptive to the individual's civilian career and would not provide a training benefit that warranted the cost. Finally, under the recommended system, soldiers called back to active service would return at the grade held upon discharge, and the Regular Army reserve system would remain entirely distinct from the National Guard or any other reserve system.[261]

The subcommittee devoted several pages of their report to a detailed analysis intended to determine the optimum period of active and reserve status in a soldier's overall enlistment. They considered the readiness of reservists, based on the amount of training received while in active

[260] Ibid., 4.
[261] Ibid., 4-7.

service, their main priority. Based on this, they recommended a three-year initial period of active service, the same as that required of current enlisted recruits and demonstrated to provide not only sufficient training but also the opportunity to serve overseas. They also recommended providing soldiers the option of reenlisting for a second active duty term, or transitioning to reserve status for a period of four years – enough time so that once the Army implemented the system fully, it would maintain the requisite numbers of reservists each year. Finally, in accordance with the committee directive, the subcommittee drafted a three-page amendment to the 1920 NDA that would have enacted their recommendations into law. However, the War College did not submit this draft amendment through the War Department for congressional consideration. The 1920 NDA remained unchanged and underfunded, while the work of the subcommittee served purely educational purposes.[262]

In the overall committee report and synopsis, McNair informed the Director of the G-1 Division that all of his subcommittees had completed their assigned tasks and submitted written reports, noting that each had gained the full concurrence of all committee members, along with the overall committee recommendations in the consolidated report. McNair and his fellow committee members gained a particularly detailed understanding of the problem of establishing a system of Enlisted Army Reserves, and briefed the whole class on their findings. Unfortunately the problem remained unsolved despite the fact that systems existed both in Great Britain and in

[262] Ibid., 6-9. Several tables of statistics supporting the subcommittee's recommendations and the draft amendment to the 1920 NDA appear in five appendixes to the main report; Weigley, *History of the United States Army*, 403-08. However, Weigley points out despite limited appropriations, the 1920 NDA enacted several changes that led to long-term benefit in preparation for war - particularly the requirement to conduct joint and industrial mobilization planning.

America's own Navy and Marine Corps, that provided proven models that worked at low cost and on a purely voluntary basis.[263]

Of the several other committees that convened during the G-1 Course, Committee No. 7 stands out as the most interesting one in which McNair did not directly participate. It dealt with the problem of replacement personnel – a problem that had plagued the U.S. Army since the American Revolution, and had eluded a feasible solution ever since. The committee organized into two subcommittees to study the problem. The first subcommittee conducted historical analyses of America's attempts to develop a functioning replacement system in past wars spanning from the American Revolution to the World War, and of the systems employed by the British, French, and German armies during the World War. The second subcommittee developed, according to AWC curricular records, "a proposed scheme for the replacement of personnel in a future major war with special consideration to maintaining the territorial integrity of organizations." Based on these studies, the committee proposed a replacement system for use in a future war that involved creation of "permanently constituted units to receive, administer, train, and distribute the individual replacements intended for their respective organizations."[264]

No American Army, including the Union or Confederate forces during the U.S. Civil War, had developed and implemented unchanged a viable replacement system. In some of its previous wars the Army required no replacement troops, but in those in which it did, preparations made before the conflict proved untenable and required modification. In no case did a combat force arrive at an optimal solution for the replacement problem. The committee focused in particular on the replacement system the AEF attempted to implement during the World War,

[263] McNair, "AWC, G1 Course, Report of Committee No. 5."; ———, "Synopsis, Report of Committee No. 5, G-1 Course."

[264] E. J. Cullen, "Course at the Army War College, 1928-1929. G-1. Report of Committee No. 7. Subject: Replacements," October 25, 1928, Military History Institute, AWC Curricular Archives, 1928-1929, 1-2.

since it provided not only a recent example, but also one that revealed several major flaws. Upon the outbreak of the World War, the U.S. Army had no replacement system. It developed one when it organized the AEF, but the General Staff had to revise the system several times during the war, mostly due to a consistent failure to send enough replacement personnel from the United States, which eventually required the AEF to break up twelve combat divisions in France for use as replacements.[265]

Subcommittee No. 1 studied the "Cause of the Failure of Replacement System in the World War" in detail, devoting an appendix on this topic to their report on wartime replacement systems of the major combatants. The subcommittee found that the War Department assigned the Provost Marshal General additional duty as Director of the Draft on June 26, 1917. In this new capacity, the Provost Marshal General wrote to the Secretary of War recommending the numbers of personnel he believed the Army required to mobilize the Regular Army, National Guard, and National Army units, and to provide replacements for the Regular Army and a National Guard Reserve. He recommended drafting 700,000 men to complete organization of existing units, plus another 300,000 men to serve as replacements. In its response to this recommendation, the General Staff argued the AEF would require an initial draft of at least 1,500,000 personnel. However, one week after receiving this recommendation, the president chose to induct even fewer men than the number proposed by the Provost Marshal General, directing the secretary of war to call for only 687,000 men in the initial draft. Of these, only the first 187,000 raised would fill Regular Army and National Guard units; the other 500,000 would be "called to the colors as they might be needed for the National Army."[266]

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[265] Ibid., 5-11.

[266] While the subcommittee found problems with each country's replacement system, it judged America's the worst of the four. Joseph E. Bastion, "Course at the Army War College, 1928-1929. G-1. Supplement No. 1 to Report of Committee No. 7. Subject: The Systems for the Replacement of Personnel

Strangely, and with no explanation offered by the subcommittee, the War Department did not modify its mobilization plans, even though it would have fewer than half the number of new recruits to facilitate mobilization than the number recommended by the General Staff. They went forward with their forty-two division plan and that led to the obvious conclusion:

> Unless some steps were to be taken in July or August, 1917, immediately to raise and train a sufficient quota of troops and Line of Communications troops, this personnel, which would begin to be urgently needed by the expeditionary force during December, 1917, would not be available.[267]

Since the War Department never secured approval to raise these replacement personnel, the predicted crisis arose, leading the AEF to take the only step available to it – that of breaking up divisions in France, wasting the unit training invested in them during mobilization, to use their personnel as individual replacements. The initial draft call of only 687,000 men simply could not provide enough personnel to form an adequate pool of replacements, and a second draft call did not come until April 1918 – far too late for those draftees to arrive in France for employment in 1918.[268]

The first subcommittee did find that "a very comprehensive replacement Project was eventually evolved though much confusion and waste of effort was encountered during the many and various stages of its evolution. But comprehensive as this ultimate replacement project was, it was utterly unable to prevent the final crisis in the replacement situation in France." Thus, the replacement system in place in the Army's war plans in 1928 looked much like the system

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Used by the United States in Past Wars and by the British, French and German Armies in the World War," October 25, 1928, Military History Institute, AWC Curricular Archives, 1928-1929; since the American replacement system failed to function during the World War, the subcommittee devoted an appendix to a detailed explanation of the cause of its failure. Edward J. Cullon, "Course at the Army War College, 1928-1929. G-1. Appendix No. 1 to Supplement No. 1 to Report of Committee No. 7. Subject: Cause of the Failure of Replacement System in the World War," October 25, 1928, Military History Institute, AWC Curricular Archives, 1928-1929, 1-2; emphasis in the original.

[267] ———, "AWC G-1 Course, Appendix No. 1 to Supplement No. 1 to Committee No. 7 Report," 3.

[268] Ibid.

eventually worked out near the end of the World War. However, since significant numbers of replacements from the United States never materialized, the system remained untested in combat. Therefore, a second subcommittee sought to develop the broad principles that should guide a viable replacement system, and recommend changes to the one currently in place. This second subcommittee also analyzed "The value and desirability of maintaining the territorial integrity of units according to area of origin," and estimated the number of replacement troops required in the event of a future war, both initially and over the course of a protracted conflict.[269]

The subcommittee noted that both France and Germany started the World War with the goal of territorial integrity as a priority in their replacement systems, but both failed to achieve it due to overload caused by excessive casualties, particularly when concentrated in particular units. Further, the members found that the relative independence of the British colonies forced a high degree of territorial integrity on their replacement system, and they observed that the current corps area organization of the U.S. Army caused its units to reflect local origins as well. The subcommittee argued that several benefits derived from territorial integrity, including increased pride and esprit among the troops, special interest in the unit from local media, and enhanced willingness among communities to provide replacements to units raised from among their populace. However, the system also possessed disadvantages, particularly in the case of high casualty rates, which could not only cause certain communities to suffer disproportionate loss, but also make provision of replacements from those same communities an unfair or infeasible burden. In fact, the subcommittee recognized that "It must be accepted that this policy will tend to break down in practice as the war progresses." Nevertheless, the subcommittee agreed "the advantages outweigh the disadvantages, and that the policy of maintaining the

[269] Ibid., 3-5; J. A. Randall, "Course at the Army War College, 1928-1929. G-1. Supplement No. 2 to Report of Committee No. 7. Subject: Replacements," October 25, 1928, Military History Institute, AWC Curricular Archives, 1928-1929, 1.

territorial integrity of units according to area of origin should be applied to the Army of the United States."[270]

In considering the question of numbers of replacements needed, the subcommittee used the World War as a source of recent and relevant empirical data. The resulting analysis focuses on two phases of the war: the opening phase in which German divisions engaged in open warfare, and the last year of the war in which American divisions fought stabilized or trench warfare. In both cases, divisions sustained losses of up to fifty percent but maintained sufficient morale to continue fighting, as long as replacements arrived fairly quickly ("within three or four days"). The subcommittee's analysis of casualties and replacements during the World War led to the following analysis:

| Month | Total Replacements Required | Returned from Hospitals | New Replacements Required |
|---|---|---|---|
| D | 6,000 | 0 | 6,000 |
| D plus 30 | 6,000 | 884 | 5,116 |
| D plus 60 | 6,000 | 1,326 | 4,674 |
| D plus 90 | 6,000 | 2,210 | 3,790 |
| D plus 120 | 6,000 | 2,652 | 3,348 |
| D plus 150 | 6,000 | 3,094 | 2,906 |
| D plus 180 | 6,000 | 3,536 | 2,464 |
| Thereafter a constant flow of..... | | | 2,464 |

**Table 1: AWC G-1 Course Committee No. 5 – Estimated Monthly Replacements by Division**[271]

The subcommittee based these figures on three assumptions: a division would fight no more than one battle each month significant enough to result in a fifty percent casualty rate (about 6,000 men); men returned from hospitals would supply an increasingly higher proportion of the needed replacements each month, and few divisions would fight a major battle once per month.[272]

[270] _____, "AWC G-1 Course, Supplement No. 2 to Committee No. 7 Report," 1-2.
[271] Ibid., 2.
[272] Ibid., 2-3.

The subcommittee next identified three principles to serve as the foundation for any future system of replacements. Given the severe shortage of recruits in the World War, they unsurprisingly addressed this issue as their first principle. The subcommittee identified the need to provide sufficient replacements initially to bring all mobilized units to full strength, and form a reserve of trained replacements sufficient to account for both ordinary monthly losses, and exceptional losses (up to 50% of the strength of each division engaged). Next, the replacement system should provide additional replacements "sufficient to maintain the necessary flow of trained replacements to meet all losses, both ordinary and exceptional," as calculated in Table 1 above. Finally, the Army should mobilize no new units "until full provision has been made for maintaining old units at full strength." These principles all seem intended to enable the U.S. Army to avoid a replacement debacle like that they endured during the World War.[273]

The foregoing analysis supported the subcommittee's proposal for a new replacement system. They began by summarizing the key differences between the proposed system and the one currently in place. The current system did not include a method of maintaining unit territorial integrity, it made no provision for the organization of replacements, or establishment of replacement centers, and it did not provide as many replacements as the number required by the proposed plan.[274]

The subcommittee report concludes with a description, supported by several diagrams, of the characteristics and functioning in wartime of its proposed replacement system. The first change would eliminate the replacement battalions currently authorized in the Field Service Regulations from the division organizations, increasing them to replacement depots of much larger size (i.e. a brigade, in the case of a division). These replacement depots would consist of

[273] Ibid., 3; Cullen, "AWC, G-1 Course, Report of Committee No. 7, Replacements," 1.
[274] Randall, "AWC G-1 Course, Supplement No. 2 to Committee No. 7 Report," 3.

trained and organized units, inactive in peacetime, but formed during mobilization and deployed with the combat divisions in time of war. These depots would operate in echelon in the Army (or combat) and Communication Zones, linked to depots in their parent unit's territorial region in the Zone of the Interior. Thus, each corps area would mobilize a replacement center, "where replacements will be trained, armed, equipped and organized, and sent to the corresponding replacement depot unit in the theatre of operations." Similarly, each combat division would have a dedicated replacement depot to receive and train both replacements and soldiers returned from hospitals. Finally, because of their organization as an actual unit, with a headquarters and subordinate organizations made up of troops from each of the combat branches, the Army could employ these replacement depots as combat units in an emergency, rather than breaking them up for use as individual replacements in other divisions.[275]

The subcommittee closed its report by pointing out several strengths of this proposed system, and describing in text and graphics its functioning in time of war. It highlighted the similarity of the proposed system to that of the British Army, which "withstood the test of the World War" and remained in effect in 1928. The report highlighted the criticality of supplying sufficient recruits – without adequate numbers even a well-designed replacement system would fail. Finally, it highlighted the key advantages of the proposed system: it consisted of "a simple, flexible and definite plan, which can be provided for by tables of organization."[276] This last point stands out as particularly significant, since inclusion in the tables of organization meant the

[275] Ibid. The report indicated it did not imply a "rigid" relationship between replacement depots and their aligned units; Army commanders could and should use replacements from one depot to reinforce another unit that suffered exceptional losses.

[276] Ibid., 4. A detailed example of implementation of the proposed replacement system, consisting of two pages of text and four charts showing the system from the Zone of the Interior through the combat units at the front, closes the report.

Secretary of War and War Department would not deal with the problem of replacements in an ad hoc, rushed manner as in previous wars.

The Army War College G-1 Course exposed all of the students in the 1928-1929 class to a detailed examination of the primary issues associated with manpower mobilization for war. In particular, the curriculum included committee work, led by Lieutenant Colonel McNair, to propose a system of reserves for the Regular Army, which the Army currently lacked. It also included a committee dedicated to the study of one of the Army's most vexing problems – development of a viable replacement system – a problem the Army had failed to solve in any previous war that required replacements. These studies demonstrate that despite the underfunded, understrength condition of the Army in 1928, the War Department was determined to ensure that the Army's future senior leaders were assured the opportunity to attend the War College and to study there the problems associated with modern warfare. This yielded, as one result, a pool of senior officers prepared to lead the Army's mobilization for a potential future conflict.

The G-4 Course came next in the curriculum, running from 29 October to 24 November. The course covered a broad range of studies of the Army's supply organization, including "the operation and control of supply; evacuation, transportation, hospitalization; requirements, procurement, storage and distribution of supplies; war reserves; coordination of Army and Navy supply; industrial support of war and its relation to the military effort." While this diverse curriculum exposed McNair to many aspects of logistics central to the management of a war effort, he appears not to have held a leadership position on any of the G-4 course committees. This may have stemmed from a conscious decision by the faculty based on his having just finished serving as overall chairman of a committee in the G-1 Course. The faculty strove to give all students a chance to serve in a leadership role as stated policy. However, he would have

participated in the various conferences and committee reports during the three weeks of the course, gaining an exposure to all of the course content.[277]

McNair did lead a subcommittee in the next course in the War College curriculum, the G2 (military intelligence) Course. While to some observers the sequence may have seemed odd, the faculty placed the G-2 Course after the G-3, G-1, and G-4 courses as a conscious decision. As explained in the course orientation, "the preceding courses have set forth essential elements of the "Estimate of the Situation" relating to our own forces. We now should assemble the necessary facts upon which to deduce the actions and intentions of possible enemies." The preface to the course orientation ended with an enlightening comment about the philosophy of the course and the education that it hoped to deliver:

> There are two points of view from which military information must be studied and evaluated: first, what the information means to us; second and more important, what it means to the foreign country in determining the lines of action open to it in case of war, and in estimating its probable intentions. It is difficult for us to work ourselves into the mental attitude of a foreigner and to think as he does, but this we should attempt to do in the G-2 Course.[278]

This important statement highlights a key distinction between the duties of the intelligence officer and other staff officers, and demonstrates the faculty expected the students not merely to study the duties of a G-2 staff officer, but to learn to think like the enemy – a key to developing realistic and comprehensive war plans.

The "Orientation and Outline of the Course" went on to list the four primary purposes of the G-2 Course:

> To furnish instruction in those matters relating to 'Preparation for War' with which the G-2 Division is primarily concerned.

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[277] DeWitt, "AWC Orientation," 4. McNair could also have served on a committee for which records no longer exist in the War College archives; none of the War Plans Course committee reports for the class of 1928-1929, for example, exist in the AWC curricular files.

[278] _____, "Course at the Army War College, 1928-1929. G-2. Orientation and Outline of the Course.," November 26, 1928, Military History Institute, AWC Curricular Archives, 1928-1929, 1; emphasis in the original.

> To prepare certain intelligence data for use by the class later in the school year in connection with the preparation of war plans.
>
> To acquaint the members of the class with the duties and responsibilities of the G-2 Division of the War Department General Staff.
>
> To inform the class concerning those nations which either singly or in coalition may possibly be opponents of the United States or her allies in war.

Interestingly, the orientation stated that the course also had a "cultural motive" in that it aimed "to stimulate interest in world politics, economics and social conditions, beyond a bare superficial knowledge of those subjects."[279] This observation highlights the significant shift the Army War College sought to create in an officer's way of thinking. The faculty not only expected the officers to develop original, creative solutions to the problems they studied; it also sought to broaden their worldview, instilling in them an interest in world events and an ability to see a military problem from a perspective other than their own.

Like the other courses, the G-2 Course consisted of lectures, committee work, and conferences. The lectures presented to McNair's class covered both general considerations related to the current world situation, and detailed briefings on various countries including Russia, Great Britain, Mexico, Japan, and China. Committee subjects included G-2 contributions to war plans, international law and U.S. foreign policy, comparative military power and resources among potential enemies of the U.S., and analysis of specific countries (mostly the same as those covered in lectures).[280]

McNair served on Committee No. 8, G-2 Studies on the British Empire. The faculty broke the committee down into two subcommittees, the first of which, chaired by McNair, updated the previous year's military estimate of the British Empire. The second subcommittee revised existing monographs on Nova Scotia, New Brunswick, and Quebec, considering their

[279] Ibid., 2.
[280] Ibid., 2-13.

feasibility as possible theaters of operations. In addition to updating the existing staff estimate on Great Britain, McNair's subcommittee had to consider the implications of Great Britain's likely intentions and the most dangerous coalitions it might join, as determined by Committee No. 3. Unfortunately, the AWC curricular files do not contain the updated staff estimates or other work prepared by Committee No. 8 or McNair's subcommittee, probably because the officers worked on actual war plans and, given their classification, the AWC returned the documents to the War Department upon completion of committee work.

Similarly, the outline of the next course in the curriculum, the War Plans Course, identifies the fact that McNair served in the G-3 Division of Group No. 5, "War Plans – Green," which dealt with possible hostilities between the United States and Mexico, but none of the plans updated during the 1928-1929 War Plans Course exist in the War College archives. The Course Orientation does provide a general description of the organization and goals of the course, which ran from January 2 to February 16, 1929. Overall, the course served three purposes: to provide instruction in development of war plans by giving the class the opportunity to organize as staff and work on actual, current war plans; to illustrate the necessity to coordinate Army and Navy plans; and to update materials for use during the Conduct of War Course later in the year.[281]

The War Plans Course Orientation also directed each of the six student planning staffs to prepare four component parts to each plan they updated: the joint plan, the Army strategic plan, the Army concentration plan, and the Army mobilization plan. In these components the students would address matters of joint cooperation, national and military strategic objectives and the

[281] _____, "Course at the Army War College, 1928-1929, War Plans: Orientation," January 2, 1929, Military History Institute, AWC Curricular Archives, 1928-1929, 1; For a complete list of the "Rainbow Plans" color scheme, see Gole, Appendix E. War Plan Green dealt with U.S. intervention in Mexico. Gole, *The Road to Rainbow*, 166. A review of the Conduct of War Course archives reveals the guidance issued to each staff conducting map maneuvers based on the "Rainbow Plans," but the specific plan components do not exist in the archive files.

operations required to achieve them, detailed troop movement tables within the Zone of the Interior to support planned operations, and a method for mobilizing the required personnel. While the faculty did not expect the student groups to develop complete, executable plans given the time allotted, they did expect them to address the required areas with respect to present conditions based on detailed research of all information available. The faculty did not provide a specific required format for the planning staff products. However, they did expect a "simple, flexible, and practicable" plan that "definitely set forth the objectives upon the attainment of which it is counted to win the war and the operations to be undertaken initially to that end," which would "form the basis of the initial concentration and strategic deployment."[282]

Immediately after the War Plans Course ended the students found themselves confronting the second half of the Army War College program of instruction – the Conduct of War Course, scheduled to run from February 18 to June 25, 1929. The course consisted of map maneuvers, map problems, terrain exercises, and field reconnaissance. Students assigned to various general staff positions studied the strategy and tactics of field armies, and addressed both army and joint considerations in their practical exercises. While the actual war plans they worked on do not exist in the AWC curriculum archives, they also studied historical cases, which are present in the course records. The Conduct of War Course served four purposes: to train participants for positions of high command, to test the soundness of the war plans prepared in the preceding course, to familiarize the class with the mobilization-related features of certain areas of the United States, and to train officers in the conduct of map maneuvers and command post exercises. The faculty sought to provide the students a range of different experiences by

[282] DeWitt, "AWC War Plans Course Orientation."

organizing the course into six periods, assigning the students to different groups and positions during each period.[283]

For example, during the first period McNair served as the chairman of Command Group No. 3, which analyzed French operations on the Western Front in 1914 from mobilization through the First Battle of the Marne. McNair divided his committee into five subcommittees; one for each staff section – G-1 through G-4 – and a fifth (consisting of McNair and one other officer) that conducted the analysis from the perspective of the French commander, General Joseph Joffre, and his chief of staff. The committee's final report of nearly sixty pages provides a thorough assessment of French mobilization and operational plans and actions, going beyond a mere recounting of events to provide a critical analysis of French decisions and their outcomes. In particular, McNair's subcommittee emphasized the illogical French decision to assume the offensive, despite their lack of any advantage in mobilization or troop strength, perceptively linking this decision with the post-1871 "military renaissance" that led to the French "creed of the offensive."[284]

In the second period of the Conduct of War course McNair served as recorder, attached to the "Assistant Umpire Group for Historical Studies." The students conducting the historical study analyzed the attack of the British Fourth Army in August 1918 by conducting map maneuvers, facilitated by umpires who executed each side's plan for the day, rendering

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[283] _____, "Course at the Army War College, 1928-1929, Conduct of War: Orientation Lecture," February 18, 1929, Military History Institute, AWC Curricular Archives, 1928-1929.

[284] Lesley J. McNair, "Course at the Army War College, 1928-1929: Conduct of War Course, First Period, Report of Command Group No. 3, Subject: French Operations on the Western Front in 1914, from the Concentration of Their Armies to Include the First Battle of the Marne," March 27, 1929, Military History Institute, AWC Curricular Archives, 1928-1929; _____, "Course at the Army War College, 1928-1929: Conduct of War Course, First Period, Supplement No. 5 to Report of Command Group No. 3," March 27, 1929, Military History Institute, AWC Curricular Archives, 1928-1929, 1. McNair found Joffre a poor strategist but a strong leader, who failed to see the shortcomings of his strategic plan and abandon it early enough, or establish an effective defense once he finally did abandon the offensive.

decisions, and providing updated information to the staffs overseeing the Red (Great Britain) and Blue sides conducting the map maneuvers. The second period gave McNair a bird's-eye view of the umpire process for a map maneuver, through his recording of the various assistant umpires' actions, and their interaction with the Chief Umpires for each side, who rendered all major decisions and supervised the work of the red and blue command groups. He also soon found himself contributing to the War College faculty's procedures for conduct of umpire duties during maneuvers.[285]

While the records for the Green map maneuver apparently no longer exist, the War College archives do include the records of a lengthy debate that ensued during the maneuver between Major General Connor and his staff regarding the quality of execution of the map maneuvers. This prompted a comprehensive review of the AWC maneuver procedures, including detailed and honest critical input from one of the student command groups. Based on guidance he received from Conner, the assistant commandant, Colonel DeWitt, directed each subcommittee of Command Group No. 3, the one that conducted the Green map maneuver, to submit a set of written recommendations for improving maneuver execution procedures two weeks after the maneuver ended.[286]

Writing for the command group's umpires, McNair authored a three-page memorandum, one copy of which contains handwritten comments, presumably from a faculty member, indicating his response to McNair's recommendations. (The notes indicate concurrence with all of the points, although in some cases no solution to the problem identified currently existed.)

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[285] John L. DeWitt, "Course at the Army War College, 1928-1929, Conduct of War, Second Period, Outline of the Course, Oranization for Work and Assignments, General Instructions," April 1, 1929, Military History Institute, AWC Curricular Archives, 1928-1929, 4, 6; Gole, *The Road to Rainbow,* 166.

[286] "Memorandum from Colonel Dewitt to Student Command Group No. 3, War Plans Course, Subject: Report on Techniques of Green Map Maneuver," March 7, 1929, Military History Institute, AWC Curricular Archives, 1928-1929.

Additionally, a cover sheet indicated that many of the criticisms offered by the various subcommittees appeared in many or all of their individual reports. This cover sheet summarized the common observations and indicated that the faculty made corrections to many of the noted deficiencies before execution of the next exercise (handwritten remarks on McNair's report also indicate concurrence with almost all of his criticisms, and correction of most). Thus, McNair helped provide valuable insight that improved procedures specific to the conduct of map maneuvers at the AWC.[287]

Many of McNair's comments not only applied to umpire procedures at the Army War College, but also provided insight valuable in the conduct of umpire duties in any exercise. For example, McNair advised giving ample time for participants to familiarize themselves with the situation before execution began, and he pointed out the challenge with appointing "partisan" umpires, or umpires attached to one side and therefore often partial to that side when rendering decisions. He also advised providing more time for deliberation, coordination, and staff conferences, by having the command groups work through fewer situations, but more deliberately and in more detail. Finally, McNair expressed doubt that map maneuvers could replicate the actual functioning of a staff, but they did offer value in teaching command and staff duties, as well as testing war plans.[288]

During the third period, the course focus shifted to a Blue-Orange scenario, both sides fighting without allies. For this period, McNair served in the G-4 (Services of Supply) staff section on the Blue side. Like the other map exercises, no copies of the actual plans used as a basis for the situation exist in the curriculum records; they include only a summary of the basic

[287] "Notes on Reports on Techniques of Green Map Maneuver Submitted by Command Groups," March 1929, Military History Institute, Army War College Curricular Files, 1928-1929.

[288] "Memorandum from McNair to the Commandant, Subject: Technique of Green Map Maneuver," March 22, 1929, Military History Institute, Army War College Curricular Files, 1928-1929.

situation and troops available to each side, along with guidance for conduct of the exercise. Similarly sparse records exist for the fourth period, in which McNair found himself in the Blue forces' G-3 section, facing a "special situation" involving an Orange invasion of Blue possessions in the Western Pacific Ocean, followed immediately by Red and Maroon (Italy) naval force operations against Blue shipping in all other oceans. While seeming rather unlikely in retrospect, this special situation shows the comprehensiveness of the War Department's "Rainbow Plans," and the diversity of training opportunities they provided for the AWC and its students.[289]

The fifth and sixth periods of the Conduct of War Course involved a significant change in activity for the class. Instead of another map maneuver, the student staff groups first conducted a command post exercise in field conditions, and then a reconnaissance of the Northeast Theater. As described in the command post exercise instructions, the exercise differed from a map significantly: "(a) Actual terrain conditions will govern in all plans and orders; (b) All headquarters will be operated under field conditions, as far as it is practicable to do so; (c) Signal communications and message centers will be installed and operated by the Signal Corps. These facilities will be used exclusively in the exercise." The faculty provided cars and airplanes to facilitate command group reconnaissance, and brought in faculty from the Quartermaster Corps, Air Corps Tactical, and Signal Corps Schools to serve as assistant umpires and provide technical

[289] John L. DeWitt, "Course at the Army War College, 1928-1929, Conduct of War, Third Period, Outline of the Course, Oranization for Work and Assignments, General Instructions," May 13, 1929, Military History Institute, AWC Curricular Archives, 1928-1929, 2; ———, "Course at the Army War College, 1928-1929, Conduct of War, Fourth Period, Outline of the Course, Oranization for Work and Assignments, General Instructions," May 27, 1929, Military History Institute, AWC Curricular Archives, 1928-1929, 3; ———, "Course at the Army War College, 1928-1929, Conduct of War, Fourth Period, Map Maneuver Red II, General Situation and First Special Situation," May 27, 1929, Military History Institute, AWC Curricular Archives, 1928-1929, 1; Gole, *The Road to Rainbow*, 166.

advice. As in the map maneuvers, staff groups studied both historical cases and existing War Department plans, only in field conditions on real terrain.[290]

The sixth period's command post exercise took place at Fort du Pont, Delaware, from June 6-15. Unfortunately, records that reveal the position each student held during the exercise exist only for the Red forces. They only show that McNair participated as a member of the Blue side – not what position he held. Nevertheless, student officers on each side studied, from the perspective of their role on the general staff, the specific effects of the terrain and infrastructure of the area surveyed on the conduct of military operations. Unlike the previous map maneuvers, in which the effect of terrain proved much harder to visualize, on this reconnaissance, the class could evaluate roads, bridges, airfields, supply depots, railroads, hospital facilities, Army arsenal and depot capacities, and many other military aspects of the terrain first-hand. One group, assisted by Naval War College faculty, studied a "special area" to evaluate plans for Army-Navy cooperation and evaluate the suitability of various sites to support an amphibious landing and follow-on logistic support and resupply. The participants also focused on the suitability of various types of terrain for motorized and mechanized operations. Thus, through both the fifth period command post exercise and the sixth period area reconnaissance, the class applied the education they had received in lectures, committees, and conferences to real terrain, in field conditions.[291]

The command post exercise and reconnaissance served as the culminating events of the Army War College curriculum. Only two days after the end of the reconnaissance, Major

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[290] John L. DeWitt, "Course at the Army War College, 1928-1929, Conduct of War, Fifth Period, Command Post Exercise, Fort Du Pont, Delaware," June 6, 1929, Military History Institute, AWC Curricular Archives, 1928-1929, 3-6; emphasis in the original.

[291] _____, "Course at the Army War College, 1928-1929, Conduct of War, Subject: General Instructions for the Conduct of a Reconnaissance of the Northeast Theater," June 15 - June 25, 1929, Military History Institute, AWC Curricular Archives, 1928-1929.

General Connor gave a short closing address to the soon-to-graduate class, noting he had already covered many potential topics during his direct interaction with the students, faculty, and War Department Staff throughout the year. Therefore, he limited his address to only two subjects – one general, and one personal. First, Connor reminded the class that the demand among officers to attend the Army War College far exceeded the school's capacity. He told the class,

> I mention this at this time merely to bring out the fact and impress upon you that while the Regular Army itself is a nucleus in our National Army, that you and the other graduates of the Army War College are a nucleus within a nucleus, and remembering that to whom much is given, much will be expected, and obligation rests upon you and that obligation is to use the things you have learned here in regard to the doctrines of national defense and the principles of military training, not only in your ordinary military duties but, what is of more importance I think, that you should spread them to the Army at large and by the "Army" I want to use the word in its full sense, its legal sense, and it is just as important that you should spread sound doctrine to the civilian components of the Army as it is that you should spread sound principles to the Army itself.[292]

Connor next moved on to the personal part of his address.

After mentioning the potential value of self-assessment as a means for each graduate to continue to improve his performance, Connor brought up the topic of aging. He touched on a particularly relevant issue in an Army that often retained officers in their current grade for more than a decade, and had no system for moving aging officers aside to make room for the upward mobility of their more youthful and energetic subordinates. In his injunction to keep young, Connor explained,

> Youth means vigor, enthusiasm and receptivity. Without health, which is vigor, a man can neither take advantage of the opportunities that a kind fate or his own ability may give to him, nor can he enjoy any measure of success that may come to him for any reason. Without enthusiasm you cannot hope to inspire in others that will to do, that belief in your projects, which is half the victory in the battle toward achievement. Without receptivity to new ideas and methods, you are living in the past, you are a tale that has been told in this world of today where new marvels spring into being with startling frequency.[293]

[292] William D. Connor, "Closing Address by Major General W. D. Connor, U.S.A., Commandant," June 27, 1929, Military History Institute, AWC Curricular Archives, 1928-1929, 1.
[293] Ibid.

Connor had addressed two of the most critical challenges the graduating officers would face in the aging, under-resourced Army they would soon reenter. He reminded them of the need to seek continued self-improvement while educating the civilian Army that the nation would rely on upon mobilization in time of crisis. He also reminded them they must each confront the challenge of remaining youthful in mind and body, amidst an aging body of Regular Army officers, to deal with the intellectual and potentially physical challenges of the future.

Upon graduation, McNair received an efficiency report for the academic year in which Major General Connor rated him "superior," with no noted deficiencies, and recommended him to hold peacetime command or staff positions at the brigade, division, or War Department General Staff level. Connor judged McNair "An officer of high professional attainments, able, energetic and of sound judgment, quiet but forceful." He also found his potential for high command or a senior position on the War Department General Staff "superior" and evaluated him fully qualified for duty with civilian components. This exceptional efficiency report included a letter of commendation as well. As mentioned above, the college required all students to complete an individual research project – a challenging task given the already hectic schedule caused by reliance on the applicatory method, in which most instruction occurred via student-led practical exercises. Demonstrating his by now well-established work ethic, McNair prepared a report that Connor selected for forwarding to the War Department as a "study of exceptional merit made at the Army War College."[294] His commended individual staff study reflected the impression this education left on McNair. The paper focused on how the War Department should

[294] _____, "Efficiency Report," 5 July 1929, McNair Papers, National Archives and Records Administration, St. Louis, MO; _____, "Letter of Commendation for Efficiency Report," May 10, 1929, McNair Papers, National Archives and Records Administration, St. Louis, MO; AWC Adjutant General, "Index Sheet, the Adjutant General's Office," May 10, 1929, McNair Papers, National Archives and Records Administration, St. Louis, MO.

use the limited funds available each year to maximize the level of preparedness among all arms of the U.S. military – active, National Guard, and reserve.[295]

In his seventeen-page paper, supported by seven highly detailed tables and graphs, McNair provided a fifteen-point conclusion. His recommendations included establishing a more specific national military objective, continuing development of the Regular Army while either slowing or suspending expansion of the National Guard, increasing use of ROTC graduates as officers in the National Guard, expanding the Organized Reserves and improving their officer development programs, and providing pay for all personnel serving in the reserves. These conclusions supported his overall recommendation "that the Regular Army as a whole and the War Department especially, with broad vision, continue their efforts, so notably successful to date, to the end that there may be a maximum of military preparedness with the total resources available from year to year."[296]

While he could not control national-level decisions regarding appropriation of funds, his research study reflected McNair's continued concern about reliance on a National Guard over which the Federal Government held little authority, limiting the Regular Army's ability to affect its training readiness or officer education. It also demonstrates that he believed limited defense dollars would provide a greater return if spent on a federally controlled and monitored Army Reserve – a capability the nation currently lacked.

McNair departed the Army War College having completed a challenging curriculum intended to prepare graduates for high command and senior general staff positions. He also attended at a time when the curriculum, having just undergone significant changes as part of the

[295] Lesley J. McNair, "Course at the Army War College, 1928-1929, Memorandum for the Commmandent of the Army War College, Subject: The Apportionment of Appropriated Funds among the Components of the Army of the United States in Peace," May 6, 1929, Military History Institute, AWC Curricular Archives, 1928-1929.

[296] Ibid., 16-17.

reorganization of the Army's officer education program, included a particular focus on both military and civilian-industrial mobilization for war. While we do not know what his views were about the year spent in Carlisle Barracks, it is clear that McNair departed the Army War College in the summer of 1929 ready to embark on a new stage of his career. He had set himself apart as a superior officer even among the subset of officers selected for attendance, while receiving an education that prepared him for duty as a commander or general staff officer in an upper echelon Army unit. McNair enjoyed numerous opportunities in the coming years to make use of the insights he gained at the Army War College to foster innovation and improve Army effectiveness in the difficult circumstances of continued resource constraints during the years of the Great Depression.

## CHAPTER SEVEN

### Innovation and Training in the Early 1930s

Upon his graduation from the Army War College, McNair returned to his basic branch, serving as the deputy commandant of the Field Artillery School for the next four years. While McNair served in a largely administrative position, he contributed significantly to innovative efforts the Gunnery Department pursued during his tenure there. A long-time believer in the superiority of observed fires and the need to provide forward guns and observers to support attacking infantry, McNair strongly support the Gunnery Department's effort to find ways to provide faster, more accurate, and more effective fire support in open warfare conditions. He contributed most significantly to the innovative methods the Gunnery Department developed by protecting them from the resistance of senior officers who opposed their ideas because of the centralized control they would impose over guns traditionally controlled by battery commanders.

#### Innovation at the Field Artillery School, 1929-33

The 1923 *Field Service Regulations* devoted more pages to the issue of artillery support to the infantry than any other topic. While artillery might arguably be the queen of modern battle, unreliable communications and difficulty observing and adjusting fires remained a major challenge to the realization of artillery's full potential. The Field Artillery Branch devoted significant effort to finding solutions to these problems, particularly at the Field Artillery School, Fort Sill, Oklahoma. Moving his family from West Lafayette, McNair reported for duty on July 23, 1929 to serve as the assistant commandant of the Field Artillery School.[297] Long known as an outstanding officer in his branch, subordinates acknowledged the new energy McNair brought to

[297] War Department, "Report of Change: Assigned to the Academic Division as Assistant Commandant, Headquarters, the Field Artillery School, Fort Sill, OK," July 23, 1929, McNair Papers, National Archives and Records Administration, St. Louis, MO.

the position, and to the Field Artillery School as a whole. Major Carlos Brewer, Chief Instructor in the school's Gunnery Department, later said McNair "could get an awful lot out of people," and called him "extremely thorough and very, very capable."[298]

McNair put these qualities to use, overseeing all activities of the Field Artillery School, and in particular supporting the Gunnery Department's efforts to develop and instruct students in new fire direction techniques. The school had already made some progress improving delivery of fires by the time McNair arrived at the school, but it achieved perhaps the most significant advances during his four years there. While McNair served in an administrative position and appears to have had little direct involvement with the Gunnery Department personnel who actually development, tested, and trained new fire procedures, he oversaw all training activities, and all memoranda and reports produced by any of the school's departments passed across his desk. In retrospect, the progress made at the Field Artillery School in modernizing gunnery procedures seems truly remarkable, particularly since postwar conservatism and lack of funding for weapons technology hindered the efforts of the dedicated personnel assigned to the school. Nevertheless, McNair saw the potential in their efforts and lent essential support to the officers of the Gunnery Department.[299]

In an article titled "Fort Sill and the Golden Age of Field Artillery," Russell A. Gugeler of the U.S. Army Center of Military History has described the process of post-war artillery innovation that had already begun in the school's Gunnery Department and continued with McNair's support during his tenure as Assistant Commandant. In the first several years following the end of the World War, Regular Army officers recognized the need to overcome limitations in

[298] As recalled by Thomas T. Handy, quoted in Coffman, *The Regulars*, 265-66.

[299] Frank E. Comparato, *Age of Great Guns* (Harrisburg, PA: Stackpole, 1965), 258; Boyd L. Dastrup, *King of Battle: A Branch History of the U.S. Army's Field Artillery* (Fort Monroe, VA: Office of the Command Historian, United States Army Training and Doctrine Command, 1992), 196-201; Coffman, *The Regulars*, 265-67.

the artillery support available during that war. Limited mobility of guns, inadequate means of communications, and laborious fire direction techniques greatly reduced the effectiveness of American field artillery during the war. Furthermore, only a few years after the war many artillerymen already recognized that machine guns mounted on newly developed tanks made a future scenario in which war consisted primarily of static fighting between entrenched forces highly unlikely. Therefore, officers in the Field Artillery School's Gunnery Department sought ways to adapt artillery to the more fluid, mobile form of future warfare likely in a future scenario. However, despite sporadic efforts to improve fire techniques, Gugeler argued, "there was less agreement on the direction of the changes than there was resistance to changes of any kind.[300]

The Field Artillery Center finally began to make progress upon the assignment of Major Jacob L. Devers, McNair's former platoon leader, as Director of the Gunnery Department in 1925. Described by one historian as "a man of action and decision," Devers commenced a deliberate effort to make fire direction procedures both less complicated and more effective. Realizing that forward observers possessed the most current and accurate understanding of the battlefield situation, Devers began experimenting with letting them control artillery fire from their positions – a method of conducting observed fired McNair had strongly advocated since the World War. He also directed his department to begin updating regulations adopted from the French during the World War. The aim was to simplify procedures for firing the 75mm howitzer

[300] Russell A. Gugeler, "Fort Sill and the Golden Age of Field Artillery," 31 January 1981, Field Artillery School Archives, Morris Swett Technical Library, Fort Sill, Oklahoma, 7. Gugeler, author of the unpublished biography of Major General Orlando Ward, sent this unpublished article to Mr. Lester Miller, an archivist at the Morris Swett Library, in 1981.

while retaining the main strength of that doctrine – increased artillery effectiveness through the simultaneous delivery of massed fires.[301]

When Major Carlos Brewer reported as the new Chief Instructor of the Gunnery Department in 1929, he took charge of an organization already infused with an innovative spirit. Brewer agreed with Devers' assessment that achieving effective fires required relying on observed rather than timed fires. He also supported the concept of massing fires by placing fire direction responsibility at the battalion rather than the battery level, even though this ran contrary to longstanding Field Artillery Branch tradition. Traditionalists believed battery commanders should retain full control over their batteries, including execution of fire missions, and they appeared unlikely to change their minds about this principle as long as no senior artillery leaders embraced these new ideas.[302]

Several technological limitations hindered both Devers' and Brewer's efforts. No method then existed for the battalion to control the individual batteries in open warfare, since batteries typically emplaced a thousand yards apart from each other, relying on wire communications or very large radio sets, and that seriously limited mobility. Calculation of fire data also depended on accurate knowledge of the location of the firing battery and the target, requiring accurate and detailed maps (relatively easy to obtain on the stabilized fronts of World War, but harder to come by in open warfare). Unobserved fire also required detailed surveys to determine the location of each individual battery, and the positions of planned or likely targets. These surveys could take hours to complete. Radio operators still communicated in Morse code, adding delays in

[301] Ibid. Massed fires in the World War consisted of unobserved fire, in the form of timed and rolling barrages, calculated using detailed maps and laborious surveying techniques. Observed fire would potentially increase the speed, accuracy, and effectiveness of fire, but many technological barriers hindered its feasibility in 1925.

[302] A battery consisted of only six guns; by combining the fire of its three batteries, the battalion could achieve greater massed effects, and it could deliver fire more accurately by centralizing the preparation of fire data in one headquarters.

transmission of target location data to the battery to an already laborious process. Finally, no method existed to calculate fire missions at the battalion level for each battery to execute in concert.[303]

Brewer made it his goal to find a faster way to prepare batteries to fire and a feasible method of engaging targets of opportunity with massed fires. The capability to provide timely and accurate fires, mass fires effectively, and provide mobile artillery support to maneuvering units had eluded America's artillery throughout the World War, and still required the development of improved techniques and new technology. Significant breakthroughs finally began to emerge in the early 1930s, just when McNair arrived at the Field Artillery School and provided the impetus required to overcome traditionalism and turn new concepts into formal doctrine.[304]

An article Carlos Brewer wrote for the July-August 1931 edition of the Field Artillery Journal described "Flash-Sound Ranging," one method the Gunnery Department employed to overcome the laborious methods the field artillery had relied on during the World War. Flash-sound ranging showed potential as a way to estimate the range to an enemy battery and conduct counter-battery fire without relying on accurate maps. Brewer pointed out that flash and sound ranging equipment had improved since the war, and required only six hours to set up (it took up to forty-eight hours during the World War). Brewer still considered this an excessive amount of setup time, but he saw potential in combining flash and sound systems and using calculations devised by the Gunnery Department to derive a more accurate position estimate by combining the information the two systems provided. Brewer described the method's pros and cons and

[303] Gugeler, "Fort Sill and the Golden Age of Field Artillery," 8. Rapid-fire missions posed particular challenges since they would require replacing battalion siting and survey procedures that required at least six hours with a procedure the battalion could accomplish in minutes.

[304] Ibid.

admitted it remained experimental, but emphasized the value of developing innovative means to prepare the field artillery for motorized warfare.[305]

Brewer also made strides in developing new methods for adjusting observed fires. Several years' experimentation with the use of aerial observers highlighted the difficulty of relaying map coordinates over the radio using Morse code. Frustration with this system led Brewer and his Gunnery Department to develop a new adjustment technique in which observers transmitted basic corrections rather than detailed map coordinates to the firing battery. The aerial observer estimated the distance between a round or barrage's point of impact and its intended target, and simply transmitted the observed error – i.e. "200 left, 400 over" – to the fire control personnel, who used this information to calculate adjustments and transmitted them to the gun crews. This significantly reduced time between barrages, and allowed spotters to guide rounds progressively closer to targets using real-time information without relying on detailed maps. First Lieutenant Edwin L. Sibert, one of Brewer's instructors, found ways to teach ground observers the same technique. This method initially showed great promise, and proved so easy to employ "that untrained soldiers could adjust fire after only a little instruction."[306]

These new techniques sped up the process of transmitting adjustments to a battery, but pinpointing the battery's fire on target or achieving accurate and timely massed fires still proved problematic. Since no procedure yet existed for centralized calculation of fire data for multiple batteries firing from separate locations, massed battalion fires still required each battery to rely on its own observer and to calculate its own fire data. Individual observers had to adjust their battery's fire onto the correct target, and do so quickly and in a coordinated manner to achieve a battalion "fire for effect." In practice, the Gunnery Department and its students found this very

[305] Carlos Brewer, "Flash-Sound Ranging," *The Field Artillery Journal* XXI, no. 4: 345-53.
[306] Gugeler, "Fort Sill and the Golden Age of Field Artillery," 8-9.

challenging. Observers often failed to identify the correct target or took too long – usually twenty to thirty minutes, if not more – to adjust fire onto the target. In fact, accurate adjustment of individual battery fires proved so difficult for students that most did not even advance to the point that they could attempt to coordinate efforts with other observers to mass battalion fires. In 1931, when Major Orlando Ward joined the Gunnery Department, he soon found himself swept up in the faculty's enthusiasm and added new energy into the quest for innovative methods to overcome the deficiencies in the support the Field Artillery provided the Infantry during the World War.[307]

McNair shared this enthusiasm as demonstrated by the annual reports he prepared for the commandant each year. In his first report, submitted on June 11, 1930, McNair addressed the importance of the instruction students received in the school's advanced course. In particular, he emphasized the gunnery department's work to modernize fire direction techniques:

> There has been and will be a continuing effort to shape the courses so that the instruction in the methods peculiar to the World War will not be unduly emphasized at the expense of methods which would be more appropriate for a war under other conditions. It is contemplated to lay greater stress on artillery fire against tanks, and it is expected to improve the gunnery methods and practical execution against such targets. The use of the range finder demands greater emphasis in view of conditions where maps would not be available or when there would be insufficient time to use them in connection with the preparation of fire.

Further, McNair emphasized the importance of field artillery officers attending the Advanced Field Artillery Officer's Course. In his first year at the school, he noted cases of officers missing that opportunity because they received orders to report to Fort Leavenworth, where, per Army Chief of Staff Summerall's direction in 1928, the course once again consisted of two years of instruction. McNair argued,

> It is to be regretted that it has been found necessary in some cases to detail officers of field artillery as students to the Command and General Staff School without their having passed through the advanced course at this school. If the necessity continues, it clearly would justify a return to the one-year course at the Command and General Staff School. In other words, as far as

[307] Dastrup, *King of Battle*, 197; Gugeler, "Fort Sill and the Golden Age of Field Artillery," 9.

> the field artillery is concerned, the advanced course at Fort Sill is far more essential than a second year at Fort Leavenworth.

Having completed less than a year of his tour of duty McNair already saw the potential in the new techniques under development in the gunnery department and their importance to future field artillery battery commanders. Beginning with his first annual report, he urged the Field Artillery School commandant to support both the modernization efforts and field artillery officers' opportunities to receive training in the new methods under development, even if it meant not attending the second year of instruction at Fort Leavenworth.[308]

McNair further supported this recommendation by pointing out the need for more artillery personnel in the field qualified to provide unit training – an ability that required the education received at the various advanced courses at the Field Artillery School. These included not only the Field Artillery Officer's Advanced Course, but also advanced courses in horsemanship, motors, and gunnery. During the preceding year, the school had completed and gained War Department approval for the full set of base texts for the Extension Course of the Field Artillery School – a first since the World War. Therefore, the educational materials existed to support training in field units, but shortages in experienced personnel to lead the training would persist unless more artillery officers attended the three advanced courses at the Field Artillery School.[309]

McNair devoted the second half of his 1931 report to the results of a survey given to students of the previous year's advanced course. The faculty had observed a wide range of field artillery expertise among attendees of the battery officer's course, despite all students reporting

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[308] Lesley J. McNair, "Memorandum for the Commandant, Field Artillery School: Annual Report," June 30, 1930, Field Artillery School Archives, Morris Swett Technical Library, Fort Sill, Oklahoma, 3. McNair emphasized the increased proportion of time spent on reconaissance, fire direction, staff duties, and supply to prepare officers for field artillery command, arguing no other school could provide this vital instruction.

[309] _____, "Memorandum for the Commandant, Field Artillery School: Annual Report," June 28, 1931, Field Artillery School Archives, Morris Swett Technical Library, Fort Sill, Oklahoma.

for attendance at approximately the same point in their careers. In particular, the Gunnery Department, as mentioned above, observed a significant lack of experience and ability adjusting observed fires, demonstrating the neglect among field units in this type of training. Therefore, the school required attendees of the course to fill out a survey prior to graduation to try to determine why their skill levels upon arrival at the Field Artillery School varied so much. McNair believed the results of the survey would reveal ways for the branch to increase the quality of artillery instruction in the field. This, in turn, would enable the Field Artillery School to begin instruction at a more advanced level, improving the output of the battery officer's course. Combined with the War Department approved Extension Course materials and a larger pool of advanced course graduates to lead instruction in in the field, this initiative would both increase the quality of training in units, and the proficiency of battery officer's course graduates, raising overall proficiency across the branch.[310]

The survey included eighteen questions to determine each officer's time in commissioned service, experience in field artillery units, service in gun batteries, type and quality of unit instruction received, specific tasks trained, and whether their level of experience upon reporting for the battery officer's course affected the difficulty they experienced completing it. McNair reported ten conclusions and several additional observations from the answers to the survey, with the overall finding unsurprising – many common tasks went untrained in most field artillery units, and most units that did conduct training failed to do so to the minimum acceptable standard in accordance with field artillery training publications and regulations. The answers also indicated problems already suspected through informal observations at the school – in particular, a general lack of experience in the field conducting observed fire missions. The overall results led McNair to call for "remedial action." This included a number of steps, but they came down to

[310] Ibid., 2-3.

two basic remedies. The first involved revision of the Army regulation that covered unit training, since in many instances it either set unreasonable or unsupportable training requirements, or failed to establish the standards that training should meet. The second involved leadership – in short, ensuring commanders from the troop all the way to the corps area level possessed the knowledge and took the action necessary to participate in and oversee quality unit training. McNair summed up his conclusions with two salient points: "Means should be devised to bring home to battery and higher commanders their responsibilities in connection with the training of junior officers," and "In assigning officers to duty with troops, special attention should be given to providing suitable instructors in the various subjects."[311]

The additional energy Orlando Ward brought to the Gunnery Department, and McNair's efforts to support innovation at the Field Artillery School while finding ways to improve proficiency across the branch, ensured progress continued during the 1931-32 academic year. In particular, Gugeler highlights two events that helped the Gunnery Department in its efforts to improve fire direction procedures that year. First, Brewer discovered a recently arrived book in the school library titled *Field Guns in France*, written by a French officer named Lieutenant Colonel Neil Fraser-Tytler who served as an artillery observer during the World War. Brewer found Fraser-Tytler's account quite compelling, making him rethink just how much the U.S. Field Artillery Branch needed to change the way it supported the other arms, and he told all his instructors to read it. The book described Fraser-Tytler's efforts to accompany the infantry and remain as far forward on the battlefield as possible, so he could see the targets they needed the field artillery to neutralize as they advanced. Using a telephone system he developed that simplified communications with the gunners, Fraser-Tytler could direct their fire onto point targets, quickly shifting from one to the next, to enable the infantry to keep advancing past

[311] Ibid., 3-9.

machine gun nests or other strong points. While Fraser-Tytler used a fire correction method very similar to the one under development in the Gunnery Department, he described a manner of employment much different from the one Brewer envisioned. As Gugeler put it, “Tytler-Frazer’s concept of moving the artillery fire from point to point on the battlefield, and shifting it rapidly as the infantry needed help, went well beyond the artillery’s accepted role during the World War.” It also went well beyond what Brewer envisioned accomplishing at the Field Artillery School. The book made both Brewer and Ward rethink just how much they could accomplish by improving American artillery fire procedures.[312]

McNair highlighted the other significant event for gunnery innovation that year in his annual report of June 15, 1932. He closed the report by noting the receipt of new radio equipment – the SCR 131, 161, 171, and 163 radios – in sufficient quantity to begin giving instruction in their use, as well as experimenting with them during the traditional Saturday morning Gunnery Department tests. McNair described excellent results with the radios, particularly during the end-of-year field exercise. To McNair, their performance indicated, “a greatly enlarged sphere of usefulness for radio communication is at hand. It appears entirely probably that definite steps may be taken conservatively, looking toward the progressive substitution of radio for wire. It is proposed during the coming school year to exploit the possibilities of the new equipment to the utmost.”[313]

By late 1932, the larger field artillery community had started paying attention to the new developments at the Field Artillery School. The November-December 1932 issue of the FA Journal includes in its “Field Artillery Notes” section a short article titled “Gunnery Liaison

[312] Dastrup, *King of Battle*, 196-97; Gugeler, "Fort Sill and the Golden Age of Field Artillery," 10. Gugeler refers to the French officer merely as "Tytler-Frazer."

[313] Lesley J. McNair, "Memorandum for the Commandant, Field Artillery School: Annual Report," June 15, 1932, Field Artillery School Archives, Morris Swett Technical Library, Fort Sill, Oklahoma, 3.

Methods." The article begins with a pointed statement: "The advent of the SCR-161 short wave radio set has introduced new possibilities in liaison between the field artillery and infantry. Practical work already has shown that the artillery's response to calls for fire from the infantry can be speeded up materially." The article's purpose is to summarize the recently issued "Field Artillery School note No. G-47, 'Gunnery Liaison Methods.'" However, the final paragraph of the introduction to this short article reminds the reader, "These notes are authorized by the Chief of Field Artillery for use at the Field Artillery School only. Where in conflict with TR 430-85 they are to be considered as experimental, being tested at the Field Artillery School, and unorthodox until embodied in the Field Artillery Manual or other regulations." After this introduction, the article merely describes the new fire adjustment methods based on transmitting error corrections rather than lengthy map data, highlighting the potential of the new radio to increase the ability of the field artillery to provide flexible fire support in fluid situations. While considered experimental, this brief article demonstrates the Field Artillery School's efforts to foster its innovative spirit throughout the branch.[314]

The new radios, like their wire-based predecessors, still only transmitted and received Morse code, but the advantage they offered in mobility alone gave them great potential for changing the way field artillery directed fires. Similarly, Brewer's efforts to change fire direction procedures achieved progress, but left much work to do. Brewer understood the shortcomings of unobserved fires – one of the biggest limitations in America's artillery employment during the World War – and he reminded McNair they had long shared this understanding in a memo he wrote the Assistant Commandant on the Gunnery Department's achievements just before his departure:

[314] "Field Artillery Notes: Gunnery Liaison Methods," *FA Journal* 22, no. 6: 631-35.

> I remember reading a report during the progress of the war of a staff inspection made by Brig. Gen. L. J. McNair in which he described a certain engagement which he observed from a good OP [observation post] near the front line. In this report the failure of the artillery to utilize available observation was criticized in terms somewhat as follows: 'If I had had command of a single battery I believe I could have inflicted greater damage on the enemy with observed fire than an entire regiment did with the rolling barrage.'[315]

Brewer may have recalled "Extracts from 'Notes on Recent Operations,' by Brigadier General Leslie [sic] J. McNair, General Staff, G. H. Q., A. E. F." from the April-June 1919 issue of *The Field Artillery Journal*. Reporting on an attack he observed in which American forces broke through the enemy trench system and attempted to transition to mobile warfare, McNair lamented the American forces' failure

> to cease the extravagant methods of map firing and utilize direct observation. The terrain afforded excellent observation posts and battery positions. Observed fire was used barely – if at all. It must be inferred either that artillery commanders do not appreciate the immense advantage of adjusted fire, and the waste and loss of effectiveness in searching areas, or that the lack confidence in the ability of their battery commanders in the rapid preparation and conduct of observed fires. It is conservatively estimated that of the ammunition fired during the first two days of this operation, 50 per cent was wasted.[316]

Brewer used his memorandum, written to a like-minded senior field artilleryman that he obviously respected, to both summarize the work of the Gunnery Department he supervised and make recommendations for the way forward. He had a very capable successor in Orlando Ward, but also recognized the important role of continuity McNair would fulfill.

Brewer and McNair definitely agreed on the superiority of observed fires, demonstrated by an article McNair wrote based on his experiences in the World War, published in 1921. In this article, McNair displays a deep understanding of combined arms attacks in both trench-to-trench and mobile warfare conditions. He also makes a passionate and well-argued case for the need to provide attacking infantry with mobile accompanying guns, and explains the artillerymen

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[315] Carlos Brewer, "Recommendations for Changes in Gunnery Instruction and Battalion Organization," June 2, 1932, Field Artillery School Archives, Morris Swett Technical Library, Fort Sill, Oklahoma, 1.

[316] Lesley J. McNair, ""Extracts from 'Notes on Recent Operations,' by Brigadier General Leslie J. McNair, General Staff, G. H. Q., A. E. F.," *Field Artillery Journal* IX, no. 2 (April-June 1919): 229.

operating these batteries must learn to transition from pre-calculated to observed fires upon penetrating the enemy's initial defenses and continuing the attack to secondary positions. McNair argued this required close proximity of supporting guns to lead infantry elements, since battery commanders must remain close enough to the front to observe fires, and close enough to the guns to provide adjustment instructions, to overcome the limitations of communications technology. In short, McNair made an early and powerful argument for combined arms training of observed fires, a key element of mobile warfare and an unpopular one among many field artillerymen who believed it ceded too much control over artillery to infantrymen. Regardless, during his tour with the AEF in France and after, McNair remained a staunch advocate of combined arms operations and training, and in particular, mobile, observed, responsive artillery fires. McNair's innovative spirit and concern for the effectiveness of the Army over the needs or wants of the branch set him apart even at this stage of his career from the traditionalist majority in the field artillery. The Army could not have assigned a better-suited artilleryman to oversee the training and innovative efforts taking place at the Field Artillery School in the early 1930s.[317]

Brewer's seven-page memorandum focused on his strong desire to improve in a future, probably motorized war, the quality of support provided by American field artillery during the World War. He lamented the time lost since the war merely seeking ways to refine the laborious and ineffective French methods the AEF adopted during the war (the unobserved map-calculated and highly orchestrated rolling barrages McNair so highly criticized), and summarized the advances his department achieved in just a few short years. Brewer did realize, however, that the new fire direction techniques his division taught required a level of competence difficult to achieve and sustain in the U.S Army of the early 1930s, due to their complexity and the need for

[317] _____, "Infantry Batteries and Accompanying Guns," *Field Artillery Journal* 11, no. 2 (March-April, 1921): 123-35.

regular practice to maintain the necessary skill. As a remedy, he offered two primary suggestions. In addition to McNair's efforts to standardize fire direction procedures and improve gunnery training in the field, Brewer recommended creating a subset of artillery specialists known as "Gunnery Officers," drawn from the best-qualified graduates of the Field Artillery Officer's Advanced Course (he believed only about half the latest classes' graduates demonstrated the requisite skill). Since they could focus on fire direction procedures to the exclusion of other areas of field artillery practice, these officers stood a much better chance to gain and retain the competence modern gunnery methods required.[318]

Secondly, Brewer recommended a reorganization of artillery units to group these gunnery officers together at the artillery battalion, coinciding with a change in gunnery procedures involving the consolidation of fire direction at the battalion headquarters. While Brewer had not yet overcome the technological challenges of adjusting several batteries' fire from a single headquarters, and relying on one observation point to provide adjustment data for more than one battery, he saw this as the only way to continue moving forward and sustaining the progress his gunnery department had achieved during his and Jake Devers' tenure there. Brewer summarized several advantages of this new organization, from easing the training of Gunnery Officers and their ability to share new ideas, to improved staff coordination, simplified OP placement and security, and the creation of maps more quickly and accurately than when attempted at multiple battery-level headquarters. However, Brewer recognized the single most likely obstacle facing this recommended organization: "Probably the greatest objection of all is that this will rob the batter commander of one of his time honored prerogatives, that of firing his own battery, and tend thereby to stifle his ambition and desire to have an efficient firing battery." However, Brewer believed the branch could overcome this objection, and noted from his own observations

[318] Brewer, "Brewer to McNair on Recommended Changes in Gunnery Instruction, 1932," 3-4.

while serving with the Gunnery Department that battery commanders strove to deliver the most accurate fire possible, wherever the fire direction responsibility rested.[319]

Nevertheless, Brewer had not yet developed a procedure for calculating fire adjustment data in a consolidated battalion gunnery section and then transmitting it to each firing battery.[320] The responsibility would fall to his successor, Orlando Ward, to solve this problem while McNair fended off the resistance from Field Artillery Branch traditionalists who believed the battery commander should fire his own guns. Fortunately, as Gugeler put it, "From the beginning, [Ward] enjoyed several advantages: Brigadier General Lesley J. McNair, then the Assistant Commandant [and serving in his current permanent rank of Lieutenant Colonel], supported all efforts to simply or improve artillery support; Ward understood artillery techniques thoroughly; and he inherited from Brewer a group of about 15 capable and enthusiastic gunnery instructors." Describing Ward's methods, Gugeler points out his hands-off approach and lack of strict control. Ward encouraged new ideas, even ones that seemed impracticable, believing the officer might not only see the infeasibility of his idea, but in doing so, develop a new one. Gugeler quotes one of the Gunnery Department officers, later Major General John M. Lentz, as recalling, "His methods were not obvious. There was no prodding, no laying out of objectives, only a gentle happiness with every new thought, every development. The result was a vastly greater change in every facet of our technique than has ever happened before or since."[321]

Progress accelerated under Ward's leadership. Building on the previous several years' experimentation, Ward's open-minded approach to developing new methods soon led to discovery of a rapid and relatively simple method of controlling fires and calculating fire data at the battalion. The gunnery instructors realized the main hindrance they had experienced to date

[319] Ibid., 4-7.
[320] Dastrup, *King of Battle*, 197; Gugeler, "Fort Sill and the Golden Age of Field Artillery," 8-9.
[321] ———, "Fort Sill and the Golden Age of Field Artillery," 11.

involved using several observers, each trying to adjust their own battery onto the same target simultaneously, often leading them to confuse another battery's rounds for their own and therefore miscalculating further adjustments. Not long after Ward took over as Chief of the Gunnery Department, the instructors worked out a new fire adjustment method. A single observer adjusted one battery until it placed a round on target, at which point the battalion used a newly devised technique to calculate and send firing data to the battery that had fired and the others that had not, enabling them all to place, quickly and accurately, massed fires on the target. After seeing this new method in action during one of the department's standard Saturday morning gunnery experiments, Ward realized they now knew not only how place accurate fires on a target of opportunity in ten minutes – a process that had previously required several hours – they also could do so as a battalion, achieving accurate fires with unprecedented speed and mass. Upon returning from the firing range to his office, Ward described the results: "It was just like squirting a hose at the target."[322]

In the process of solving the problem of calculating fire data for separate batteries at the battalion, the gunnery instructors formed a new organization that eventually evolved into the Fire Direction Center (FDC). The FDC consolidated all the complex procedures associated with adjustment of fire in a single organization. Answering directly to the battalion commander, the FDC received correction data from the forward observers, who no longer had to calculate adjustments since the FDC calculated fire data for each battery. With accurate maps the battalion could consistently achieve accurate concentrations in ten minutes; without maps they required more time, but the procedure still worked exceptionally well.[323]

[322] Ibid., 12-13.
[323] Ibid.; Dastrup, *King of Battle*, 197-98.

Working in this exciting, innovative organization, gunnery instructors continued to improve artillery fire direction by refining procedures and developing new techniques, some deceptively simple, like the back-azimuth technique that eliminated the need for time-consuming surveys by enabling a battery to calculate its position based on the trajectory and point of impact of fired rounds. One of these new techniques, the range fan, developed by First Lieutenant Charles C. Blanchard, enabled FDC personnel to measure range and deflection (lateral error) with a single device, rather than a range scale and protractor. The range fan consisted of a fan-shaped piece of clear plastic, connected to the map by a pin placed at the location of each firing battery. By shifting the position of the range fan based on a round's point of impact, an artilleryman could quickly calculate both the range and angle of deflection adjustments. Field artillery battalions soon adopted Blanchard's range fan as standard equipment.[324]

Similarly, while the new procedures dramatically sped up fires delivered on opportunity targets, or prior to completion of battery position surveys, Ward also sought ways to speed up surveys to improve artillery responsiveness when a forward observer had not yet reached a position where he could provide adjustment data. Another young officer in the Gunnery Department, Captain John M. Lentz, jumped at the opportunity to work on this problem. Realizing both the antiquated French survey equipment and the inaccurate aerial surveys they relied upon created most of the problem, Lentz borrowed instruments from the Coast Artillery – including the far more accurate transit – and developed a procedure for testing the speed and accuracy of surveys conducted using them. Convinced that they average officer would never have allowed his experiment, since the Field Artillery at that time did not possess the transit and developing a procedure relying on unauthorized equipment served no use, Lentz gave full credit

[324] Gugeler, "Fort Sill and the Golden Age of Field Artillery," 14.

to Ward for allowing him to develop yet another procedure the Army later adopted for widespread use.[325]

The Gunnery Department developed several additional new or improved methods to adjust fire, including improved fire calculation tables, map overlays, and aerial photography techniques. However, Ward's greatest obstacle remained "the resistance, by most of the artillery, particularly the Chief's office, to taking any of the prerogatives away from the battery commander." Ward argued it made sense for a battery commander to control his own battery's fire if engaging a target it could neutralize with four guns or less, but larger targets required the massed fires of the whole battalion, which only the FDC, using the new procedures developed by the Gunnery Department, could achieve. With officers from other departments attending Saturday morning gunnery practice and seeing the amazing results the Department could achieve, Ward grew confident the drastic increases in speed, flexibility, and accuracy would outweigh traditionalist concerns, and began to urge the school to adopt the new procedures for instruction to all students. His biggest immediate obstacle stemmed from the fact that his department, rather than the Tactics Department, should teach fire direction. With this achieved, the sheer efficacy of the new procedures, propagated through the branch via annual classes of graduates trained in the new procedures, would eventually overcome traditionalist resistance.[326]

Ward faced a tough battle when he confronted the Tactics Department. However, Lesley McNair had established a reputation among his peers as a highly competent artilleryman, and in his fourth year as Assistant Commandant, he wielded significant influence at the Field Artillery School. An advocate of innovation for many years, McNair supported Ward, and convinced the Commandant to grant Ward's request, giving the Gunnery Department the freedom not only to

[325] Ibid., 15.
[326] Ibid., 17.

continue experimenting, but also to train students at the Field Artillery School in the latest fire direction techniques. Resistance among senior field artillery officers remained, and the War Department did not support immediate implementation of the FDC. However, the Gunnery Department now had control over fire direction instruction, and with it, the freedom to influence the thinking of every young field artilleryman who attended the Field Artillery School about how much the branch could achieve using the latest procedures.[327] As these young artillerymen aged and increased in rank, they might finally hold sway over the traditionalists currently preventing the Artillery Branch from overcoming the challenges that hindered its effectiveness during the World War.

McNair submitted his final annual report at the Field Artillery School on June 7, 1933. Significantly, he did not mention the new developments in the Gunnery Department, probably realizing he had nothing to gain by risking the success in transferring responsibility for fire direction instruction to the Gunnery Department by advertising that change to the traditionalists among the more senior officers in the Branch. His report did emphasize the updating of texts, following on from the previous year by discussing the ongoing revision process, along with efforts to print enough texts for use at the school and for distribution to the field. As Regular Army artillery personnel gained proficiency, he recommended implementation of admittance tests to ensure students met minimum qualification standards before acceptance into the school's various courses. He also highlighted the lack of motorized equipment in the 1st Battalion, 1st Field Artillery, that prevented it from conducting motorized tactical training. McNair emphasized the need to acquire the necessary equipment at the school, arguing in modern conditions at least half of all instruction should cover motorized rather than horse-drawn artillery. Finally, McNair mentioned the dramatic impact on the school of the newly created

[327] Ibid., 17-18; Coffman, *The Regulars*, 265-66; Dastrup, *King of Battle*, 198.

Civilian Conservation Corps (CCC), a New Deal program put in place by President Franklin D. Roosevelt. Since the program relied on Regular Army personnel to run the CCC's many civilian work camps, most Army units and schools lost many personnel. The Field Artillery School lost sixty percent of its personnel, forcing it to close the academic year early, on May 22, 1933. McNair stated the school retained sufficient personnel to maintain minimum functioning in each of its key departments, and expected to resume functioning upon arrival of the fall class.[328]

McNair's efficiency reports from his four years at the Field Artillery School invariably rated him a superior officer, qualified both for promotion to the next highest grade, and for command of a regiment in peace or a brigade in time of war. In the section evaluating his suitability for duty with civilian components (required by *Army Regulation 600-185*) he received a similarly consistent qualified rating. After a brief seven-month period working for Colonel George P. Tyner, Acting Commandant of the Field Artillery School, McNair served under the new Commandant, Brigadier General Wm. M. Cruikshank, for the duration of his time there. He clearly made a strong impression on Cruikshank, who wrote the following unusually long "Brief General Estimate of this Officer" (section "R" of the form) on McNair's final efficiency report before departing the school:

> A superior officer in the highest sense of the word. Extremely well informed, hard working and conscientious. Very tactful, a fine disciplinarian and gets results from all with a minimum of friction. Very pleasing personality, liked and respected by all. I cannot give him too much credit for the continued progress and efficiency in the Academic Division of the F.A. School during his four years service here.[329]

[328] Lesley J. McNair, "Memorandum for the Commandant, Field Artillery School: Annual Report," June 7, 1933, Field Artillery School Archives, Morris Swett Technical Library, Fort Sill, Oklahoma.

[329] William M. Cruikshank, "Efficiency Report," June 27, 1933, McNair Papers, National Archives and Records Administration, St. Louis, MO.

Not only did Cruikshank deem McNair "Suitable for civilian contact," he added the handwritten statement: "Eminently qualified for any duty to which he may be assigned."[330]

McNair had obviously made quite an impression within his branch. After his excellent performance at the Field Artillery School, and his overall very strong record of performance since the World War, the Army selected McNair for battalion command. He reported to Fort Bragg, North Carolina on July 1, 1933 where he took nine days of leave before assuming command of 2nd Battalion, 16th Field Artillery.

**Battalion Command at Fort Bragg, 1933-34**

Like the rest of the Army, the Field Artillery Branch remained in a consistent state of flux throughout the 1920s and 1930s. Largely due to the severely under strength and budget constrained condition of the Army, units frequently reorganized, redesignated, and shifted from the control of one higher headquarters to another. McNair experienced this situation firsthand when he received orders to report to Fort Bragg, North Carolina upon his selection to serve as a battalion commander.

In accordance with Special Orders No. 112, dated May 15, 1933, the War Department relieved McNair of duty at the Field Artillery School, reassigning him to the 16th Field Artillery at Fort Bragg effective June 30, 1933 "for assignment to duty." While these orders did not specify that duty as battalion command, McNair's efficiency report for the period July 1, 1933 through June 30, 1934 listed nine days of leave enroute, followed by service as battalion

[330] George P. Tyner, "Efficiency Report," Feb 8, 1930, McNair Papers, National Archives and Records Administration, St. Louis, MO; William M. Cruikshank, "Efficiency Report," June 30, 1930, McNair Papers, National Archives and Records Administration, St. Louis, MO; ———, "Efficiency Report," June 30, 1931, McNair Papers, National Archives and Records Administration, St. Louis, MO; ———, "Efficiency Report," June 30, 1932, McNair Papers, National Archives and Records Administration, St. Louis, MO; ———, "Efficiency Report." Cruikshank added and initialed this hand-written final comment to the typed efficiency report. He clearly held McNair in very high regard.

commander for the rest of the upcoming year. However, the report indicated he commanded the 2nd Battalion, 83rd Field Artillery, not a battalion in the 16th Field Artillery.[331]

The two-volume set on the Field Artillery in the Center of Military History's "Lineage Series" helps to clarify the situation. The War Department constituted the 16th Field Artillery Regiment in the Regular Army on July 1, 1916 and the regiment organized on May 21, 1917 at Camp Robinson, Wisconsin. After service with the 4th Division during the World War, the War Department inactivated the regiment on September 21, 1921 at Camp Lewis, Washington. The following year it activated the 1st Battalion at Fort Myer, Virginia, assigning it initially to the 4th Division. However, the War Department reassigned the battalion back and forth between the 4th and 8th Divisions several times over the next twelve years. Concurrent to one of these reassignments, the War Department activated the 2nd Battalion at Fort Bragg on September 5, 1927. However, less than a month later, on October 1, 1933 the 16th Field Artillery Regiment received orders reassigning it once again from the 4th Division to the 8th Division, concurrently inactivating the 2nd Battalion at Fort Bragg.[332]

The 83rd Field Artillery Regiment also formed prior to the World War. Constituted on July 1, 1916 in the Regular Army as the 25th Cavalry, the unit organized on June 5, 1917 at Fort D.A. Russell, Wyoming. It converted from cavalry to field artillery, and Field Artillery Branch redesignated the unit on November 1, 1917 the 83rd Field Artillery, assigned on December 17, 1917 to the 8th Division. The War Department inactivated the Regiment (less 1st Battalion) on January 7, 1922 at Camp Benning, Georgia, and disbanded it (again, less 1st Battalion) on February 28, 1927 (1st Battalion concurrently reorganized and redesignated as the 83rd Field

[331] Manus McCloskey, "Efficiency Report," June 30, 1934, McNair Papers, National Archives and Records Administration, St. Louis, MO.

[332] Janice E. McKenney, *Field Artillery, Part 1*, Army Lineage Series (Washington, DC: United States Army Center of Military History, 2010), 513-15.

Artillery Battalion). The War Department reconstituted the 83rd Field Artillery Regiment on March 17, 1930 and assigned it to the 8th Division (the War Department simply reorganized the 83rd Field Artillery Battalion as the 1st Battalion, 83rd Field Artillery, reforming the rest of the regiment on paper; the other battalions remained inactive). The War Department relieved the regiment on October 1, 1933 from assignment to the 8th Division and assigned it to the 4th Division, concurrently activating the 2nd Battalion (a horse artillery unit) at Fort Bragg, North Carolina.[333]

Thus, McNair apparently commanded the 2nd Battalion, 16th Regiment from July 1 through October 1, 1933, when his command changed from the inactivated 2nd Battalion, 16th Field Artillery to the newly activated 2nd Battalion, 83rd Field Artillery Regiment (records do not reflect whether this merely consisted of re-flagging an existing unit). While clarified in the lengthy Field Artillery lineage volumes, McNair's efficiency reports – probably due to regulations governing generation of such reports based on how long an officer served in a unit or for a particular supervisor – make no mention of this turbulence. His first efficiency report as battalion commander mentions only the 2nd Battalion, 83rd Field Artillery, while his second, covering the brief period from July 1 to September 1, 1934 includes command of the same battalion plus a short period of detached service at a Civilian Military Training Camp (CMTC). These efficiency reports do reflect consistently superior performance, as judged by the regimental commander, Brigadier General Manus McCloskey. In particular, the senior rater on his second evaluation, the newly assigned 4th Corps Area Commander, Major General George

[333] _____, *Field Artillery, Part 2*, Army Lineage Series (Washington, DC: United States Army Center of Military History, 2010), 965-67.

Van Horn Moseley, added the remark, “Colonel McNair is one of the outstanding officers of the Army,” and signed his name to this indorsement above his official signature block.[334]

Thus, while no other information appears available on McNair’s battalion command, these efficiency reports indicate he performed as well in this assignment as he did in previous positions, drawing the attention of yet another senior officer who singled him out for particular commendation. Further, due to the turbulence in the field artillery community, McNair probably faced significant administrative challenges during his command, reorganizing and re-flagging the unit after only a few months. Nevertheless, he performed yet again in a superior manner, and soon found himself reassigned to another high-profile command, although one of a very different nature.[335]

**District Command with the Civilian Conservation Corps (CCC), 1934-35**

McNair departed Fort Bragg in August 1934, having received orders to serve as Commander, Civilian Conservation Corps (CCC) District “E,” VII Corps Area, at Camp Beauregard, Louisiana.[336] McNair began this tour of duty at a time when America was continuing to suffer the financial debilitation caused by the Great Depression. The Army officer salaries and annual raises set by Congress in 1922 may have put them in a better position than many Americans, but left them much worse off than federal employees in other branches of government, who received higher wages and more than double the annual pay raises of Regular

[334] McCloskey, "Efficiency Report."; Manus McCloskey and George Van Horn Moseley, "Efficiency Report," September 1, 1934, McNair Papers, National Archives and Records Administration, St. Louis, MO. Most efficiency reports of this period include no special remarks in the 1st Indorsement section, with the Adjutant simply signing for an unnamed senior rater, indicating his concurrence in the rater's evaluation.

[335] Headquarters Fourth Corps Area, "Extract, Special Orders No. 118," n.d., McNair Papers, National Archives and Records Administration, St. Louis, MO. McNair remained assigned to the 83rd Field Artillery during this assignment, serving as detached personnel with the Civilian Conservation Corps.

[336] L. D. Gasser, "Special Orders No. 118," July 16, 1934, McNair Papers, National Archives and Records Administration, St. Louis, MO.

Army personnel. When Franklin D. Roosevelt won the presidency in 1932 and implemented his New Deal policies, the situation for members of the Regular Army only worsened, including implementation of a fifteen percent annual pay cut and one unpaid month per year, from 1933 through 1935.

Roosevelt established the CCC to put young, unemployed civilian men to work, but the program significantly affected Regular Army personnel as well. Almost all Regular Army officers served a one-year assignment as a commander or leader in a CCC district over the life of the program. While most contemporary accounts about the CCC emphasized the role of the military in establishing the organization, they also emphasize the absence of any military training at the camps. The administration turned to the Army to establish and command the camps, and equip and organize the individuals joining the CCC, because the Army possessed the capacity to mobilize a large number of people quickly and effectively. However, aware of the prevailing pacifist sentiment in early 1930s America, the administration ensured (and publicized) the conscious avoidance of militarization in the camps.[337]

The Regular Army answered the call, but reluctantly, given the massive personnel demands with no apparent benefit to the Army. The Army still lacked an Organized Reserve, and the CCC program seemed to some the ideal opportunity to create one. Most Army officers also saw their support of the program as a diversion of an already skeleton force away from its primary mission of national defense. Nevertheless, despite the reduction the Regulars experienced in their own military readiness, the Army did derive some benefit from the program. As Charles Johnson put it:

[337] Coffman, *The Regulars*, 241-42. As Coffman points out, these officers often incurred unreimbursed travel costs due to offical travel requirements when serving in the CCC; Charles William Johnson, "The Civilian Conservation Corps: The Role of the Army" (PhD Diss, The University of Michigan, 1968), ii.

> The Army benefited from the CCC in a variety of ways. The Corps provided a valuable training experience for a large number of reserve officers, the Army utilized CCC labor to perform badly needed conservation work on military reservations, and 2 1/2 million enrollees acquired skills that were potentially useful to the War Department. The Army was in a position to misuse its authority over the enrollees, but it did not abuse its power because of its awareness of the probable public response to anything resembling the militarization of the camps, its knowledge of the Administration's hostility toward such action, and its clear understanding of the proper place of the military in a democracy.[338]

The Army provided an irreplaceable capability to establish and run the program, but it did not approach the mission as a military one, or view the CCC personnel as military trainees or reservists. Only time would tell if the Army would derive any significant long-term benefit from the program.

In preparation for his reassignment to command of CCC District "E," Colonel McNair received orders on August 18, 1934 to report to Fort McPherson, Georgia, for a meeting with Major General George Van Horn Moseley, commander of the 4th Corps Area. Two days later, after his meeting with McNair, Moseley wrote Brigadier General Manus McCloskey, commander of the 83rd Field Artillery Regiment and McNair's immediate supervisor, to inform him of his decision to reassign McNair. Moseley, who took particular notice of McNair during his assignment at the Field Artillery School, wrote, "I know you will be sorry to lose McNair, but I also appreciate that you are willing to cooperate with us fully so that we may keep up a fine record throughout the whole Corps Area in handling these important activities." The CCC program, a major initiative at the forefront of Roosevelt's New Deal, attracted a great deal of attention from the War Department and political leaders, and Corps Area commanders

[338] _____, "The CCC: The Role of the Army", ii. Even though members received no formal military training, they experienced military discipline, values, and leadership while gaining strength and physical endurance from regular meals and manual labor.

experienced significant pressure to assign quality officers to district commands. District "E," in particular, presented significant challenges to the commander.[339]

As Moseley explained to McCloskey in his letter of August 20, unlike all other CCC districts, no Regular Army post existed to serve as the headquarters for District "E." While General Fleming, Adjutant General of the Louisiana National Guard, offered the use of Camp Beauregard as the district headquarters, this atypical arrangement required particular effort both in establishing and maintaining the district headquarters, and in coordinating CCC activities with Louisiana National Guard and state government officials. Moseley wrote,

> I have been searching for a highly desirable man to relieve Packard [the outgoing commander], and I hit upon McNair. I have known McNair for many years and I look upon him as one of the very best officers in the Army. It will be a great relief to us to turn over that command to such a fine leader.

Moseley's meeting with McNair apparently reinforced his confidence that he had selected the right man for the job, since he immediately arranged for McNair to visit Camp Beauregard and familiarize himself with the district and its thirty-three camps before departing Fort Bragg permanently for his new assignment. McNair departed Fort McPherson by train the next day for Shreveport, Louisiana, and from there to Barksdale Field for air transport to Camp Beauregard.[340]

McCloskey's response to Moseley revealed both McNair's fitness for the complexities involved in the District "E" command, and the immense pressure the Regular Army experienced

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[339] 4th Corps Area Adjutant General, "Orders Directing McNair to Report to Fort McPherson, Georgia," August 18, 1934, McNair Papers, National Archives at St. Louis, MO; George Van Horn Moseley, "Major General George Van Horn Moseley to Brigadier General Manus McCloskey," August 20, 1934, McNair Papers, National Archives at St. Louis, MO; He only had time to send Clare a brief telegram before departing: "For Mrs. L J McNair Slated to command Beauregard District Involves permanent change of station Date unknown at present Leave today for Beauregard . . . home Date later Love Lesley" Lesley J. McNair, "Lesley J. McNair to Clare H. McNair," August 20, 1934, McNair Papers, National Archives and Records Administration, St. Louis, MO.

[340] Van Horn Moseley, "Moseley to McCloskey, August 20, 1934."; 4th Corps Area Adjutant General, "T. H. Lowe to Commanding Officer, Barksdale Field, Louisiana," August 20, 1934, McNair Papers, National Archives at St. Louis, MO.

in its rush to establish the CCC camps and receive the massive civilian workforce. Writing on August 24, the day McNair returned to Fort Bragg, McCloskey assured Moseley he understood the challenges McNair would face, largely due to the "immense distance between our eastern and western companies of about 600 miles," and had compiled for McNair all the necessary background information and regulations to help him in the transition to his new command. McCloskey's letter only reinforces the fact that the Regular Army understood it must assign quality officers to CCC commands, stating, "Like you, I regard Col. McNair as one of the outstanding officers of the Army and I know that he will handle his District most successfully."[341]

McNair officially assumed command of District "E" on 5 September 1934. He immediately began dealing with the wide array of responsibilities associated with managing more than thirty CCC camps spread out over two states (Louisiana and Mississippi). In addition to property accountability, coordination with various state government and Louisiana National Guard Officials, securing necessary equipment, ensuring safe work and living conditions, and answering many requests for employment at a CCC camp, McNair's personnel file contains temporary duty orders demonstrating he spent a great deal of time conducting inspection visits to various camps. For example, between January 21 and February 18, 1935, McNair made seven trips by car to camps in his district, usually visiting two or three camps per day. His senior subordinate officers maintained similar travel schedules, usually to provide their individual expertise when called for by a particular problem.[342]

[341] Manus McCloskey, "Brigadier General McCloskey to Major General Moseley," August 24, 1934, McNair Papers, National Archives at St. Louis, MO.

[342] Various Special Orders, Headquarters, District "E" C.C.C., January 21 through February 18, 1935, McNair Papers, National Archives at St. Louis, MO.

McNair highlighted one of the CCC's key areas of emphasis in his introduction to a pamphlet entitled "Progress in Education in District "E" C.C.C." Acknowledging the enormous challenges initially facing the program, from lack of facilities and educators to the need to develop an academic curriculum, McNair wrote, "Camp educational advisers have been improved and will be improved still further, and the young men themselves are learning that the instruction affords them a fine opportunity for self-improvement." McNair emphasized the relevance of the educational program within the CCC's overarching goal of "building young men for better and more useful and successful citizenship," which involved both physical and mental development. He wrote, "This education rounds out his camp life; his daily work, his recreational activities, and his educational efforts blend to make a rational and healthful whole."[343]

Like all of the officers who participated in the CCC program, McNair received valuable practical experience in mobilizing, housing, supervising, and building the mental and physical toughness of young inductees. Reserve officers in particular benefited, since the lack of an Organized Reserve meant before the creation of the CCC, almost all ROTC graduates received no annual training after receiving their reserve commissions. Regardless, McNair soon moved on to a new stage in his career – like many Army War College graduates, McNair began to ascend into the ranks of the Army's senior leadership, meaning accelerated promotions and positions of greater responsibility. The first indication he might soon leave the CCC arrived in November 1934 in the form of orders to report to Fort Benning for a special physical to determine his fitness for continued active service and promotion.[344]

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[343] Lesley J. McNair, "Message from the Commanding Officer, District "E" C.C.C., in "Progress in Education in District "E" C.C.C.","," n.d., McNair Papers, National Archives at St. Louis, MO.

[344] L. D. Gasser, "Special Orders No. 164," November 19, 1934, McNair Papers, National Archives at St. Louis, MO.

McNair passed his annual physical in January 1934, with his longstanding hearing loss noted but no treatment or administrative action recommended. Nevertheless, promotion boards required a special promotion physical, so McNair received orders on November 19, 1934 to travel to Fort Benning, Georgia to undergo his second physical exam that year, to determine his fitness for continued active service and promotion. He proceeded to Fort Benning as directed and underwent the physical exam (annotated "promotion" on the first page) on November 27.[345]

Interestingly, the exam revealed significantly improved numerical scores for hearing sensitivity, but the examining doctors still noted defective hearing in his left ear and physical damage to his eardrums. Just as in previous exams, his doctors assessed his hearing loss "not considered a disqualifying condition." A medical board composed of three infantry colonels and two medical corps majors found him fit for continued active service and promotion. On December 11, 1934, the Secretary of War approved the board's results, and on February 1, Moseley wrote McNair to inform him he would soon change duty stations, having made the colonel's list (presumably to move McNair to a Colonel's assignment pending promotion).[346]

McNair remained in command of District "E" through April 1935, while awaiting arrival of his replacement, Colonel Thomas Osborne. During his final months with the CCC, McNair continued his busy travel schedule and maintained a huge administrative workload overseeing

[345] Ibid.

[346] G. A. O'Connell, "Report of Physical Examination," January 12, 1934, McNair Papers, National Archives and Records Administration, St. Louis, MO; James W. Duckworth, "Report of Physical Examination," November 27, 1934, McNair Papers, National Archives and Records Administration, St. Louis, MO; H. P. Hobbs, "Report of Physical Examination," August 5, 1927, McNair Papers, National Archives at St. Louis, MO; Ward Surgeon, "Walter Reed Diagnosis Card, 1927."; Charles W. Weeks et al., "Report of Examining Board for Promotion of Officers," November 27, 1934, McNair Papers, National Archives and Records Administration, St. Louis, MO; P. T. Hayne, "War Department, the Adjutant General, Subject: Qualifications for Promotion," December 11, 1934, McNair Papers, National Archives and Records Administration, St. Louis, MO; George Van Horn Moseley, "George Van Horn Moseley to Lesley J. McNair," February 1, 1935, McNair Papers, National Archives and Records Administration, St. Louis, MO.

more than thirty camps in two states. On March 14, 1935, a few days before he began the process of transferring responsibility for District "E" to Osborne, McNair received a letter from General Moseley regarding the establishment of educational programs in the CCC camps. Noting the Roosevelt administration's emphasis on these programs, Moseley commended McNair for his achievements in District "E" and directed he send a copy of the letter to all his subordinate commanders, to ensure they sustained the CCC's educational program after McNair's departure.[347]

Moseley also indicated his continued respect for McNair in his April 1935 efficiency report, in which he wrote the following "Brief General Assessment" of McNair: "An able, even-tempered officer with outstanding talents. Possesses great tact in leading human beings. One of the very best field artillerymen in the Army." Regarding his potential for service with civilians, Moseley wrote, "Ideally suited for duty with the civilian components. Colonel McNair was specially selected to command District "E", Civilian Conservation Corps, containing thirty-four camps. In the performance of this duty he fully measured up to my expectations."[348]

[347] _____, "George Van Horn Moseley to Lesley J. McNair, Subject: CCC Education," March 16, 1935, McNair Papers, National Archives and Records Administration, St. Louis, MO.

[348] _____, "Efficiency Report," April 20, 1935, McNair Papers, National Archives and Records Administration, St. Louis, MO.

# CHAPTER EIGHT

## Rise to Prominence in the Late 1930s

Due to the attention he gained for his excellent performance in key positions at the Field Artillery School and as a district commander (and periodically, acting corps area commander) serving with the Civilian Conservation Corps, McNair had developed throughout the early 1930s into one of the Army's up and coming officers. His service with CCC District "E," in particular, drew attention from senior officers in his branch, leading to his selection to serve as the executive officer to the Chief of Field Artillery – a position that exposed him to many senior commanders and gave him a taste of high-level officer leadership. His performance in the late 1930s led to further progression in authority and responsibility, and participation in key innovative and organization efforts that led to his serving as s key individual in the modernization of the Army in the final years of the decade.

### Executive Officer to the Chief of Field Artillery, 1935-37

McNair departed Camp Beauregard on April 20, 1935 enroute to his new assignment in the office of the Chief of Field Artillery in Washington, D.C. He soon found himself in one of the key positions in a high-level headquarters – Executive to the Chief of Field Artillery, Brigadier General Upton Birnie, Jr. Unlike an aide de camp, an executive essentially serves as the primary military assistant to the senior general officer in a headquarters, managing his calendar, keeping records, handling correspondence, and serving as the "gatekeeper" for people seeking to meet with the general. In addition to the heavy administrative burden associated with this position, McNair soon found his particular expertise with experimentation and testing of equipment innovations put to use again. He traveled to Aberdeen Proving Grounds in Maryland on May 17, 1935 "for the purpose of observing Field Artillery materiel and test of the Hotchkiss

25 m/m gun." Also on May 17, with McNair on temporary duty in Maryland, notification arrived at the Office of the Chief of Field Artillery of his promotion to the permanent rank of Colonel. McNair executed the required Oath of Office on 20 May, with an effective date of rank of 1 May 1935.[349]

McNair returned to Aberdeen Proving Grounds in March 1936 to observe further field artillery materiel tests, but few records exist describing the other duties he performed while serving as the Executive to the Chief of Field Artillery. However, detailed records McNair kept in his personal files demonstrate the significant effort he expended learning about and studying the potential of an emerging technology, as demonstrated in an article in *The Field Artillery Journal Article* published in 1937 entitled, "And Now the Autogiro." The article describes the potential for the autogiro, a hybrid aircraft combining the characteristics of the airplane (for speed) and the helicopter (for low speed takeoff and landing) to transform the practice of aerial observation of artillery fires. Unlike a helicopter, the autogiro relied on both a powered propeller and unpowered rotor blades for flight. Looking much like a typical airplane with a rotor system attached above the pilot and observer seats, the aircraft possessed significant advantages over a standard airplane – primarily due to the constant autorotation of the rotor blades, which enabled the autogiro to maintain flight at speeds as low as twenty to thirty knots. Any typical airplane at that time stalled at much higher airspeeds. Thus, the autogiro possessed obvious advantages over the balloon due to its maneuverability, enabling it to avoid enemy threats. However, it also offered significant advantages over the airplane, including the ability to take off from and land to

[349] War Department, "Special Orders No. 18," January 22, 1935, McNair Papers, National Archives and Records Administration, St. Louis, MO; Lesley J. McNair, "Lesley McNair to the War Department Adjutant General, Subject: Travel Orders to Aberdeen Proving Grounds," May 13, 1935, McNair Papers, National Archives and Records Administration, St. Louis, MO; War Department Adjutant General, "Promotion Orders and Oath of Office," May 17, 1935, McNair Papers, National Archives and Records Administration, St. Louis, MO.

very short fields, and fly very low and slow, enabling artillery commanders to perform detailed aerial reconnaissance for citing batteries and aerial photographers to capture much clearer images than those taken in airplanes flying much faster.[350]

The Field Artillery began evaluating the potential uses of autogiros in 1934, when it planned to purchase three airframes for evaluation – one for The Field Artillery School, one for The Infantry School, and one for The Cavalry School. Major Edwin P. Parker, Jr. described the autogiro's potential for field artillery support in *The Field Artillery Journal* in 1934, while reminding his readers, "It must be borne in mind that the autogiro is in its infancy, and great development thereof is to be expected." Parker wrote his short article about the Kellett KD-1, the model currently under evaluation by Army personnel, primarily to provide a brief description of the aircraft's characteristics and describe its potential for replacing the observation balloon, which proved extremely vulnerable to enemy fire during the World War. Parker described the very short takeoff and near-vertical landing ability of the aircraft, its minimum airspeed that enabled a runner on the ground to keep up with it long enough to hand a bag to a courier in flight. He also described the aircraft's ability to use wired communications when operating over a small area or radio at longer distances, and its potential for field artillery reconnaissance and observation.[351]

Despite the potential Parker described, by 1935 the Army still had not procured any autogiros, although various tests continued. In its May-June, 1935 issue, the "Field Artillery Notes" section of *The Field Artillery Journal* describes the sixth annual Field Artillery dinner, which took place shortly after McNair's arrival in Washington as the Executive to Brigadier

[350] Lesley J. McNair, "Lesley McNair to the War Department Adjutant General, Subject: Travel Orders to Aberdeen Proving Grounds," March 25, 1936, McNair Papers, National Archives and Records Administration, St. Louis, MO.

[351] Edwin P. Parker Jr., "The Autogiro and Its Value to the Field Artillery," *Field Artillery Journal* 24, no. 4 (July-August 1934): 347-54.

General Birnie. At the dinner, hosted by the McNairs and the Birnies and attended by 164 guests, the decorations included place cards with a hand-drawn illustration of children playing with various toys including a rifle, an artillery piece, a bridge section, and an autogiro. Later in this section of the journal, the reader learns, "For various reasons the purchase of autogyros [*sic*] anticipated in the FIELD ARTILLERY JOURNAL [*sic*] of July-August 1934 has not yet been made. It is hoped that these will be procured in the near future." However, the notes described the ongoing testing, not just in America but also in France and Russia, including a demonstration at Bolling Field in Washington, D.C. for General Birnie "and numerous other officers." General Birnie rode in an autogiro during this demonstration, and supported continued efforts to develop and procure the aircraft through the direct involvement of his new Executive.[352]

McNair clearly took great pride in the various equipment tests he led and boards he presided over, since his notes and reports from these projects make up the majority of the personal papers he left behind. His work on the autogiro remains preserved in one of the largest of these records, detailing a lengthy period of research, including trips to visit the manufacturers of the Army's autogiros, the Kellett Autogiro Corporation. The records also include correspondence with pilots and field artillerymen involved in testing earlier models, the results of later field tests, and many other letters providing information to McNair and commending him on his efforts.[353]

McNair captured the results of more than six months' research in his thirteen-page article "And Now the Autogiro," published in the January-February 1937 issue of *The Field Artillery Journal*. This article focused on the latest autogiros in production – the Kellett YG-1 and YG-

[352] "Field Artillery Notes," *Field Artillery Journal* 25, no. 3: 283-86.

[353] Lesley J. McNair, "Auto-Giro," October 18, 1937, National Archives and Records Administration, College Park, MD, RG 337, Entry 58, Box 7. McNair began research for his article in June 1936, and traveled to the Kellett Autogiro Corporation to speak with project engineers in December 1936; ———, "And Now the Autogiro," *Field Artillery Journal* 27, no. 1 (January-February 1937).

1A. The Army Air Corps had recently purchased one of each model, placing the aircraft and pilots at the ground forces' disposal to conduct service tests. He began the article by describing the many technological advances since the World War, while pointing out their evolutionary nature. As McNair pointed out, the AEF employed an earlier version of almost every piece of the equipment the Army possessed in 1937. However, he described the autogiro as one of the few truly revolutionary technological advances available for military application, largely because of the same features Parker described in his 1934 *Field Artillery Journal* article. However, in every major performance category, the newer models demonstrated improved performance. They could fly as slow as sixteen knots without stalling, and hover over a point if facing a sixteen-knot headwind. They could land nearly vertically, with a forward roll of no more than fifty feet upon landing, and take off over a fifty-foot obstacle only 300 feet away.[354]

McNair credited the invention and revolutionary characteristics of the autogiro to a Spanish engineer named Juan de la Cierva, who built the first operational prototype in 1920. Cierva sought to create a safer alternative to the traditional airplane, with its tendency to stall at low airspeeds, by making use of the autorotation capability of the autogiro's rotor system. Ironically, as McNair pointed out, "at the age of forty-one and after bringing his brain-child through the most trying period of its development, he met death recently in a modern transport airplane." However, other aeronautical pioneers continued Cierva's work, including a Purdue alumnus named R. H. Prewitt, Chief Engineer of the Kellett Autogiro Corporation. By 1937, Prewitt had worked out the aerodynamic principles for the "jump take-off" – an initial vertical climb of 200 feet before beginning forward flight – although many credited this concept incorrectly to Cierva. While this capability remained under development, the autogiros of 1937 offered a dramatically more versatile alternative to the airplane, and now that the Army finally

[354] ———, "And Now the Autogiro," 5-6.

owned two of the aircraft, McNair sought to help his readers understand the potential they held for employment by the field artillery.[355]

Perhaps because the autogiro looked so strange in comparison to the airplane, or perhaps simply because he found the technology fascinating, McNair provided his readers not only a description of the aircraft's flight characteristics and potential for field artillery employment; he also wrote a detailed yet accessible explanation of the general aerodynamic principles of rotary wing aircraft. This remains a highly complex topic that still proves challenging to student helicopter pilots today. In particular, McNair focused on the concept of autorotation, the main characteristic that made the autogiro unique.

Unlike the modern helicopter, which relies for normal flight on a powered rotor system, the autogiro pilot used a clutch to provide power to the rotor system prior to takeoff, releasing the clutch once the rotors reached the desired speed, thereby transferring engine power to the propeller. This gave the aircraft forward motion, which in turn maintained the spinning of the rotor system via autorotation and provided the lift necessary for flight. This mode of operation differs significantly from that of the modern helicopter, in which the pilot only relies on autorotation in an emergency involving the loss of engine power. As the helicopter descends unpowered, the upward airflow through the rotor system provides the energy to maintain the rotation of the blades – thus "autorotation" – as long as the aircraft retains sufficient forward velocity. As the helicopter approaches the ground, the pilot can use the kinetic energy in the spinning rotor system by changing the angle of the blades to create one brief, life-saving reduction in speed of descent, enabling a safe landing with little or no forward movement. This provides the helicopter its enhanced safety compared to an airplane, which must land at much higher forward velocity and therefore in a much longer and smoother field or airstrip. Due to the

[355] Ibid.

autogiro's rotor design, its forward speed enabled the rotors to remain in a constant state of autorotation. This supplemented the power provided by the propeller, and kept the aircraft aloft at airspeeds well below those at which an airplane would stall. McNair used photos provided by Prewitt of a miniature model of a rotor and a standard desk fan to demonstrate the principles of rotor aerodynamics (in addition to complex and surprisingly modern-looking engineering drawings).[356]

McNair also emphasized the autogiro's distinct flight characteristics from those of the helicopter, another new form of aircraft in development at the time, despite their visual similarity. At the time of writing, the autogiro had advanced much further than the helicopter, which had not yet achieved any notable success. Helicopter prototypes at that time combined a propeller and a (powered) rotor system, so they looked similar to autogiros, even though they operated according to very different aerodynamic principles. However, McNair realized the helicopter also possessed potential, mentioning one engineer's concept of a helicopter with no propeller, relying solely on a powered rotor system that the pilot could tilt forward to gain airspeed – a concept not yet developed into a prototype. Perhaps more importantly, McNair did not exaggerate the autogiro's potential, despite what he saw as its revolutionary nature. Rather, he emphasized the need for further development: "Does the giro offer something worthwhile which the airplane has not? If the answer is yes – or even possibly yes – then the Federal government should put its might squarely behind this struggling infant, and push its development." He ended on a cautionary note: "We must not forget, however, that the giro is only a boy, and we should neither expect nor demand that a boy do a man's work."[357]

[356] Ibid., 8-16.
[357] Ibid., 17.

Like the reports of many of his previous equipment tests and experiments, the detail and clarity of McNair's article attracted a great deal of attention and earned him numerous accolades. Alexander Klemin of the Daniel Guggenheim School of Aeronautics called it "a splendid article," and various business leaders and politicians commended both Birnie and McNair on the article's publication. Prewitt wrote McNair a particularly gracious letter, congratulating him on his ability to communicate such a complicated topic with admirable detail and clarity, and stating that his article "warrants all the praise that anyone could give." Prewitt also thanked McNair for mentioning him as the originator of the "jump-off" autogiro concept, and mentioned the Kellett Autogiro Corporation received an order for six more autogiros from the Army (model YG-1B) after publication of the article. Once again, McNair demonstrated his fine intellect, innovative spirit, and influence not just within the Field Artillery, but the Army and defense industry.[358]

The cautionary note McNair included regarding the potential of the autogiro proved insightful. By the mid-1930s, Air Corps engineers determined the giro lacked sufficient power to lift a pilot, observer, and service radio into the air. However, they remained hopeful an aircraft that possessed greater power while still offering the benefit of the autogiro's short takeoff and landing capability would emerge and offer practical military application. This led them to turn to abandon the autogiro in favor of the helicopter, with its powered rotor system, particularly after two Frenchmen, Louis Bréguet and Réne Dorland, achieved the first successful helicopter flight in 1935. The helicopter increased in reliability and power as engineers developed new models, and it soon replaced the autogiro as the most useful field artillery observation platform (along

[358] ———, "Autogiro Folder, NARA II."

with other future military applications). The autogiro quickly faded into obscurity, as did any recollection of McNair's participation in the Army's experiments with it.[359]

Throughout McNair's tour as the Executive to the Chief of Field Artillery, Major General Birnie rated him consistently superior, writing in his final efficiency report, "An officer of preeminently outstanding ability and high attainments; especially clear headed in thought and sound in judgment." This final report, dated through December 31, 1936, preceded McNair's promotion to the permanent rank of brigadier general, which the War Department announced on December 22. Having reverted from brigadier general to his permanent rank of major after the World War in 1919, McNair finally earned back his star, with an effective date of January 1, 1937. Also on New Year's Day, the War Department issued Special Orders No. 1, both announcing McNair's promotion, and relieving him of duty in the Chief of Field Artillery's office pending assignment in March 1937 as Commander, 2nd Field Artillery Brigade at Fort Sam Houston, Texas. McNair took the oath of office as a brigadier general on January 4, 1937, and promptly requested a leave of absence from January 10 to March 5, with permission to visit Cuba. McNair had made it over "the Hump" of senior officers who had bogged down promotions for more than fifteen years, rising in rank and authority rapidly since graduation from the Army War College in 1929. His hard work, competence, and noteworthy achievements had paid off, and he requested a well-deserved vacation, receiving approval from the War Department on January 3 for leave and travel to Cuba.[360]

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[359] Edgar F. Raines Jr., *Eyes of Artillery: The Origins of Modern U.S. Army Aviation in World War II*, Army Historical Series (Washington, D.C.: U.S. Army Center of Military History, 2000), 21-22. Raines briefly described the Army's experiments with the autogiro, but made no mention of McNair's involvement or his article, "And Now the Autogiro."

[360] Upton Birnie Jr., "Efficiency Report," June 30, 1935, McNair Papers, National Archives and Records Administration, St. Louis, MO; ———, "Efficiency Report," June 30, 1936, McNair Papers, National Archives and Records Administration, St. Louis, MO; Lesley J. McNair, "Acceptance of Appointment as Brigadier General," December 23, 1936, McNair Papers, National Archives and Records

**Redesigning the Infantry Division, 1937-39**

Newly promoted Brigadier General McNair reported for duty at Fort Sam Houston on March 7, 1937 to take command of the 2nd Field Artillery Brigade. McNair's assignment to the 2nd Division represented a conscious decision to place him where the Army could once again make use of his particular experience and talent in unit organization and equipment testing. Concurrent with McNair's notification of his imminent promotion and change of duty station, General Malin Craig, who had replaced General MacArthur as Army Chief of Staff on October 2, 1935, decided to test the recommendations of the Modernization Board, formed in January 1936 to examine the organization of the Army.[361]

When Malin Craig, described by Russell Weigley as "a Pershing protégé," took over as Army Chief of Staff, he immediately sought to correct what he saw as troubling flaws in Army plans, organization, and equipment. Many of Craig's concerns revolved around mobilization issues McNair and his fellow students had studied at the War College, recommending solutions that the War Department lacked the resources to implement. While he struggled against similar budget limitations as his predecessor, and could not initially convince President Roosevelt to pressure Congress to fund an increase in the size of the Army's ground forces, he did convince the President that the War Department possessed no real capability to execute its strategic plans, making them essentially theoretical in nature. Perhaps because of the increasingly tense international climate, the President supported some of Craig's recommendations. For example, at

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Administration, St. Louis, MO; Upton Birnie Jr., "Efficiency Report (Promotion)," December 31, 1936, McNair Papers, National Archives and Records Administration, St. Louis, MO; War Department Adjutant General, "Promotion Orders and Oath of Office," January 1, 1937, McNair Papers, National Archives and Records Administration, St. Louis, MO; War Department, "Special Orders No. 1," 1 January, 1937, McNair Papers, National Archives and Records Administration, St. Louis, MO; ———, "Special Orders No. 3," 5 January 1937, McNair Papers, National Archives and Records Administration, St. Louis, MO.

[361] Kleber, "McNair," 696; "Senior Field Artilleryman," 898; Wilson, *Maneuver and Firepower*, 126.

the urging of his G-4 and Deputy Chief of Staff, Craig recommended in October 1936 reducing spending on weapons research and eliminating any programs deemed unessential, arguing any useful innovations to come from such research would not appear in the form of actual fielded equipment for at least two years. Craig supported development of critical items, but with reduced funding for research and many competing programs, few would receive funding. For weapon systems deemed non-critical, Craig secured the president's approval to redirect funds to buy the best currently available weapons instead.[362]

As Army historian Mark Watson has written, "The dominant purpose, it is clear, was to get the existing Army re-equipped without further delay with the best equipment currently available. . . . Prolonged research undoubtedly would produce better weapons five years hence. It would not provide any immediate betterment of a force currently handicapped by obsolete weapons and, in some cases, possessing none at all." Watson mentioned one shortfall in particular – "the lack of antitank weapons adapted to use against post-World War I armor." Halting an Ordnance Department antitank weapon development program, the War Department staff instead supported the field forces' request for the fielding of a weapon system as early as possible to fill an "imperative need." This led to the Army's purchase of a 37-mm gun of German design that Army arsenals could quickly replicate and produce. Thus, in the 1930s, just like today, currently fielded equipment represents the outcome of choices made years earlier.[363]

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[362] Weigley, *History of the United States Army*, 415-16. Thus, in the mid-1930s, when other countries fielded dozens of divisions, maintained large organized reserves, and pursued programs to develop weapons with the latest available technology, the U.S. Army accepted the reality of the political environment, choosing to use its limited budget to buy currently available weapons, many only slightly updated versions of World War vintage models.

[363] Mark Skinner Watson, *The War Department: Chief of Staff: Prewar Plans and Preparations*, United States Army in World War II, ed. Kent Roberts Greenfield (Washington, D.C.: U.S. Army Center of Military History, 1949; reprint, 2003), 42-43.

Much like his concerns about obsolete equipment, Craig believed the Army's World War vintage organizations had failed to keep up with emerging technology and the resulting potential for a future war very different from the last one. This motivated his effort to reevaluate the organization of the Army, particularly the infantry division. This review of the infantry division organization represented the continuation of a debate that had raged on and off since the end of the World War. As historian John B. Wilson describes, "January 1929 marked the beginning of a ten-year struggle to reorganize the infantry division. The Assistant Chief of Staff, G-3, General Parker, reported that European countries were developing armies that could trigger a war of greater velocity and intensity than anything previously known." The major powers in Europe, each searching for a way to increase mobility and minimize losses in a future war, had already begun to employ increasingly sophisticated motorized and mechanized vehicles as a solution. While each arrived at different conclusions regarding the specifics, Great Britain, France, and Germany all reorganized their military units to exploit these new military technologies in the late 1920s. In particular, Parker pointed out some European militaries had restructured their divisions into smaller, more maneuverable units, compensating through enhanced firepower and mobility.[364]

Concurrent with its imminent acquisition of semiautomatic rifles and air-cooled machine guns, Parker believed the U.S. Army should make similar changes, starting by streamlining its cumbersome square infantry division – an idea considered but rejected after the World War. The 2nd Division tested various forms of triangular divisions in 1929, but in the end Army Chief of Staff Summerall, perhaps due to his experience during the World War, saw no need to change

[364] Wilson, *Maneuver and Firepower*, 125-26.

the square division structure.[365] Therefore, the infantry division retained essentially the same structure it had employed during the World War for another six years, when new Army Chief of Staff General Malin Craig decided to revisit the issue.

Noting the increasingly non-standardized organization of existing infantry divisions, all of which relied on a variety of foot, animal, and motor transport for mobility – none of which he deemed suitable for modern warfare – Craig polled senior commanders in 1935 for solutions. No consensus emerged, even among senior infantry branch leaders, so Craig formed the Modernization Board to make an objective assessment of the situation. The board, led by Major General John B. Hughes, War Department Assistant Chief of Staff, G-3 (Operations), focused its efforts on a study of the infantry division, both to make the task manageable, and since the infantry division served as the cornerstone for the organization of all Army units. Hughes submitted the board's report to Craig on July 30, 1936. It recommended abandoning the massive square division for a smaller and more versatile triangular division, but much like Parker's efforts in 1929, the report attracted many dissenting opinions.[366]

Upon reviewing the board's recommendations, Craig directed a test of the Proposed Infantry Division (PID), both to determine the effectiveness of the triangular organization and quell dissent, and selected the 2nd Division to conduct the tests beginning in the fall of 1937. Thus, only three months after his arrival at Fort Sam Houston to command the 2nd Artillery Brigade, McNair found himself performing an additional duty, serving as the Chief of Staff of

[365] Ibid. The square division consisted of two infantry brigades with two infantry regiments each – four infantry regiments total – leading to the "square" designation. The division also possessed two field artillery regiments of two battalions each. The organizational problem existed at the battalion level, since each infantry regiment had three battalions, not two, making task organization a challenge, and preventing habitual relationships and equivalent organization of sub-units. Total troops including all support elements amounted to a very cumbersome 19,385. For a complete division organization, see "Chart 5 – Infantry Division, 7 October 1920." The infantry division retained this basic structure through 1936, while expanding to nearly 22,000 men.

[366] Ibid., 126-30.

the PID. In this role, he oversaw every aspect of the PID redesign, maneuvers and equipment tests, post-maneuver boards, and preparation of reports for the War Department.[367] Once again, the Army needed someone with a talent for objective experimentation and innovation, and called on McNair, perhaps the most qualified officer for the job in the Army, due to his more than three decades of experience presiding over similar tests and experiments.

The infantry division proposed by the 1936 board included three infantry regiments, each comprised of three rifle battalions. With all supporting units, including a single field artillery regiment of three 75mm battalions and one 105mm battalion, and the first divisional cavalry squadron since before the World War, the PID comprised only 13,512 men. More importantly, the triangular structure meant the division could easily reorganize into three independent regimental task forces, each with its own 75mm field artillery battalion. The division could allocate support from the larger howitzers, heavy machine guns and mortars, and various support elements to the task forces as the need arose. On paper, the triangular division also possessed adequate vehicles to motorize its troops fully; however, the Army lacked the resources to motorize all its divisions should it adopt the new organization, despite its congressionally capped personnel level that remained well below 200,000. In fact, the War Department had to arrange for the reallocation of adequate trucks and other vehicles from various units to 2nd Division to facilitate examination of the benefits of complete motorization of the division. Thus, in theory the division benefited from both greater agility and mobility, simplified logistics sustainability, and the ability to reorganize easily into regimental task forces when required. The PID organization tables reflected all these modifications, intended to enhance the infantry division's capability to conduct modern warfare (still regularly referred to as "open warfare" by senior

[367] Ibid.; J. K. Parsons, "Efficiency Report on General Officer," July 1, 1937 through March 8, 1938, McNair Papers, National Archives and Records Administration, St. Louis, MO.

Army officers). The War Department intended the PID tests to verify these advantages while determining what capabilities the division might have lost in the reorganization.[368]

Recognizing that unit training, receipt of equipment, and consolidation of units to form the PID at Fort Sam Houston would require several months of preparation, the War Department issued its initial guidance in a memorandum dated March 26, 1937, directing 2nd Division to conduct the test in the fall of that year. A second memorandum, dated April 2, 1937 authorized 2nd Division to coordinate directly with the various organizations that would provide additional personnel and equipment necessary to form the PID and facilitate the tests. In this memorandum, the War Department, through Headquarters, 8th Corps Area, placed responsibility for the tests "directly under [2nd Division] control." However, the War Department issued guidance to all participating units for activities they should undertake pending conduct of the tests in the fall of 1937. For example, the War Department directed the various branch schools to submit lists of questions and current issues they wanted the PID test to explore. The War Department also issued its own list of "Secondary Questions" in topic areas ranging from "Maneuverability," "Fire Power," and "Frontage" to "Ability to Sustain Combat" and "Command and Staff."[369]

McNair also received his first efficiency report since his promotion to the permanent rank of Brigadier General before the first PID test began. The report covered his first three months in brigade command, from March to June 1937. His rater, Major General Parsons, evaluated McNair superior overall, with excellent physical activity and endurance and superior knowledge of his profession. In the event of war, Parsons recommended McNair for duty as chief of staff of a corps or army, and, in an evaluation specific to reports on general officers, Parsons ranked

[368] Wilson, *Maneuver and Firepower*, 127-29. For a complete division organization, see "Chart 9 – Proposed Infantry Division, 30 July 1936."

[369] H. J. Brees, "Field Service Test of Proposed Infantry Division," April 2, 1937, National Archives and Records Administration, College Park, MD, RG 337, Entry 58C, Boxes 12-13.

McNair second among the thirty general officers personally known to him. The 8th Corps Area commander, Major General H. J. Brees, concurred with Parson's evaluation. Based on this report alone, Parsons and Brees obviously ranked McNair among the best general officers they had worked with, and selected him to serve in the critical role of chief of staff, PID due to his qualifications for the position.[370]

Upon his assignment as PID chief of staff, McNair oversaw all aspects of the upcoming division test, as evidenced by his signature on almost every document generated by the division after the early spring. One of these, a memorandum he distributed on June 4, 1937, projected the tests taking place in six phases. These included (1) organization and preliminary training at home station; (2) training and tests of company and smaller units; (3) training and tests of battalions and regiments followed by movement of supporting units to Fort Sam Houston; (4) assembly of the division; (5) combat team tests; and (6) division tests. McNair projected phases four, five, and six taking place no earlier than September 1937. By July 13 McNair identified the date for the start of the fourth phase as September 15, 1937, and issued a tentative schedule with a more detailed breakdown of events in the final three phases, including the specific tests the PID would undergo during phases five and six, during the five weeks from October 11 through November 15. These included strong attacks and defenses, envelopments, division counterattack in support of a corps defense, wide front advances to test the daily range of the motorized formations, night attacks, and pursuit operations. On September 3, McNair identified the umpires[371]

[370] J. K. Parsons, "Efficiency Report on General Officer," June 30, 1937, McNair Papers, National Archives and Records Administration, St. Louis, MO.

[371] .Lesley J. McNair, "General Information - Field Service Test of the Proposed Infantry Division," June 4, 1937, National Archives and Records Administration, College Park, MD, RG 337, Entry 58C, Boxes 12-13; ———, "Tentative Schedule of Field Service Test," July 13, 1937, National Archives and Records Administration, College Park, MD, RG 337, Entry 58C, Boxes 12-13; ———, "Memorandum Number 23 (PID Umpires)," September 3, 1937, National Archives and Records Administration, College Park, MD, RG 337, Entry 58C, Boxes 12-13.

On September 20, McNair appointed a board of review comprising two infantry colonels, one infantry captain, and one field artillery captain, to develop a process they would oversee during the latter phases of testing to receive, standardize, and consolidate the test results. He also studied the many issues the branch schools (including the Leavenworth schools) and the supporting units sent the War Department in anticipation of the tests, using them to help develop appropriate scenarios and umpire rules. While far too numerous to list here, several common themes and a few particularly interesting comments deserve mention. Perhaps the most common concern, whether from a combat arms or support unit perspective, dealt with the consequences of mobilizing the infantry division, good and bad. Organizations wanted the tests to identify how far the division could move in a day, and with what limitations in terms of various support elements repositioning and preparing for combat operations after a long road march. Map maneuvers at Fort Leavenworth identified the potential for the division to move as much as seventy miles in a day and then conduct a deliberate attack or defense. However, they also found this rapid advance often led to units thinly dispersed over excessively large fronts, formation of a salient the enemy could exploit, and challenges for combat support and logistics units trying to maintain the same pace as the combat units.[372]

Some of the more specific comments involved particular capabilities, limitations, and employment recommendations for specific units and types of equipment. For example, map maneuvers at Fort Leavenworth revealed significant difficulty keeping mortars supplied over long road marches preceding an attack. Since mortars served as the backup fire support weapon for attacking infantry outside the range of field artillery support, this posed a significant problem. The Infantry School at Fort Benning echoed this concern, while recommending use of light

[372] _____, "Memorandum Number 29; Subject: Board of Review," September 20, 1937, National Archives and Records Administration, College Park, MD, RG 337, Entry 58C, Boxes 12-13.

machine guns primarily for support to attacking rifle squads, and .50-caliber machine guns for anti-motorized and anti-mechanized defense. The Field Artillery School also identified challenges keeping artillery in supply when supporting infantry formations conducting envelopments, indicating in both attacks after long marches and enveloping maneuvers, infantry would likely operate without field artillery or 81mm mortar support. The Coast Artillery School's primary concerns revolved around motorized units' vulnerability to mechanized and air attack when on the march, leading them to recommend movement by motor only at night. Finally, cavalry officers at Fort Leavenworth emphasized the proper employment of the reconnaissance squadron, highlighting their conviction that "Reconnaissance and security [are] its primary roles." Therefore, they recommended equipping and employing the reconnaissance squadron in a manner that would prove unlikely to lead to prolonged fighting, discourage the unit from engaging in sustained combat, and ensure the squadron handed off the fight to infantry as soon as possible so the it could continue its reconnaissance mission.[373]

The final phases of the PID test commenced in early October and ended in late November 1937. In accordance with McNair's directive of September 20, standardized reports of the various tests identified the scenarios undertaken, resulting friendly and enemy actions, and recommendations stemming from the observations of the participating units and umpires. Despite the widespread equipment shortages throughout the Army, the PID received the weapons that it needed to conduct the test from various Army units, or used suitable alternatives where necessary (i.e. the heavy artillery battery employed 155-mm howitzers since the 105mm

[373] Various, "Observations, Questions, and Recommendations from Leavenworth and Branch Schools for PID Test of 1937," February-May 1937, National Archives and Records Administration, College Park, MD, RG 337, Entry 58C, Boxes 12-13. Some accounts name McNair as the primary advocate of equipping and employing cavalry primarily for its reconnaissance role, leading to an inability to engage in prolonged fighting, optimizing it instead to remain disengaged, avoid excessive losses, and maintain its focus on reconnaissance. However, the archival records show McNair and the 2nd Division received this advice from the Leavenworth faculty months before the first PID test took place.

remained in production, and tripod-mounted Browning Automatic Rifles (BARs) replaced shortages in .50-caliber machine guns. In addition, General Craig ordered augmentation of the division by antitank and antiaircraft artillery battalions and an observation squadron, to give it capabilities it would normally receive via reinforcement from the corps reserve, enabling a more realistic test (including evaluation of the organization of these non-divisional units). Therefore, in terms of organization, equipment, and execution, the test represented a valid and thorough examination of the capabilities of the PID, as reflected in the report that McNair provided to the War Department on February 24, 1938.[374]

McNair organized the final report into four sections: three recommending changes in the PID, the antimechanized battalion, and the antiaircraft battalion, and a fourth section providing information specifically requested by the War Department. Seven appendixes contain the PID test data that elaborate on the findings and justify the division's recommendations. Some highlights from the findings include recommendations to eliminate several positions and units, including the "infantry advisor" and the "commander of service troops" (both brigadier generals) and their staffs, the reconnaissance squadron, the machine gun battalion (including a machine gun company in each rifle battalion instead), the quartermaster service company, and the band. The report also included the recommendation to remove the 81mm mortars from the artillery regiment and place them directly under each infantry battalion commander, to reduce the size of the rifle and light machine gun squad to seven men, to reduce the size of the engineer

[374] PID Test Review Board, "PID Test Reports," October-November 1937, National Archives and Records Administration, College Park, MD, RG 337, Entry 58C, Boxes 12-13; H. C. Ingles to Lesley J. McNair, Letter, February 24, 1938, National Archives and Records Administration, College Park, MD, RG 337, Entry 58C, Boxes 12-13. Lieutenant Colonel Ingles wrote to McNair on February 24, 1938 confirming receipt of the report and commending its quality despite the limited time available to prepare it due to Craig's insistence he receive it by February 20. The formatted and bound version of the report bears the date March 21, 1938, but this report contains the same information provided by McNair on Craig's February 20 due date.

organization from a battalion to a company, all enabling reductions in transportation equipment.[375]

While Parsons signed the report, McNair served as its primary author, and it bears the same stamp of quality and detail as his many previous such reports. His efforts during the first PID test earned McNair great respect, demonstrating his capability not just as a field artilleryman, but also as a general staff officer well versed in all aspects of Army doctrine, organization, and equipment issues. One can see this in the efficiency report McNair received just two weeks prior to publication of the final PID test report, in which Parsons once again rated him superior as a field artillery brigade commander and expert in his profession, and also rated him superior in the performance of his duties as chief of staff of the PID. Parsons ranked McNair second among the forty general officers he knew personally, based on interaction with McNair "every day" during the rating period, and wrote in the optional remarks section, "An officer of outstanding ability. He will go far in the Military Service if given the opportunity." Malin Craig also recognized McNair's exceptional contribution to the PID test with a letter of commendation that read, in part, "As you are aware, I consider the results of this test of great importance to the entire Army. You have personally contributed a great deal toward a correct reorganization of the Army. I wish to express to you my personal appreciation of your constant and untiring work and the splendid results thereof."[376]

McNair also underwent another annual physical exam on January 3, in the interim between the end of the PID test and submission of the test report. This physical revealed the

[375] J. K. Parsons, "Report of the Field Service Test of the Proposed Infantry Division Conducted by the 2nd Division, U.S. Army, 1937," March 21, 1938, National Archives and Records Administration, College Park, MD, RG 337, Entry 58C, Boxes 12-13. Appendix "A" of the report alone, "Supporting Data," totals over 300 pages in length.

[376] _____, "Efficiency Report, July 1937 through March 1938."; Malin Craig, "Letter of Commendation," April 5, 1938, McNair Papers, National Archives and Records Administration, St. Louis, MO.

long-term nature of his loss of hearing, which had gradually worsened since first noted in 1908, the lack of potential treatment options, and his otherwise excellent health. The Surgeon General recommended a second inpatient medical exam, this time at Fort Sam Houston, which the War Department endorsed, probably because of the accelerated rate at which the condition had worsened in recent years. McNair underwent this exam from 31 January through 4 February. Weighing in at 151 pounds, with "few teeth missing" and "no dentures," the examining doctors judged McNair physically fit, with no significant health problems other than his degraded hearing. In his final statement upon McNair's discharge, the lead examining doctor, Lieutenant Colonel S. U. Marietta, noted the existence since 1908 of information on McNair's hearing loss in his medical records. He also wrote in the clinical record that McNair remained "very frank about the condition. He states that the onset and progress has been so insidious that he scarcely recognizes it except when he compares his hearing now with a period of some years ago. He has no difficulty in using the telephone or in transacting the business incident to his duties except that, on occasions, he is impelled to request the repetition of remarks made to him. A further physical survey, including 6 ft. plate of chest, urine concentrations, blood picture, blood chemistry (urea and sugar) urine concentration test, and electrocardiogram was negative."[377]

Despite his otherwise excellent health, the surgeon general, upon receipt of this report, recommended further examination at Walter Reed Hospital, followed by a medical board to determine McNair's fitness for continued active duty. At this point, the Army Chief of Staff intervened, seeing no need for yet another medical board given McNair's demonstrated capacity

[377] S. M. Browne, "Report of Physical Examination," January 3, 1938, McNair Papers, National Archives and Records Administration, St. Louis, MO. The physical includes eleven endorsements, the first two recommending the special exam, and the eleventh, on Februuary 14, 1938, containing the Surgeon General's recommendation McNair go before a medical board; S. U. Marietta, "Clinical Record: Request for Consultation - Special Examination," February 4, 1938, McNair Papers, National Archives and Records Administration, St. Louis, MO.

for excellent performance in a wide range of tasks despite his hearing loss. In short, common sense prevailed. Overruling the Surgeon General, Craig's replacement as Chief of Staff, General George C. Marshall, refused to order another medical exam or board, and ordered issuance of a waiver for hearing loss, effective June 1939. McNair would no longer have to worry about a medical board or possible early retirement due to his hearing loss, since several of the most senior officers in the Army personally observed his ability to perform in a superior manner during the PID test, despite his condition. Later physicals merely noted his degraded hearing, although the surgeon general continued to include an endorsement that indicated the condition warranted a medical board, but this would not take place due to the Chief of Staff's waiver.[378]

Long before the conclusion of this final chapter in the long history of McNair's service-connected hearing loss, the War Department began its analysis of the PID test report, with some staff officers criticizing certain recommendations and suggesting changes. However, more troublesome opposition to the PID organization emerged even before 2nd Division completed the field tests. Major General George A. Lynch, Chief of Infantry, wrote the War Department in late 1937, after observing a portion of the PID tests, to voice his objections to the proposed organization. These included the creation of machine gun companies, which separated the machine gun – a critical asset – from the direct control of the rifle battalions, and the inclusion of

[378] M. C. Stayer, "Report of Physical Examination," May 22, 1939, McNair Papers, National Archives and Records Administration, St. Louis, MO. McNair's 1939 physical includes an indorsement by the surgeon general recommending McNair go before a medical board. However, Chief of Staff Marshall responded to the Surgeon General's recommendation to conduct a medical board with an order to issue a waiver for the condition, adding a handwritten note to the document explaining he saw no reason to pursue one. While one could construe this as favoritism, at no point in three decades of medical history do any of McNair's exams indicate that he attempted to hide or downplay the severity of his hearing loss. Further, no evidence exists to indicate Marshall ordered the issuance of a waiver for any reason other than the one he described in his handwritten note attached to McNair's 1939 physical. Marshall (and Malin Craig, Marshall's predecessor and a huge admirer of McNair who helped propel his career forward despite his knowledge of McNair's hearing loss) knew through direct observation of McNair's duty performance in demanding general officer command and staff positions that the condition did not significantly hinder his duty performance or prevent his continued active service.

signal detachments and mortar batteries in rifle battalions, which Lynch saw as a threat to unity of command. He also argued against the presence of a commander of service troops – a general officer – within the division, since it further complicated command and control. He pointed out the movement of supply trains remained a tactical matter, depending on the division's combat situation. Therefore, the decision remained the division commander's to make, not one he should delegate to a commander of service troops. Since logistics trains operated to the rear of combat units, Lynch saw no need to burden the division with their presence, or the division commander with a subordinate intended to control them. In short, Lynch proposed an even leaner division, resourced for fighting only, with corps organizations tailored to provide logistic support.[379]

To address Lynch's concerns, Craig appointed a committee to design a new division based on the results of the initial PID test. Craig chose Major General Fox Conner, Colonel George C. Marshall, and McNair to serve on this committee – men who all supported the idea of a leaner, triangular division and would make an objective assessment of the issues Lynch raised. However, the committee never convened due to General Conner taking early retirement for medical reasons.[380]

Meanwhile, the War Department General Staff began to discuss its own modifications to the organization of the PID presented in the 2nd Division report. Unlike the comments received from Lynch and other senior infantrymen across the Army, who supported the idea of a leaner infantry division, differing only in the details of its modified organization and employment, the War Department General Staff resisted some of the streamlining. For example, they discussed retaining the "infantry advisor" and the "commander of service troops" and their staffs, and lowering the rank of the Chief of Staff to Colonel and relieving him of his duty as division

[379] Wilson, *Maneuver and Firepower*, 130. As Wilson describes, Lynch's concerns soon drew the attention of the media, leading to a *New York Times* report on Craig's plans to respond.

[380] Ibid., 126-30.

second-in-command. They also considered retaining a separate service company rather than consolidating the division's service and headquarters companies, and allocating 81mm mortar companies to each infantry company, rather than keeping the mortars under battalion control as recommended in the PID test report. However, these discussions soon came to Parsons' attention, provoking a preemptive rebuttal he wrote to General Craig on June 13, 1938. In this terse but respectful letter, Parsons wrote,

> I hear that the principle reasons for the changes recommended . . . are because of the effect on the National Guard; I know it well and appreciate its value in our plan of national defense, but I think it is a mistake to make major changes in an organization that has been built up as a result of a thorough field test because it might adversely affect the national Guard, and I am sure that the National Guard will neither expect nor ask that this be done."

Instead, Parsons noted all the senior National Guard officers he spoke to merely asked for adequate time to adjust their division organization to match the approved PID structure.[381]

While the division organization proposed in the PID test report answered many of Lynch's concerns, the main point of contention centered on the logistics capability within the division. Lynch advocated removing all logistics from the division and assigning service support responsibility to corps headquarters, allowing the division to streamline even further into an organization tailored purely for fighting. McNair's report instead left some logistics capability in the division but proposed one even smaller than that originally designed by the 1936 Modernization Board. Upon receipt of the PID test report, the Modernization Board reconvened to analyze it and the various responses it provoked. Soon, the board put forward a new division organization (designated the "Provisional 2nd Division" or P2D) that retained the triangular structure of the PID, but sought compromise between the many recommendations and concerns expressed by various schools and corps area headquarters across the Army. In doing so, the

[381] J. K. Parsons, "Letter to General Malin Craig," June 13, 1938, National Archives and Records Administration, College Park, MD, RG 337, Entry 58C, Boxes 12-13.

board created a new division structure that satisfied no one, and worse, that overlooked recommendations made as the result of months of field tests and intense work within the 2nd Division in favor of the opinions of a few men reviewing the test results from an office in the War Department.[382]

The new division organization the board proposed retained the band and a service company within each infantry regiment headquarters, and assigned a weapons company to each rifle battalion, armed with heavy mortars and machine guns, despite the PID test findings regarding the difficulty of keeping 81mm mortars supplied with ammunition when moved forward to support infantry attacks. The board did not assign the rifle battalion an antitank unit, believing the weapons companies' .50-caliber machine guns and the regiment's 37mm guns provided adequate antitank defense.[383] It also reduced the size of the field artillery regiment based on command and control concerns expressed by various branch school and corps area commanders, even though the PID test showed no evidence of such command and control difficulties. The board also retained the two general officer advisers that the PID had found worse than useless, but removed them from the chain of command (apparently thinking this would mitigate the problems identified in the PID tests). The board also disregarded Lynch's recommendations concerning logistics, redesigning the division's supply system instead of assigning logistics responsibility to Army corps. They placed responsibility for ammunition resupply and baggage with the combat arms units, and eliminated the motor battalion in favor of a quartermaster battalion that combined transport and some maintenance capability (the division

[382] Wilson, *Maneuver and Firepower*, 131-32; Kevin C. Holzimmer, *General Walter Krueger: Unsung Hero of the Pacific War*, Modern War Studies, ed. Theodore A. Wilson (Lawrence, KS: University Press of Kansas, 2007), 65.

[383] McNair voiced no strong opinion either way on the question of antitank defense – he merely did his best, when called upon, to form and prepare a series of objective and thorough tests of the Modernization Board's updated division organization.

would handle any repairs requiring three hours or less). Finally, the division retained responsibility for evacuating their sick and wounded to corps medical facilities.[384]

Upon reviewing the board's new division design, Craig realized it would attract criticism, and ordered a yearlong test, to begin in February 1939. After a brief two-month break serving solely as Commander, 2nd Field Artillery Brigade, McNair found himself once again performing the additional duty of division chief of staff, and taking the lead role in the preparations to test the newly proposed division organization. McNair planned for the second round of tests by developing a series of scenarios for the P2D headquarters to oversee, each describing the day's timeline of events and the orders the division staff would issue to its subordinate units. Each day's scenario comprised a detailed schedule, including descriptions of orders the headquarters would issue and missions the division would conduct – all focused on evaluating the division's mobility, flexibility, and combat effectiveness. The scenarios reflect meticulous planning, including detailed movement rate calculations and timings for issuance of movement orders to coordinate the arrival of march columns originating from both Fort Sam Houston, Texas, and Camp Bullis (about thirty miles to the northwest), at the desired time and place and in the correct sequence. The scenarios also include plans for movement of divisional headquarters, timed to ensure the staff would complete movement and resume full function before each key event began. The scenarios considered reconnaissance plans and orders, supply and other logistics requirements, and command and control processes including the preparation and distribution of orders and overlays to facilitate coordination.[385]

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[384] Wilson, *Maneuver and Firepower*, 131-33.

[385] P2D Headquarters Staff, "File Folder: 322.13 Provisional 2nd Division - General," March 9, 1939, National Archives and Records Administration, College Park, MD, RG 337, Entry 58C, Boxes 12-13. This consolidated folder contains various correspondence between the War Department, 8th Corps Area Headquarters, and the P2D Headquarters; however, the majority of P2D test planning documents bear McNair's signature.

While McNair conducted the vast majority of the planning, he did not participate in the actual P2D tests, although he did serve as Chief Umpire during the 3rd Army maneuvers that took place near San Antonio – his first experience in a field unit overseeing umpire duties since the academic instruction he received at the War College. Just prior to the beginning of the P2D test, scheduled for March 1939, the 2nd Division welcomed a new commander, Major General Walter Krueger, and learned McNair would leave the division for a new assignment on March 17.

The previous month, General Craig selected McNair to succeed Brigadier General Charles M. Bundel as the commandant of Fort Leavenworth's Command and General Staff School (CGSS). Increasing tensions in Europe had confirmed Craig's conviction the Army must accelerate preparations for war. With the bulk of the hard work associated with redesigning the infantry division done, Craig's deputy, Brigadier General George C. Marshall, advised he take the opportunity to assign McNair to Fort Leavenworth to improve the education programs there. Craig had significant concerns about the Leavenworth Schools' readiness to support officer education, particularly with the potential for wartime mobilization rising, and after witnessing McNair's capability and work ethic for the past two years, he knew no Regular Army officer who possessed stronger qualifications to accomplish the much-needed revitalization of CGSS. Brigadier General George C. Marshall, Craig's Deputy Chief of Staff, wrote to McNair on February 23, 1939 to provide some insight regarding the War Department leadership's expectations. Marshall wanted McNair to know that Secretary of War Woodring had expressed concern about the course, and believed "something should be done immediately to modernize the school methods of instruction."[386] Having served on the post-World War inaugural faculty, McNair would return as the Leavenworth Commandant, with the charter to prepare the school for the possibility of military mobilization.

[386] Bland, ed. *Vol. 1, Marshall: "The Soldierly Spirit"*, 702-03.

McNair's final efficiency report as Commander, 2nd Field Artillery Brigade and Chief of Staff, Provisional 2nd Division reflected the exceptional reputation he established during his time at Fort Sam Houston. The division commander, Major General F. W. Rowell, rated McNair superior in the performance of both his primary duties, and ranked him first out of seventeen brigadier generals Rowell knew personally. Brees, still commanding the 8th Corps Area, concurred with Rowell's report, while ranking McNair fifth out of the forty-one general officers he knew. Each added a special indorsement to their report, congratulating McNair and commending him for, in Brees' words, "your unflagging energy, your vision, the training you gave your umpires, and to your excellent executive and organizing ability. It gives me great pleasure to make my views of record." Thus, not only did McNair develop an expertise unique among the Army in the intricacies of the U.S. Army infantry division's organization, capabilities, and limitations, he also put his War College education in umpire procedures to practical use while serving as the chief umpire for the 3rd Army Maneuvers in the fall of 1938.[387] McNair at this stage of his career epitomized the general staff officer – an officer who had not only risen to general officer rank, but also possessed a wealth of experience that transcended the narrow focus of his particular branch background. Thus, accounts that describe McNair at this stage of his career merely as a field artillery officer either ignore the breadth of his experience or display an ignorance of it.

The P2D tests began in February 1939 as scheduled, but did not last a year as Craig envisioned, ending early due to Germany's invasion of Poland on September 1, 1939. Demonstrating the diverse range of opinions among senior Army officers regarding Army equipment, organization, and doctrine during this period of uncertainty and resource constraints,

[387] F. W. Rowell, "Efficiency Report on General Officer," July 1, 1938 through March 17, 1939, McNair Papers, National Archives and Records Administration, St. Louis, MO.

Krueger expressed concern over many of the changes that resulted from the Modernization Board's review of the first round of tests. He worried about the lack of robust logistics capability within the division, and believed the organization could only fight independently for forty-eight hours at its 1939 peace strength (the P2D had an authorized peace strength of 7,970, and a wartime strength of 11,485). Krueger did agree with the streamlining of the division in general, supporting the pooling of air, antiaircraft, and tank units at corps or higher echelons, although he believed it lacked adequate antitank capability. The division still relied on .50-caliber machine guns and 37mm antitank guns, and since funding to purchase existing models remained limited, and Craig freeze of most weapon development programs in 1936 remained in effect, no solution to this problem appeared imminent.[388]

McNair did not participate directly in the final stages of the infantry division's refinement, but he continued to monitor developments while serving as the commandant at Fort Leavenworth. A wholesale reorganization of the fundamental building block of the Army, sure to create debate and discord, also required updated doctrine. By assigning McNair to his new position at Leavenworth, Chief of Staff Craig placed him in an ideal position not only to

[388] Wilson, *Maneuver and Firepower*, 132-33; Holzimmer, *Krueger: Unsung Hero*, 65-69. Wilson and Holzimmer differ in their account of Krueger's assessment of the P2D. Wilson states, "Krueger found the organization sound except for the quartermaster battalion and the need to make some minor adjustments in a few other elements." Holzimmer, perhaps due to his book's focus (and more detailed research) on Krueger, describes Krueger's fundamental concerns over the division's organization in more detail, particularly its shortage of antimechanized capability, and its limited fighting durability due to the lack of organic logistics assets. According to Holzimmer, Krueger also worried about a disconnect between the Army's overarching doctrine that stressed defeating the enemy through overwhelming combat power, while relying on light divisions organized to emphasize mobility over firepower and limited logistics to support their intended mobility. In short, Krueger emerged as one of the first Army officers to object to the concepts of pooling, streamlining, and task organization, believing the divisions should contain the same organic capabilities as Army corps, only at a smaller scale.

modernize the teaching methods at CGSS, but also to play a key role in bringing Army doctrine up to date, to account for recent changes in organization and fighting techniques.[389]

**Leavenworth Commandant, 1939-40**

General Craig, concerned about the need to update teaching methods at the Leavenworth schools, sought to prepare McNair for this aspect of his new assignment by providing him airplane transport to Barksdale, Langley, and Maxwell Fields en route to Fort Leavenworth. On this trip, Craig intended McNair to familiarize himself "as to the principles and theories being taught at the Air Corps Tactical School." Shortly before his departure, McNair requested the addition of Fort Knox to his itinerary so that he could observe the newly created Mechanized Force as it conducted experiments with armored vehicles. Craig approved this request.[390]

Marshall expounded on his intent for McNair's assignment as CGSS commandant and the preparatory tour of other training installations in a letter he wrote to Brigadier General Asa L. Singleton on February 27, 1939. Marshall anticipated McNair would have only one day on his itinerary to spend with Singleton, who had served as commandant of the Infantry School at Fort Benning since July 1936, and Marshall wanted to ensure Singleton took maximum advantage of this opportunity. Marshall scripted the discussion by writing:

> I hope that in that brief time, you can give him a good idea of the practical tactics and techniques taught there. I think it very important to have brought to his attention any apparent differences between Benning tactical techniques and that at Leavenworth. For example, during my period, a Leavenworth Infantry battalion order would be two or three pages long, where a similar order at Benning would be less than a page in length. The same applied to G-2 summaries, supply details and so forth. The one was ponderous and cumbersome, while the other at least showed struggle towards simplicity. Benning used geological survey maps and Leavenworth was more inclined to the Gettysburg variety. Benning's procedure suggested more of contact with soldiers and the soil, than did the Leavenworth procedure. I am writing you most informally to give you some idea as

[389] The Adjutant General, "Index Sheet - Travel Orders," June 25, 1940, McNair Papers, National Archives at St. Louis, MO.

[390] Bland, ed. *Vol. 1, Marshall: "The Soldierly Spirit"*, 702-11. No orders exist in McNair's personnel file assigning him to Fort Leavenworth.

> to why McNair is being sent to Benning. Times have changed and maybe there is not the difference today that there was in my day.

Marshall closed this letter like many he wrote to general officers late in his career: "Please treat all that I have said here as confidential."[391]

On March 4, 1939, with McNair still on his tour of training installations, Marshall wrote another letter to McNair in which he elaborated on his concerns about CGSS. Marshall believed that the course had adopted an overly rigid and laborious staff procedure, and in particular one not optimized to the nature of the forces on which the Army would rely in the event of mobilization for war. Believing the Army would have mere weeks, not months or years, to mobilize for a future war, Marshall worried Leavenworth improperly focused on training officers to lead the professional Regular Army, rather than preparing them to lead "partially trained troops" activated from the National Guard – not to mention a potential horde of untrained conscripts. Marshall believed

> Regular officers should be experts regarding every consideration involved in the training and the leadership of partially trained troops; they should be intimately familiar with the employment of organizations below war strength and lacking in artillery and similar components, as well as supply echelons. They should be most familiar with the technique involved in working on poor maps of the Geological small scale variety – rather than the Leavenworth fourth-year-of-a-war-type.

He based these views on three years' experience working with National Guard units and his participation in two Army Maneuvers, which had left him "horrified by the methods taken by Regular officers in handling these partially trained troops."[392]

Marshall also lamented the "laborious stabilized command post technique and procedure" he regularly witnessed. He cited the frequency, length, and detail of orders, the number of highly detailed reports headquarters demanded from their subordinate units, and "the absurd amount of G-2 information supplied." All this led Marshall to believe a "stabilized or siege warfare"

[391] Ibid., 705-06.
[392] Ibid., 707-08.

mentality still governed Regular Army officers' views of warfare. Writing "Now, we know what kind of an army we are going to have on M-day, and we must presume that open warfare will be the rule rather than the exception," Marshall wanted McNair to refocus CGSS on the tactics and leadership methods appropriate to lead inexperienced troops in that demanding environment.[393]

This letter seems remarkable in retrospect. It preceded Germany's invasion of Poland by almost five months but predicted the mobile nature of warfare that would result from motorization and mechanization of modern armies. It showed the lasting impact of the two generals' AEF experience, both in the use of language Marshall knew McNair would understand ("open warfare" versus "stabilized or siege warfare"), and in the desire to avoid the mistakes the nation made in its preparations for and operations during the World War. Finally, it demonstrated that like McNair, Marshall continued to struggle intellectually with impact of the increasing technological sophistication of modern armies, and with the challenge of how to prepare the U.S. Army for modern warfare despite the limitations posed by the economic crisis and isolationist sentiment that had dominated America throughout most of the previous two decades. This letter, representative of the content of a long-term correspondence between Marshall and McNair, casts doubt on the idea that U.S. Army officers failed to foresee the changing nature of warfare and the impact motorization and mechanization would have in a future war.

Upon the conclusion of McNair's pre-assignment tour of training installations, he wrote Marshall to describe the great benefit he accrued from visiting the various installations and witnessing their current training systems and modernization efforts. Two months later, after Marshall learned of his selection to succeed General Craig as the Army chief of staff, he wrote to McNair: "You at the head of Leavenworth are one of the great satisfactions I have at the moment

[393] Ibid. Marshall and McNair remembered the challenges hastily mobilized divisions faced when attempting to master the complex fighting methods Pershing's open warfare doctrine required.

in visualizing the responsibilities of the next couple of years." As Stephen R. Taaffe noted, "Marshall had countless responsibilities as chief of staff, but he believed that his most significant and difficult task was recommending officers for the president to nominate as generals and assigning them to their posts." Therefore, the fact that Marshall placed so much trust in McNair at this early stage in his rise to the highest position of responsibility in the Army speaks volumes about Marshall's respect for McNair's competence and character – traits Marshall valued above all others in an Army officer.[394]

Russell Weigley has pointed out the irony that Marshall's replacement of Craig as chief of staff in August 1939, while placing the ideal officer in this key position at a pivotal historical moment, obscured the significance of Craig's influence on the Army's preparedness for war. While the Army remained far from ready in 1939 to fight a war in modern conditions, it had made great strides under Malin Craig's leadership. Craig oversaw a massive effort to update the organization of the infantry division, the first step in an overhaul of Army organization as a whole, and managed to equip units with the best weapon systems available at the time. Most of the Army's limitations in 1939 stemmed from longstanding funding shortages and personnel caps. The infantry division's two authorized strengths – one for peace and a much larger one for war – serves as just one example of these challenges. However, the Army did possess far more equipment, if somewhat dated, than before Craig's tenure, and it benefited from a significant organizational modernization effort. Craig also accelerated the War Department's study of the challenge of industrial mobilization, and led the Army to investigate the impact of motorization and mechanization, both in the officer education system and in unit field tests. Nevertheless, Marshall overshadows Craig in most historical accounts leading to various misunderstandings, including the belief that the Army's reliance on suboptimal weapons (i.e. the 37mm antitank

[394] Ibid., 710-14; Taaffe, *Marshall and His Generals*, 4-5.

gun) represented a choice officers made under Marshall's tenure, rather than the downstream effects of Craig's decision to halt most weapons development programs from 1936 to 1939.[395]

McNair lived up to Marshall's expectations as the Fort Leavenworth commandant. Upon his reassignment, he realized he faced a significant challenge. He had to oversee modification of the curriculum to one that prepared the minds of Leavenworth graduates for the changing reality of contemporary warfare, while preparing for the likelihood of increased demand for graduates as war loomed on the horizon. In a graduation address a few months after his arrival, the new commandant anticipated the changes made necessary by the demands of modern warfare, pointing out that the graduating class had learned "applicatory methods" to solve "concrete cases." He warned them that "you have applied principles and, in many cases, definite procedures . . . it may be possible that Leavenworth was wrong." Furthermore, "changes in organization, armament, and transportation are ahead. Aviation is coming into the picture more and more, and leading us to no one knows just what and where." He admonished the graduating class, "Do not use horse-and-buggy methods in a motorized age."[396] As these comments reveal, the applicatory method might have suffered from imperfections, but McNair recognized them, and encouraged Leavenworth graduates to avoid applying the principles they learned there blindly, instead adapting them to the situation in which they found themselves.

Thus, McNair arrived at Leavenworth well aware of both the benefits and the flaws in the school's applicatory method. However, some historians take Leavenworth to task for its use of the applicatory method, failing to recognize the value of teaching principles of war and inculcating doctrine in establishing a solid foundation and common language among mid-grade Army officers. In one recent critique of the U.S. Army's officer education system, Jörg Muth has

[395] Weigley, *History of the United States Army*, 415-21.

[396] Lesley J. McNair, "Graduation Address to Command and General Staff School Graduating Class and Faculty, June 20, 1939," Combined Arms Research Library Archives, McNair Files.

attempted to prove that the German officer education system produced better combat leaders. Muth claimed the Americans tried but failed during the interwar years to create an officer education system based on that of the Prussian (later the German) military, hoping to replicate their exceptional combat performance during the Austro-Prussian and Franco-Prussian Wars. In Muth's words, "The U.S. Army's professional educational system produced . . . an average officer who knew the basics of his trade in theory because he had run through a number of schools that had taught him that. He generally longed for doctrine and prepared solutions and tried to 'manage' rather than command. In stark contrast to the German Army, mavericks were not sought or fostered."[397]

Muth sought to establish the inferiority of the American officer corps' "command culture" to that of the Germans through a comparative analysis of each army's interwar education system. He described "command culture" as something like "the 'corporate identity' of an army." Muth used the term to account for factors like "how an officer considers himself to be in command, i.e., does he command as a visible person close to the action or rather through orders by his staff from his command post?" Further, he saw "command culture" as the driving force that determines how an officer "tackles the turmoil and chaos of battle and war – whether

[397] Muth, *Command Culture*, 194. Muth recounts one retelling of the "Thunder Run" into downtown Baghdad in 2003, conducted without the encouragement or presence of the corps commander who he claims should have overseen the action from within the brigade's lead elements, "where he belonged," to demonstrate the U.S. Army still possesses a flawed command culture. Ibid., 208-09. One could argue this contradicts Muth's own high praise for *Auftragstaktik*, or "mission orders," in which commanders give subordinates basic guidance and clear objectives, with plenty of latitude to demonstrate initiative in their execution of those orders. Other historians have revealed the problems with this interpretation of *Auftragstaktik*, as described below. However, assuming this reflects the concept's true meaning, it remains unclear how it supports the idea that a corps commander belongs in a brigade's lead elements in combat – something American officers would almost uniformly consider micromanagement and contrary to the idea of mission orders, both in the early twentieth century and the twenty-first.

he tries to make sense of it by the application of doctrine or rather utilizes the pandemonium to make bold moves."[398]

Muth's explication of his research exhibits significant bias, adding him to the many, often American, historians who applauded combat performance among the German officer corps, despite the fact that objective assessments revealed their performance as unworthy of such admiration.[399] For example, in his expansive body of work on the operational history of the German military, Robert Citino offers an impartial examination of other historians' assessments of the German officer corps' "command culture," that Muth so admires. Citino reveals the inherent flaws in this "command culture," which Muth ascribes largely to the German tradition of *Auftragstaktik*. Muth argued historians and military practitioners routinely misunderstand *Auftragstaktik*, "as a technique to issue orders, while in fact it is a command philosophy. The basic concept of *Auftragstaktik* means that there is direction by the superior but no tight control." Muth illustrated the concept with an example of the different ways in which an American and a German officer's instruction would prepare them to lead a tactical action, concluding that, "Because of his training, a German officer simply did not [*sic*] 'not require detailed instruction.'"[400]

By contrast, Citino demonstrated that this conception of *Auftragstaktik*, as reimagined by Muth and many other admirers of the Prussian-German tradition, "is completely mythological. The Germans hardly ever used the term when discussing issues of command. Rather, they spoke of 'the independence of subordinate commanders,' which is a very different thing." In essence,

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[398] Ibid., 8. Apparently, Muth views taking action based on a foundation in doctrine and the use of "bold moves" as mutually exclusive.

[399] William J. Astore, "Loving the German War Machine: America's Infatuation with *Blitzkrieg*, Warfighters, and Militarism," in *Arms and the Man: Military History Essays in Honor of Dennis Showalter*, ed. Michael S. Neiberg, *History of Warfare* (Boston: Brill, 2011).

[400] Muth, *Command Culture*, 173-74. Again, this begs the question why a brigade commander would need a corps commander's physical presence in his lead combat echelons to execute an attack.

as Citino made clear in *The German Way of War*, "Operational-level German commanders (corps and above) saw themselves, and were recognized by the General Staff, as absolutely independent in spirit and behavior; they were free agents while on campaign." Demonstrating his detailed understanding of German culture, resulting from objective and detailed research, Citino explained the roots of this thinking:

> It was a view tied closely to Old Prussia's social system, especially the distinct social contract between the king and the Junker nobility. They swore fealty to him and served him, typically in war but also in the civil service. In return, he allowed them near total dominance over the serfs, and later the peasants, on their domains. That arrangement extended to the general's relationship with the troops under his command, as well. Although they were not his property, they were bound to obey him, and he could launch them on any operation that he saw fit. For the king (or his deputy, or the chief of the General Staff) to intervene in a detailed way in the military operations of his subordinate would have been to violate this arrangement and to call into question the sovereignty of the Prussian nobility.[401]

This reveals the true cultural origin and meaning of *Auftragstaktik*, an understanding surprisingly lacking in Muth's analysis. His fundamental misunderstanding of a German cultural norm he used as a foundation for his argument led Muth to the equally flawed conclusion that the German interwar officer education system created better leaders, imbued with a superior "command culture" than their American counterparts.

In addition to clarifying the true meaning of *Auftragstaktik*, Citino systematically dismantled the myth that this cultural trait led the Germans to develop a system of command superior to that of their various enemies. He described the chaos, confusion, and unnecessarily high casualty rates in Prussia's wars against Austria and France in the nineteenth century, caused by commanders executing hasty attacks without gaining approval from higher headquarters or even coordinating their actions with adjacent units. He also demonstrated that the German school

[401] Robert M. Citino, *The German Way of War: From the Thirty Years' War to the Third Reich* (Lawrence, KS: University Press of Kansas, 2005), 308. For a detailed account of just one of many uncoordinated and costly attacks that resulted in "brutal, wholly avoidable casualties," during the Franco-Prussian War, led by a senior officer steeped in German "command culture," see Geoffrey Wawro, *The Franco-Prussian War: The German Conquest of France in 1870-1871* (New York: Cambridge University Press, 2003), 107-20.

system taught this same flawed system of command after the World War, casting doubt on Muth's contention that America's officer education system of the 1920s and 1930s produced officers inferior to those educated in the German system. Books like *Command Culture* fit within a historical tradition that a growing number of historians like Citino are diligently working to overturn.[402]

Other recent works add weight to an opposing view of such timeworn misrepresentations of the early twentieth-century U.S. Army's officer education system. As mentioned above, Peter Schifferle demonstrated the essential role the Leavenworth schools played in maintaining the preparedness of the interwar U.S. Army, while Michael Matheny emphasized its role in the development of American operational art. These new histories make great strides in shattering the myth of a flawed American officer education system and the mediocre generals it supposedly produced.

Schifferle's account pointed out key gaps in the education officers received at Leavenworth in the 1920s and 1930s, particularly the lack of focus on logistics and Army Air Forces. Further, he claimed flawed mobilization estimates exaggerated these problems because they "grossly underestimated the need for large headquarters to form, train, deploy, and sustain ground forces, grossly underestimated the needs of service forces, and nearly completely failed to understand the needs of the burgeoning army air forces for senior officers and staffs."[403] However, Schifferle argued out the school's contributions far outweighed its shortcomings. It

[402] Citino, *The German Way of War: From the Thirty Years' War to the Third Reich*, 309-10. For a concise yet revealing narrative exposing the many flaws of the German command system, see in particular Citino's description of the Franco-Prussian War. As Citino makes clear, "Blundering into battle may have been all well and good in the seventeenth and eighteenth centuries, when the firepower had not yet taken on the fierce cast of later eras. In an age of ever more terrible weaponry . . . Prussian warrior tradition could be positively dangerous, especially if you happened to be a foot soldier spearheading yet another frontal assault against a well-armed adversary." Ibid., 174-90.

[403] Schifferle, *America's School for War*, 167-68.

benefited from a particularly talented faculty, mostly selected from among the top graduates of each class, who served a tour with a field unit and then returned to Leavenworth to teach. Many of these officers also possessed experience serving with the AEF during World War I. The school provided many officers during this period their only opportunity to study large-unit operations, even if funding constraints prevented field maneuvers and limited this instruction to the classroom. Most importantly,

> Although students were not always encouraged to be innovative, student solutions that did not mimic the instructors' rote answers were possible and did not necessarily result in a lower grade. What every graduating class gained at Leavenworth were not cutting-edge technological advances or new, doctrine-shaking ideas about combat. They gained the three essential elements of the Leavenworth educational system: skills in problem solving, the principles and techniques of handling large formations in combat, and, of inestimable value, the confidence that they could manage these large formation command and staff tasks that had so greatly challenged officers in the AEF.[404]

Matheny pointed out that many of the men who attended the staff school at Leavenworth went on to graduate from the War College, which produced by 1939 the vast majority of the officers who served as the Army's most senior commanders in the 1940s. Graduates of the AWC also practiced large formation operations through map maneuvers and command post exercises, and filled some of the gaps left in their military education by Leavenworth. Matheny argued, "The lessons of World War I, as distilled in the curriculum of the War College in the twenties, continued to be studied and taught into the thirties. The emphasis on logistics remained evident in virtually all of the exercises and map maneuvers. The scale, scope, and detail in campaign planning became more refined and more sophisticated, particularly as war clouds gathered at the end of the decade. More than anything else, the specificity of war planning . . . helped to develop meaningful and modern solutions to problems in operational art."[405]

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[404] Ibid., 190.

[405] Matheny, *Carrying the War to the Enemy*, 76. Analysis above of McNair's AWC class curriculum supports this assertion. While CGSS may have neglected logistics and air power, they

In the end, the rapid acceleration of America's preparation for war had an unforeseeable impact on McNair's efforts at Leavenworth. It arose from the curtailment of his assignment there to just one year and the decision to abbreviate the course near the end of his tour as commandant. Rather than revising the curriculum of the existing one-year course to bring it more in line with the methods Marshall and McNair discussed, events led the War Department to direct creation of a significantly abbreviated course, in hopes it could produce the number of graduates necessary to support large-scale mobilization should the need arise. Nevertheless, McNair did not merely lead the reorganization of CGSS into an short course, he also made great strides in updating the teaching methods and grading system employed by the faculty, and contributing to the Army's ongoing modernization efforts.[406]

For example, upon McNair's arrival at Leavenworth, the Army still operated based on a core doctrine developed by assessing the AEF's performance during the World War, which several post-war boards judged as generally adequate and based on a valid doctrine. This led to publication of the 1923 *Field Service Regulations (FSR)*, a document that served as the Army's overarching operational doctrine, on which it based all other doctrine and procedures. This manual governed Army operations for over a decade, and despite various efforts to rewrite the Army's core doctrine throughout the intervening years, the updated *FSR* it remained unapproved and in a state of flux upon McNair's arrival at Fort Leavenworth.[407]

As Walter Kretchik has argued, the 1923 *FSR* grew increasingly outdated as technological and organizational change took hold in the Army throughout the 1920s and 1930s.

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remained key topics throughout the 1930s, preparing the officers bound for senior leadership far better than Leavenworth for those aspects of the conduct of operational art by large formations.

[406] McNair Papers, Combined Arms Research Library, Fort Leavenworth, KS.

[407] For a particularly detailed and insighful analysis of the development of the 1923 doctrine, see Odom, *After the Trenches*. Post-war board reports are held at the National Archives and Records Administration, College Park, MD, in Record Group 120, Entry 23.

The 1923 manual, fundamentally unchanged from its 1914 predecessor, stressed mobile offensive operations – open warfare – above all else, although it did add some specificity to the concept by defining tactical actions like meeting engagements and attacks against stabilized fronts. As seen in the 1929 curriculum of the Army War College, the year McNair and Dwight D. Eisenhower graduated, students analyzed both their own doctrine and that of other armies as they reviewed and suggested changes to existing war plans that anticipated many possible scenarios that might lead to war with other nations. Nevertheless, halfhearted congressional implementation of the 1920 National Defense Act meant the Army lacked the resources to effect change based on the insights gained from lectures and practical exercises at the War College or the vibrant discourse that took place in the various professional branch journals like *The Field Artillery Journal*.[408]

While doctrine writers incorporated other changes in the 1923 *FSR* based on the practical and theoretical review of the World War's lessons the Army undertook after the war, Kretchik describes the most significant feature of the manual. It served as the "intellectual core of the Army," and the tool by which "the War Department now shaped ideas contained within the service's principal manual, while also holding sway over the manuals affiliated with each branch of the service. Through doctrine, the War Department had furthered its authority over the service as a whole. Yet, without a war to test it in battle, the 1923 *FSR* was obsolete by the mid-1930s." In 1939, the Army remained undermanned, relied on aging or obsolete equipment, and adopted new doctrine and operational concepts slowly in comparison to the major European armies, even

[408] Walter E. Kretchik, *U.S. Army Doctrine: From the American Revolution to the War on Terror*, Modern War Studies, ed. Theodore A. Wilson (Lawrence, KS: University Press of Kansas, 2011); for a detailed analysis of the vibrant and professional discourse that took place in several branch journals in the 1920s and 1930s, see Dan C. Fullerton, "Bright Prospects, Bleak Realities: The U.S. Army's Interwar Modernization Program for the Coming of the Second World War" (PhD diss., University of Kansas, 2006).

though many officers in Army schools and operational assignments studied these ideas, and incorporated them into U.S. Army discourse. Only Japan lagged behind America in the major powers' mechanization efforts, and America's first experiment with a mechanized force ended in failure after only a few months, serving only "to demonstrate that the Army lacked mechanized forces." Even in the development of infantry, the U.S. Army failed to learn from its European counterparts' experiments with machine guns and armor support, and was the last to adopt the triangular division structure, in 1939.[409]

This fundamental change in organizational structure formed the main catalyst for the eventual approval of a new *FSR* in 1939. While various efforts took place beginning in the late 1920s to update the doctrine, they failed to result in a new *FSR*, although they did lead to creation of a series of supporting manuals. However, lack of consensus on these manuals only added confusion to the effort to update Army doctrine. Between 1935 and 1939, the War Department stepped up efforts to update the official doctrine in the *FSR* and gain approval for the unofficial doctrine contained in the supporting manuals, which had drawn much criticism since their creation, in part due to their early foundation in French doctrine. By 1937, the War Department staffed an updated draft *FSR*, broken down into three volumes (*Operations*, *Administration*, and *Large Formations*), but, in Walter Kretchik's words,

> The responses ranged from detailed analyses to total apathy. . . . The drafts eventually made their way into the hands of Brigadier General Lesley J McNair . . . . McNair and his staff [at CGSS] painstakingly reviewed everything chapter by chapter. McNair was involved to the point where he authored many changes himself. His personal comments also took shape in a formal reply to the War Department. The general staff adopted most of his ideas.

[409] Odom, *After the Trenches*, 72-78. Odom describes the degree to which the AEF relied on British and French doctrine and procedures in preparing for the war and evaluating its lessons to write the 1923 manual; ironically, as the memory of the World War waned, so did America's tendency to implement change based on observations of European military developments. See Kretchik, *U.S. Army Doctrine*, 139-41.

Thus, the man individually most responsible for adoption of the triangular division also led the final push to develop a doctrine to bring the Army up to date with the technological and organizational changes it had undergone over the preceding decades. He also did so from the ideal position – as commandant at CGSS McNair could not only monitor ongoing developments in the organization of the triangular infantry division and contribute to the Army's new operational doctrine, he could also ensure the Leavenworth curriculum covered the Army's latest doctrine and unit organization.[410]

After only two months in his new position, Marshall wrote to McNair on August 7, 1939 to inform him of the imminent approval of the *FSR*. He also lauded McNair on the positive effect he had already achieved as commandant: "I hear on every hand the most flattering comments regarding your effect on Leavenworth. You apparently – to use a hackneyed word – have vitalized the place and yet in a most harmonious manner."[411]

In his recent study of U.S. Army doctrine, Kretchik observed that, "these draft manuals were subjected to far more scrutiny than any previous *FSR*." However, he pointed out the process of buy-in among the War Department staff, Army schools, and operational units made for a slow, but inclusive process. Finally, in September 1939 George C. Marshall approved the new doctrine, while putting in place a fundamental change in the organization of doctrine by dividing the 1939 *FSR* into three Field Manuals (FMs), *FM 100-5, Operations*, *FM 100-10, Administration*, and *FM 100-15, Large Units*. This subdivision of the Army's core doctrine recognized the significant differences in the three functions the FMs described warranted

[410] ———, *U.S. Army Doctrine*, 141-43.

[411] George C. Marshall, "George C. Marshall to Lesley J. McNair," September 29, 1939, McNair Papers, Combined Arms Research Library, Fort Leavenworth, KS; Larry I. Bland, ed. *"We Cannot Delay": July 1, 1939-December 6, 1941, Vol. 2 of the Papers of George Catlett Marshall* (Baltimore, MD: Johns Hopkins University Press,1986), 30.

separate doctrine, while meaning the Army's overarching doctrine now existed in the form of an FM (*FM 100-5*) rather than the *FSR*.[412]

Perhaps most significantly, the timing of the approval of this new doctrine, and of the leadership changes that preceded it, cannot represent mere chance. McNair's service first as chief of staff of 2nd Division overseeing the field tests of the triangular division, and then his assignment as Leavenworth commandant – followed shortly thereafter by Marshall's selection as chief of staff – contributed directly to a comprehensive overhaul of Army organization and doctrine just as a major European war began with Germany's invasion of Poland. These men, recognized as key innovators, led the effort to wrest the U.S. Army from its resource-constrained torpor and develop into a modern Army on par with the European ones that had left it behind in the 1920s and 1930s.

However, approval of the 1939 *FSR* did not indicate the achievement of either consensus or consistency in U.S. Army doctrine. The new doctrine met considerable criticism from field units, who received the tentative *FSR* shortly after its approval, with guidance from Marshall directing commanders of large units to provide feedback on its contents. Criticism ranged from complaints about the review process to debates over branch-specific roles, missions, and procedures. The Army Air Corps rejected the manual because it did not identify them as an independent force, a debate raging on well into its second decade. The 1939 *FSR* did contain more similarities with its 1923 predecessor than differences, still highlighting the primacy of the infantry and relegating the other arms to support roles when many believed they could accomplish more if employed differently. Minor procedural differences did reflect new thinking based on reorganization of the infantry division and increased motorization. Nevertheless, the new doctrine begged the question why the Army had not learned more from its study,

[412] Kretchik, *U.S. Army Doctrine*, 143-44.

particularly at the Army War College, of military developments in other countries, or sought more innovative ways to exploit the potential of mechanization and air power. In other ways, the doctrine reflected the inconsistency in views among the Army itself, such as the confusing descriptions of air power's role, at once emphasizing the need for air-ground coordination while providing no guidance describing how units would employ close air support.[413]

Kretchik argued another more fundamental reason explained the lack of support for the new doctrine. As the Army's keystone doctrinal publication, in theory the *FSR* should have served as the guiding manual for the subordinate doctrine of the various arms. However, service schools still developed the tactics their own branches would employ, and the War Department did not enforce a review and approval process to ensure this doctrine conformed to the overarching concepts described in the *FSR*. Therefore, the arms and services could formally object to – or simply ignore – the War Department-issued doctrine and continue developing the methods they believed appropriate, leading to a divergence of views that publication of a new *FSR* could do little to curtail. In short, "Given differing priorities within the War Department and the schools, the various doctrinal manuals were not 'nested' with FM 100-5. The result was a keystone doctrine that failed to integrate the needs and missions of branch schools."[414]

Odom provided an assessment similar to Kretchik's, pointing out that officer attendance at interwar military schools and the vibrant discourse in interwar branch journals refutes accusations of intellectual stagnation among the interwar Regular Army. Therefore, Odom also

[413] Ibid., 147; Odom, *After the Trenches*, 166. Odom points out "It is unfair to judge the army too harshly for its failure to prescribe more accurate doctrine on the eve of World War II. After all, at the time only the German Army had developed a correct formula for success on the modern battlefield, and it had done so through an expensive and extensive process of field testing and combat trials."

[414] Kretchik, *U.S. Army Doctrine*, 147.

concluded the lack of a system for developing doctrine represented the real problem.[415] Regardless, the new doctrine represented positive steps in updating a sixteen-year old *FSR* and in bringing Army doctrine more in line with organizational changes and technological advances since the World War. However, it took the Army's overall rejection of the 1939 FSR, followed by Germany's rapid and successful invasion of Poland on September 1, 1939, to motivate true change in U.S. Army doctrine. Marshall once again called on McNair and his faculty to oversee the doctrinal update, setting January 1, 1941 as the due date for a new draft.[416]

Much as he had done in his previous assignments, McNair achieved a great deal in a short period and his efforts benefited not only his unit, but also the entire Army. As part of his vitalizing the college faculty, he ordered "studies of instructional methods, grading and evaluation, and student satisfaction." He used the results of surveys and input from the faculty to reverse a change in the grading system instituted by Brigadier General Edward King (with the approval of the War Department) in the late 1920s. Concerned about low student morale caused by the high-stress environment of competition for top-fifty percent class ranking (the key to selection for Army War College Attendance) and honor or distinguished graduate recognition (meaningless other than providing the student a sense of self-satisfaction), King dramatically changed the grading and evaluation systems. He eliminated quartile grade reports, adopting a pass/fail grading system instead, and gained War Department approval to provide end-of-course evaluations that rated students "superior," "above average," "average," "below average," or "marginal." While the fifty percent cut still applied when selecting officers to attend the War

[415] Odom, *After the Trenches*, 241. Such a lengthy lack of a viable doctrine development system does seem odd, since War Department policy requiring subordinate branch and service doctrine to conform to the *FSR* would have solved the problem.

[416] Kretchik, *U.S. Army Doctrine*, 147-48.

College, King believed this change significantly improved student morale, by rating students' performance against a school standard, rather than against each other.[417]

King may also have made these changes in reaction to critiques of the earlier grading system, adopted shortly after the war and much criticized in military journals and in the diaries and letters of many graduates. However, as Peter Schifferle reveals, some officers welcomed the competition, and even thrived in the stressful environment caused by quarterly grade reports and jockeying for class standing. When McNair surveyed the 1939-40 class, twenty-six percent of students requested more "pay problems" (graded practical exercises that applied to the total points attainable in the course and determined class standing), twenty-three percent responded the course should include fewer, and fifty-one percent judged the number about right. Ninety-eight percent of students, when asked if the instructors graded the pay problems fairly and well, answered "yes." Ninety-nine percent of students objected to peer evaluations without faculty supervision, and ninety-seven percent judged pay problems "fair" (as opposed to "unfair") in measuring students' ability to apply what they had learned. Based on these results, McNair recommended a return to the grading system King had replaced, but the following year he proposed abandoning the laborious tabulation of percentage grades in favor of a less laborious system in which students would receive a handful of letter grades at various stages of the course. However, the rapid pace of change as the nation assumed a mobilization footing delayed adoption of McNair's letter-grading recommendation.[418]

As McNair instituted change and generally raised the level of activity at CGSS, he also continued to develop the vital skills needed in a general officer. His role as CGSS commandant and post commander required him to interact with local community leaders, visiting dignitaries

[417] Schifferle, *America's School for War*, 145-46.
[418] Ibid., 140-48.

from foreign armies, and particularly the media, who sensed the increasing pace of Army preparations for mobilization and sought any information they could get, particularly from senior leaders like McNair.[419]

By late summer 1939, the pace of War Department preparations for mobilization accelerated to the point that senior Army leaders began to realize CGSS must prepare to produce more graduates than it could with its current one-year curriculum. In addition, the school needed to tailor the curriculum for the many National Guard officers expected to attend in preparation for mobilization, along with the many reserve officers who had received no military training since completing ROTC. Further, concurrent with changes enabling CGSS to increase the number of graduates, the curriculum required modification to prepare those graduates for the particular challenges of transforming mobilized Guardsmen and civilians into combat-ready military personnel. Marshall first addressed this topic with McNair in a letter dated August 16, 1939:

> There is also another matter I want to suggest to you. That is the great advantage which would result from a shortening of the course at Leavenworth for National Guard and Reserve officers. It is always very difficult to get the type of man we want when he has to give up his business for three months. *Confidentially*, under the present system at Leavenworth, at Benning, and at other schools, a three months' course is too apt to produce what might be termed 'bread-ticket' people. I know that your instructors will say that three months is the minimum time in which a satisfactory course of study can be given. Confidentially, for your eye alone, I'll bet I could do everything they do and only take two months to do it in, if you wipe out certain unimportant details, and if the preparatory material sent in advance is carefully arranged toward the desired end.[420]

McNair's ongoing correspondence with Marshall and many initiatives to improve CGSS placed the course on a path toward preparedness for mobilization.

The War Department's announcement of a Protective Mobilization Period in the spring of 1940, prompted by Germany's defeat of Poland in the fall of 1939 and given new emphasis by

[419] McNair Papers, Combined Arms Research Library, Fort Leavenworth, KS.
[420] Bland, ed. *Vol. 2, Marshall: "We Cannot Delay"*, 36-37; emphasis in the original.

their quick victory over France the following spring, finally compelled the War Department leadership to direct the implementation of an abbreviated CGSS. This decision required the early graduation of the 1940 class (shortened by two months), and the creation of a ten-week version of CGSS to maximize the number of officers who could attend the course (both by shortening the course and more than tripling class size). This generated much debate and consternation among the faculty. Fortunately, McNair had prepared Fort Leavenworth and CGSS for this possibility, and led the faculty through the transition effectively and with a minimum of disruption in training. McNair's reorganization of the curriculum by staff section simplified the process of shortening the course, since officers could take only those portions of the course that taught skills unique to their area of specialty. Undoubtedly, the abbreviated course lacked the comprehensiveness of the full-year version, and officers who had attended the full-year version felt prepared to assume any general staff duties – not just those related to a specific staff function. Nevertheless, the course proved far more effective due to the energy and focus McNair brought to the college than it would have had Marshall not foreseen the need to assign a first-rate officer to Fort Leavenworth the previous year, to update the school's curriculum and teaching methods.[421]

Significant obstacles still stood in the way of forming a well-trained and properly equipped Army guided by an internally consistent doctrine. The abbreviation of CGSS limited

[421] McNair Papers, Combined Arms Research Library, Fort Leavenworth, KS. Marshall wrote to McNair on April 12, 1940 to express his conviction that an abbreviated CGSS could still accomplish its mission, based on his five years' experience at the Infantry School, where Marshall observed much wasted time and a slow pace of instruction often caused by ill-prepared students or instruction gauged to the weakest students in each class. He believed sending future students well-designed preparatory materials, along with improved instructional methods and streamlining of the staff procedures taught could enable CGSS to produce equivalent results in less than half the time. McNair responded in an undated memorandum, "As to the new courses, I see no clouds on the horizon," and assured Marshall, "I am confident that the course will be thoroughly effective, although improvements doubtless will suggest themselves as we go along. You may be sure that we shall spare no effort to make the new setup all that you want it to be."

Marshall's ability to address one of his particular concerns. He remained convinced the Army Air Corps (AAC) could not provide effective aerial support to ground forces unless its officers thoroughly understood land operations. Marshall wrote to McNair on January 24, 1940, after visiting the western maneuvers and the Air Corps Tactical School, to describe measures he intended to take to resolve this problem:

> I was again impressed with the importance of developing every means to give the Air Corps an understanding of the ground army. I completed the tentative arrangements while en route to have the class of 300 flying cadets who finish at Kelly Field in the first of April attached for six weeks to the headquarters of companies, batteries, battalions and regiments of all the troops which are to participate in [future large-scale] maneuvers.

Marshall also mentioned "trying to make a similar arrangement for the class at the Air Corps Tactical School," and seeking to modify the future AAC officer's career path so they served at least one year in a large unit of the ground forces before beginning service in the AAC. With the basic structure of the triangular infantry division worked out, reports of German combined arms effectiveness in Poland made settling the dispute over air power's support to ground forces one of the highest priority issues the Army faced.[422]

Beginning in the 1920s the AAC had increasingly sought independence from the ground forces, which it believed did not understand or support the full development of air power's potential. A significant divergence took place in the late 1930s, when the AAC abandoned the development of ground support aircraft entirely. It had experimented with such aircraft for most of the decade, purchasing 156 single-engine attack aircraft between 1932 and 1936 designed with weapons ideal for the support of ground forces. However, the AAC began in 1939 to phase out single-engine ground support aircraft in favor of twin-engine light bombers, even as Germany

[422] Bland, ed. *Vol. 2, Marshall: "We Cannot Delay"*, 144-45.

prepared to use ground support aviation as an integral element of its combined arms team with great success in its upcoming campaigns in Poland and France.[423]

Marshall saw the divergence of ground force and air corps views firsthand in his interactions with leaders at the maneuvers and schools he visited, prompting him to seek these changes in AAC officer career management to help them understand their role in supporting the ground forces.[424] Unfortunately, the abbreviation of CGSS and acceleration of the mobilization effort a few months later prevented implementation of Marshall's initiatives, and U.S. Army doctrine continued to describe a significant ground support role for the AAC that it had no intention or capability to provide.[425] As Richard Muller points out in *Military Innovation in the Interwar Period*,

> while the development of the medium bomber was in many ways a successful and worthwhile endeavor, it did little to provide reliable air support to the ground forces. Proponents of attack aviation embraced the broader definition of their mission [twin-engine aircraft like the Curtiss A-10 and the Douglas A-20 'were less suited for close air support than for missions such as deep interdiction and attacks on enemy airfields] as a means of preserving attack's distinct identity. This development coincided with the emphasis on the long-range bomber and the air superiority mission within the GHQ Air Force.[426]

Marshall had similar concerns about the lack of progress in the development of both armor and antitank defense capability. Chief of Staff MacArthur had disbanded the experimental Mechanized Force in 1931, after only one year in existence, to allay fears among the infantry and cavalry that armor might gain autonomy as a separate and coequal arm. Therefore, throughout

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[423] Gabel, *GHQ Maneuvers of 1941*, 39.

[424] Bland, ed. *Vol. 2, Marshall: "We Cannot Delay"*, 145n2.

[425] As late as May 1941, U.S. Army Doctrine still described a critical role for the AAC in support of ground forces, long after the shift in AAC focus to strategic bombing and aerial interdiction missions supplanted any interest in or capability to provide such support. While these roles certainly provided important advantages in the conduct of campaigns, at the tactical level Army ground forces expected aerial support that rarely if ever materialized. U.S. Army, *FM 100-5, Field Service Regulations, Operations, May 22, 1941*, (Fort Leavenworth, KS: U.S. Army Command and General Staff College Press Reprint, 1992), 13-14.

[426] Richard R. Muller, "Close Air Support," in *Military Innovation in the Interwar Period*, ed. Williamson Murray and Allan R. Millett (New York: Cambridge University Press, 1996), 180.

the 1930s the infantry and cavalry each independently experimented with armor (which the cavalry called “combat cars” to circumvent the 1920 NDA’s provision that infantry retained full control over tank development). Making matters worse, the Chief of Ordnance retained authority over technical design and production, meaning either branch could request certain design specifications in future tank or combat cars, but Ordnance could modify these specifications as they saw fit before producing and delivering the new prototypes. Therefore, by 1939 there still existed no consensus either on the role of the tank or on its optimal design, although the infantry and cavalry did agree on one issue – American tanks’ primary mission would not involve direct engagement of enemy tanks. The former viewed the tank as an infantry support vehicle, while the latter viewed the combat car as a system that enabled the cavalry to conduct its traditional missions of reconnaissance, pursuit, envelopment, and exploitation on the modern battlefield. They did agree on one thing – the Army should develop light, fast tanks – although to serve very different purposes, none of which involved direct combat with enemy tanks.[427]

This meant the ground forces needed an effective means of antitank defense, but the Army had made even less progress by 1940 in this area than it had in tank development. In fact, the triangular division possessed only sixty 37-mm guns – its only antitank weapon other than the .50-caliber machine gun – drawn from the pool of German 1936-model guns reproduced in 1937. The Chief of Infantry, the proponent for antitank development, had completely neglected this responsibility, while the Field Artillery, whose units possessed forty percent of the Army’s antitank weapons, devoted only six pages to mechanized defense in its basic instructional manual. The antiaircraft artillery also refused adopt the antitank role as one of its assigned

[427] Mark T. Calhoun, "Defeat at Kasserine: American Armor Doctrine, Training, and Battle Command in Northwest Africa, World War II," http://cgsc.cdmhost.com/cdm/singleitem/collection/p4013coll2/id/31/rec/1 (accessed January 2, 2012), 31-32.

missions, even though it possessed weapons with far greater potential to fulfill that role than the 37-mm.

Therefore, during his tour at Fort Leavenworth McNair remained one of the few Army officers devoting significant intellectual effort to this capability shortfall, perhaps due to his involvement in the PID tests, when he convinced the War Department that the redesigned division's infantry regiments required antitank companies. Upon his assignment as commandant at Fort Leavenworth, McNair directed a faculty review of antitank methods, which led to the publication of *Antimechanized Defense (Tentative)* in 1939, an instructional manual that filled a gap in the CGSS curriculum. This study also formed the basis of McNair's thinking in 1940 regarding antitank defense.[428]

As Peter Schifferle described in *America's School for War*, in just over a year as commandant, McNair

> set Leavenworth on the road to a wartime instruction system. McNair changed the basic system of instruction from exposure to command and general staff concepts to a focus on staff skills. This focused system of instruction had been the hallmark of Langres, which McNair understood from his service in the . . . AEF headquarters. And, because McNair had also been a member of the inaugural faculty in 1919-1920, discussions about the form of instruction at Langres were undoubtedly one of the topics debated among the instructors. After mobilization, McNair's consultations with the War Department, coupled with the mobilization of National Guard divisions, resulted in combining the regular army course with the reserve component courses, shortening the course length to nine weeks, and organizing students and instruction by specific staff section. By the time of McNair's departure in October 1940, the system for the first special course was in place.[429]

McNair met Marshall's expectations as commandant, placing Leavenworth on a war footing while revitalizing the faculty, updating instructional and grading methods, refocusing the curriculum on development of staff skills and logically organizing the faculty by general staff section, and quickly establishing an abbreviated course when the need arose. Nevertheless, the secondary literature – when it mentions McNair at all – remains dominated by oversimplified,

[428] Gabel, *GHQ Maneuvers of 1941*, 32.
[429] Schifferle, *America's School for War*, 161.

highly critical, and unsubstantiated assertions like that of David E. Johnson, who concluded in *Fast Tanks and Heavy Bombers* that in his year at Fort Leavenworth, "McNair accomplished little."[430]

In the summer of 1940 Marshall called once again on McNair, this time to report to a new headquarters forming in Washington to oversee the Army's rapidly accelerating efforts to prepare for war. McNair's imminent reassignment meant he could not see the revision of the *FSR* through to the end. However, Germany's defeat of France in the spring of 1940 proved the effectiveness of its combined arms tactics against even a first-rate opponent, prompting Marshall to call for more extreme measures to modernize the Army. He approved on June 6, 1940 a plan to consolidate all armor development under a new organization, the experimental Armored Force led by Brigadier General Adna R. Chaffee (a cavalry officer), hoping to overcome the continued divergence of views regarding tank design and employment between the infantry and cavalry. He also directed McNair to plan for a series of army-level maneuvers in 1941 to test the updated version of the *FSR* he expected to approve early that year, to evaluate the true potential of mechanization and test the integration of air power into the combined arms team. While McNair departed Leavenworth before completion of the new draft *FSR*, he continued to contribute to its development as part of the Army's modernization process in his new assignment, continuing along the trajectory begun during his key role in the reorganization of the infantry division in 1937-38.[431]

[430] Johnson, *Fast Tanks and Heavy Bombers*, 224. The only citation Johnson provides to support this conclusion references the letter Marshall wrote to McNair on February 23, 1939, informing him of his imminent appointment as commandant at Fort Leavenworth. One wonders how a single letter written months before McNair's arrival at Leavenworth supports such a critical assessment of his achievements at the end of his assignment there.

[431] Gabel, *GHQ Maneuvers of 1941*, 44.

McNair's efficiency reports from his year as commandant at Fort Leavenworth reflect not only the continuation of his exceptional performance, but also the high level of responsibility he had reached, with a corps area commander rating his performance as post commander, and the Army chief of staff rating him as CGSS commandant. His first report only covered the period from April 6 to July 1 1939, but he still received "superior" ratings in all categories from Malin Craig, who ranked him second out of forty-six brigadier generals he knew. Craig judged McNair qualified for corps command in the event of war, despite his hearing loss (which he did not even mention on the efficiency report), and described him as "A superior officer of superior value to the service." His rater, Major General P. P. Bishop, commander of the Seventh Corps Area, ranked McNair fifth out of the thirty-one brigadier generals he knew at the time of this first report, and he, like Craig, ranked McNair superior in all areas, and recommended him for division or corps command in combat.[432]

McNair's final efficiency report, covering the period July 2, 1939 to July 1, 1940, demonstrates how much his accomplishments at Leavenworth increased his already high reputation. By this point, War Department policy waived efficiency reports for officers directly supervised by the Army chief of staff. However, Bishop, the corps area commander, rated McNair's performance as post commander in a report in which he now ranked McNair first among all brigadier generals he knew. This fit a longstanding pattern of superior performance in a wide variety of extremely demanding positions, and set McNair apart as one of the Army's

[432] P. P. Bishop, "Efficiency Report," April 6 through July 1, 1939, McNair Papers, National Archives and Records Administration, St. Louis, MO; Malin Craig, "Efficiency Report on General Officer," April 6 through June 30, 1939, McNair Papers, National Archives and Records Administration, St. Louis, MO.

most capable officers, destined to serve in positions of even greater responsibility as events in Europe unfolded.[433]

[433] P. P. Bishop, "Efficiency Report," July 2, 1939 through July 1, 1940, McNair Papers, National Archives and Records Administration, St. Louis, MO. McNair received no further efficiency reports. Since he worked directly for the chief of staff of the Army for the rest of his career, the Adjutant General inserted a memorandum indicating his exempt status into his personnel file each year in lieu of an efficiency report.

## CHAPTER NINE

### Mobilizing the Army

Having accomplished a major transformation of CGSS and, continuing to influence the modernization of U.S. Army doctrine, organization, and equipment, McNair departed Fort Leavenworth for his new duties in Washington, D.C., where he reported for duty on August 3, 1940. In ways strikingly similar to 1917, America found itself far from prepared in 1940 to engage in the rapidly accelerating European war. While the Regular Army had attempted throughout the 1920s and 1930s to modernize in step with developments in military theory and technology, it mostly succeeded only in the intellectual development of the Regular Army officer corps, for the Army's leaders found their hands once again tied by personnel and budget constraints until a crisis emerged. This observation highlights both the most significant similarity and the most notable difference in America's readiness to mobilize before the two World Wars.

While some historians have placed a great deal of blame on branch bias and doctrinal debates for the Army's low level of readiness before both wars, one must balance the significance of those issues with that of America's failure to prepare for industrial mobilization to arrive at a complete understanding of the obstacles the nation faced. America's isolationist stance led it to focus in the period before each war on defense of the nation from attack, rather than major expeditionary military operations. This resulted in the lack of a system of organized reserves to augment the small Regular Army, and a flat-footed industrial stance that drastically slowed the mobilization process before both wars. These issues would have limited the readiness of even the most well-trained and equipped military force, particularly given America's tradition of maintaining a small Regular Army in times of peace. Nevertheless, most histories of the World Wars – even those that recognized these issues – tended to emphasize military

organization, doctrine, and training as reasons for challenges in mobilizing and preparing to fight.

These unquestionably represent significant issues, but they pale in comparison to the lack of preparation to mobilize, deploy, and sustain a large-scale military force. The major difference in the U.S. Army's preparedness for World War II – the significant improvements in the officer education system during the interwar period – gave the Army a pool of highly trained and professional officers to shoulder the burden of Army training, organization, and doctrine development. This facilitated a more effective mobilization process in 1940-41; however, intellectual preparation can only go so far if a nation must build a modern army out of masses of untrained recruits formed around a tiny core of Regular Army personnel, and call upon industry to provide rapidly the means to equip and sustain that force.

The fall of France made England, the European nation with which America held the closest affinity, Germany's most likely next target. This forced the U.S. Government to acknowledge it must begin preparations to engage to some degree in this new war. Once again, the government raced to make up for lost time. The Roosevelt administration authorized protective mobilization while facing public resistance to American involvement in the war. In the midst of this turmoil, senior Army leaders focused on those things they could control – Army organization, doctrine, and training. They identified Lesley McNair as one of the men most capable of helping lead the Army's mobilization. Given the centrality of his role in this process, histories of the Second World War have often mentioned McNair's efforts. However, these histories have tended to focus on matters within the Army's, and presumably McNair's scope of responsibility and control, while neglecting the significance of the mobilization challenges the Army faced but lacked the ability to influence.

As described above, McNair served in all of America's major military conflicts after his graduation from West Point in 1904, and he played a key role in several of the U.S. Army's most important peacetime innovation efforts. However, he rarely appears in studies of the pre-1940 Army, probably due to the lack of any detailed analysis of his long career, the records of which remained mostly unexplored, filed away in various archives. McNair emerged from this obscurity due to the convergence of his rise to senior leadership in the Army, and America's imminent involvement the rapidly growing conflict in Europe and a potential conflict with Japan as well. However, the lack of detailed research about his early career meant these histories could only offer superficial analyses of McNair's qualifications for and performance in the wartime positions he held.

The inadequate scholarly assessment of the previous thirty-six years of McNair's career, combined with the failure to acknowledge the extent of the nation's industrial mobilization challenges, has resulted in a historical record that paints a somewhat one-sided picture of both McNair's efforts and the WWII Army's fighting ability. One sees this most often in the vast profusion of studies of U.S. military effectiveness that began to appear in the early 1990s, as the Department of Defense (DOD) began to pursue a transformation program intended to streamline and modernize the U.S. military. The Army found itself a particular target of this modernization program due to the perception that its units relied too much on heavy equipment, making them slow to deploy. The Army initially proved reluctant to embrace the DOD Transformation effort. Army Chief of Staff Eric Shinseki finally endorsed Transformation in 1999, perhaps because he realized the Army risked growing irrelevant in the perception of key leaders in DOD and the federal government.[434]

[434] Mark T. Calhoun, "Complexity and Innovation: Army Transformation and the Reality of War,"

In keeping with the DOD program's central tenets, Shinseki sought through "Army Transformation" to maintain relevance in a rapidly changing joint force by leveraging technology to create a leaner, more readily deployable, yet increasingly lethal Army. Debates regarding the feasibility of Army Transformation, a modernization program largely based on the advertised potential of technologies not yet fielded or even developed fully, led to a profusion of new histories, articles, government research projects, and other studies of organizational change and Army effectiveness. Many of these works included historical analyses of the two decade-long interwar period between the end of World War I and beginning of World War II as case studies for comparison to the current initiatives. This led to the publication of many critical analyses of the combat effectiveness of the U.S. Army that fought World War II, and of the Army's modernization efforts during the interwar period. Taken as a whole, authors often presented that period as comparable to the Army Transformation era and the likely effectiveness of the Army it would produce.[435] Given his role in the mobilization and training of the Army that fought World War II, McNair often featured in these studies, although they rarely exhibited thorough research of his career before 1940. Instead, most of these studies merely presented snapshots of McNair's actions during the period from 1940-44, identifying their supposed causal linkage to Army effectiveness, while lacking the historical context necessary to enable the reader to evaluate them critically.

Many of the analyses of "Army Transformation" that appeared near the turn of the century not only sought to identify similarities in the Army's interwar modernization efforts to support their views – they also often embraced the accepted wisdom embodied in the existing literature on the U.S. Army in World War II. These works selectively referenced the historical

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http://cgsc.cdmhost.com/cdm4/item_viewer.php?CISOROOT=/p4013coll3&CISOPTR=85&CISOBOX=1&REC=1 (accessed January 15, 2012).

[435] Ibid.

record to support critiques of specific topics related to Army Transformation. Because of McNair's important role in Army organization and mobilization training after 1940, he offered name recognition value and frequently served as a target for the perceived shortcomings of the rapidly expanding Army of 1940, and its often-criticized effectiveness in the coming years.[436] In an effort to support critiques of Army Transformation, many studies simply oversimplified or misrepresented the historical record, or accepted decades-old analyses as objective fact.

The following analysis, which due to space limitations cannot provide a comprehensive narrative of America's involvement in World War II, or even most aspects of McNair's role in that global conflict, seeks to restore balance to historical understanding of McNair's efforts to prepare the U.S. Army for war by acknowledging both McNair's missteps and his achievements. Balancing military analysis of McNair's performance with the effects of isolationist national policy and slow industrial mobilization illustrates many of the misperceptions that still exist in the accepted wisdom concerning U.S. Army effectiveness during the war. An increasing number of historians, many cited here, are working to overturn this flawed narrative. This study seeks to add weight to this body of work while increasing modern historical understanding of Lesley McNair's particular contributions.

**Chief of Staff, General Headquarters, 1940-1942**

On August 3, 1940, McNair reported to Washington to serve as Chief of Staff, General Headquarters (GHQ). The War Department activated GHQ on July 26 to facilitate a rapid and effective mobilization process by taking responsibility for the organization, training, and

[436] For one of the best examples of this accepted wisdom, see Russell F. Weigley, *Eisenhower's Lieutenants: The Campaign of France and Germany 1944-1945* (Bloomington, IN: Indiana University Press, 1981); For one of the better-known Transformation era critiques of the interwar Army's modernization efforts, representative of a large body of similar work, see Johnson, *Fast Tanks and Heavy Bombers*.

equipping of all field forces within the continental United States. Originally conceived in the aftermath of World War I, the War Department consciously modeled GHQ after General Pershing's AEF staff. Upon its formation in 1940, Secretary of War Henry L. Stimson appointed George C. Marshall GHQ commander, a position that included the title Commanding General, Field Forces (although the president retained responsibility for selection of an expeditionary force commander, should the need arise). Recognizing the challenge of serving simultaneously as Army Chief of Staff and GHQ commander, Marshall selected McNair to serve as Chief of Staff of GHQ and initially gave GHQ responsibility for training the Field Forces – a role Pershing had performed when preparing the AEF for war twenty years earlier. McNair established GHQ headquarters at the Army War College, enjoying both geographic distance and relative autonomy from the War Department General Staff and Marshall, who, according to the Army's official history, "freely delegated authority over training to General McNair."[437]

The official history recorded the fact that Marshall did not visit GHQ headquarters (located at the former home of the Army War College) until early 1941, more than six months after its formation, but it also documented the frequent and detailed correspondence between Marshall and McNair. A review of this correspondence reveals McNair sought Marshall's approval before he made any significant decisions, and frequently received unsolicited guidance from Marshall regarding the conduct of his duties at GHQ, much of which dealt with relatively minor issues – ones Marshall would have left for McNair to handle had he intended to give him the full autonomy some historians suggest. [438]

[437] The Adjutant General, "Creation of General Headquarters," July 26, 1940, McNair Papers, National Archives at St. Louis, MO; Weigley, *History of the United States Army*, 429; Greenfield, Palmer, and Wiley, *The Organization of Ground Combat Troops*, 1-6.

[438] For example, Martin Blumenson wrote that when Marshall appointmented McNair GHQ Chief of Staff, he "gave him a free hand to fashion the combat units into a proficient fighting force." Martin Blumenson, "Kasserine Pass, 30 January - 22 February 1943," in *America's First Battles, 1776-1965*, ed.

For example, on August 16, 1939, Marshall wrote to McNair to express his concerns about McNair's recommended replacements for departing CGSS instructors:

> In looking over your recommendations for replacements of instructors I notice the names of former instructors included in the list. I have no intention of reneging on my assurance that you would be given a free hand in the solution of your problems, but I do want to call your attention to the fact that to recall an officer as an instructor, and not to a conspicuous key position, does serve to penalize the individual, and what seems to me of more importance, does further the continuation of old non-realistic methods to which there seems to be so much current objection. I suggest that it would be a good idea, and fairer to the officers, to ascertain informally whether they desire the re-detail.[439]

This letter demonstrates that despite his chaotic schedule and wide range of responsibilities, Marshall made time to review and comment on even minor administrative issues that fell under McNair's jurisdiction. Further, in 1939, just as is the case today, a wise officer understood one does not disregard lightly a suggestion from the Army Chief of Staff, and Marshall's correspondence with McNair included many more letters like the one above. This correspondence demonstrates that Marshall regularly intervened in matters within McNair's area of responsibility, and McNair, ever the loyal subordinate, followed Marshall's orders or advice, even regarding relatively insignificant matters.[440]

McNair's autonomy and influence also decreased as events unfolded over the coming years. Other organizations took on responsibility for various aspects of the mobilization process that directly affected McNair's training duties. For example, the War Department G-4 logistics section retained authority over corps area commanders with respect to logistical matters, limiting GHQ's control over the billeting, equipping, and supply of mobilizing units about to undergo

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Charles E. Heller and William A. Stofft, *Modern War Studies* (Lawrence, KS: University Press of Kansas, 1986), 236. Such assertions greatly overstate both the autonomy McNair enjoyed and the authority he possessed, given the many factors involved in fashioning a proficient fighting force that McNair did not control.

[439] Bland, ed. *Vol. 2, Marshall: "We Cannot Delay"*, 36-37.

[440] Ibid.; ———, ed. *"Aggressive and Determined Leadership": June 1, 1943-December 31, 1944, Vol. 4 of the Papers of George Catlett Marshall* (Baltimore, MD: Johns Hopkins University Press,1996).

induction training. Even after the formation of GHQ, the War Department continued to serve as Marshall's primary staff, and in this role Marshall's staff adjudicated differences of opinion between GHQ, military and civilian mobilization leaders, and later, deployed unit commanders.[441] Therefore, McNair represented only one voice, albeit a familiar and powerful one, in a cacophony of views espoused by individuals and organizations attempting to influence Marshall's decisions regarding the Army's mobilization process.[442]

Shortly after assuming his new role at GHQ, McNair made a proposal to streamline mobilization efforts by establishing unity of command over the four field armies and eight corps areas. McNair's proposal involved viewing the Zone of Interior as a theater of operations, with corps area headquarters taking over responsibility for all administrative functions, thereby freeing up armies, corps, and divisions to focus on organizing, training, and administering troop units. This would remove the field armies from the control of corps area commanders and place them under the direct command of GHQ, with the goal, in McNair's words, of developing "the field forces into a unified whole – GHQ troops and four armies – free to move strategically and capable of prompt and effective tactical action. Thus it would be possible to move an army when and where directed by a simple order." However, even though Marshall initially supported McNair's proposal, and it fit GHQ's role in existing war plans, members of the War Department General Staff resisted the proposal, and Marshall heeded their advice.[443]

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[441] War Department Operations Division (OPD), "Operations Division Files."

[442] Many examples of Marshall's continued involvement in minor details are recorded in his personal papers. See, for example, his correspondence with McNair and Hugh Drum regarding a soldier's complaint at being passed over for promotion. Bland, ed. *Vol. 2, Marshall: "We Cannot Delay"*, 501.

[443] Greenfield, Palmer, and Wiley, *The Organization of Ground Combat Troops*, 6-9. As Eli Kahn observed, McNair's role was a "purely domestic one of training troops for combat overseas, and thus he had no direct jurisdiction over any soldier outside the continental limits of the United States. Kahn, *McNair, Educator of an Army*, 2.

This left McNair subject to constraints imposed on him by Marshall's staff, who often favored the branch-specific views of various Army leaders and school commandants. McNair also frequently struggled with GHQ's subordinate commanders being distracted from their primary mission of unit training because they remained under corps area control. That forced them to deal with administrative matters senior corps area representatives would have handled if GHQ exercised unity of command. The War Department also ensured that unit commanders understood the limits placed on GHQ's authority once it abandoned the concept of GHQ as a theater command responsible for the Zone of the Interior. As described in the Army's official history,

> In December 1940 the War Department found it necessary to remind the commanders of units placed under GHQ for training that only those communications which dealt with training should pass through the Chief of Staff, GHQ. 'In the past,' the letter ran, 'the Chief of Staff has exercised his functions as commander of the Field Forces through the War Department. GHQ is the agency through which he would exercise command over such forces in an emergency. For the present, however, the recently formed GHQ will be concerned only with the direction and supervision of training of the Field Forces, exclusive of overseas garrisons. The War Department will continue to be the agency through which command, except for training, will be exercised.'[444]

Marshall gave due consideration to McNair's advice, which he clearly respected and valued, but he limited his authority significantly, weighed McNair's advice in contrast to often conflicting advice from his staff at the War Department, and always retained the final decision. While Marshall did delegate responsibility for mobilization training to McNair, realizing he could not alone effectively accomplish the responsibilities of both Army chief of staff and GHQ commander, accounts that state or imply McNair enjoyed complete freedom of action misrepresent the actual situation. McNair enjoyed only limited authority from the start, and watched it dwindle over time. Further, as Stephen Taaffe has pointed out, "once the army began

[444] Greenfield, Palmer, and Wiley, *The Organization of Ground Combat Troops*, 15.

deploying overseas . . . Marshall more and more relied upon the suggestions of various American theater commanders."[445]

U.S. Army personnel policy, equipment, and doctrine, the concepts of streamlining, pooling, and task organization that McNair championed throughout his career, and the central elements of his training philosophy generated fierce debate among senior Army leaders throughout the mobilization period.[446] The following analysis focuses on these primary issues, analyzing them first from the perspective of the challenges McNair faced at GHQ between 1940-42, and then evaluating how effectively McNair and his staff overcame these challenges during his tenure as Commander, Army Ground Forces from 1942-44. This analysis sheds new light on both McNair's achievements and missteps, all of which took place under the pressure of the many constraints that limited his ability to prepare the Army for war. It also offers a balanced assessment of his efforts and those of his peers by facilitating a reevaluation of the performance of American troops once they engaged in combat operations. This reevaluation supports the growing awareness that the Army did not enjoy success during WWII due solely to materiel superiority over its adversaries. Instead, the Army achieved remarkable combat effectiveness given the many challenges it faced in mobilizing for war. That achievement largely resulted from the effective training units underwent before deployment, and the resulting foundation in sound doctrine that served as the basis for their adaptation to the realities of combat.

McNair approached his new responsibilities at GHQ with the energy and determination Marshall had come to expect, setting high expectations for himself while working tirelessly to streamline mobilization procedures to support the exponential growth of the Army. McNair faced an enormous task upon his arrival at GHQ on August 3, 1940, beginning with his

[445] Taaffe, *Marshall and His Generals*, 6.

[446] For another description of McNair's steadily decreasing influence over time, see Forrest C. Pogue, *George C. Marshall, Organizer of Victory, 1943-1945* (New York, NY: Viking Press, 1973), 71.

observation over the next few months of the maneuvers conducted by the First Army and the newly formed Armored Force under Brigadier General Adna R. Chaffee. McNair noted numerous individual and unit-level training deficiencies during these maneuvers. This impressed upon him the difficulty he would face preparing the Regular Army for the stress of combat while inculcating in them the Army's latest doctrine and organization and preparing them to oversee the training of recently mobilized National Guard personnel and raw recruits. McNair's observations of these maneuvers served as the foundation for his plans for a series of large-scale maneuvers scheduled to take place in 1941.[447]

Upon the formation of GHQ, the Field Forces comprised fewer than 200,000 personnel, including eight infantry divisions, one division of armor, and slightly more than one division of cavalry, all understrength and each marginally trained and equipped. Just one year later, the Army had grown in size to 1,400,000 officers and soldiers. Despite the resulting magnitude of GHQ's responsibilities, McNair remained determined to keep his staff small. GHQ initially comprised only seven officers, augmented previous members of the War College faculty. His staff grew to only sixty-four officers in its first year of existence, even though the War Department authorized 156 and added in July 1941 responsibility for planning and command of military operations in the event of an attack against the United States.[448]

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[447] Gabel, *GHQ Maneuvers of 1941*, 22-30; Blumenson, "Kasserine Pass, 30 January - 22 February 1943," 237.

[448] Greenfield, Palmer, and Wiley, *The Organization of Ground Combat Troops*, 15-31. McNair showed greater interest in the GHQ training role than its operational responsibilities, but the headquarters excelled in both. The Deputy Chief of Staff, Brigadier General Harry J. Maloney, led the operational side of GHQ as it assumed planning responsibility for an ever-growing list of task forces and locations, including Iceland, Greenland, Alaska, and three of the four U.S. defense commands. By delegating the operational role to Maloney, McNair could concentrate on the training role – but he retained overall control of each. In time, GHQ proved a highly capable planning organization, and Maloney later argued overall War Department effectiveness would have benefited greatly had GHQ possessed the authority originally intended and retained these operational responsibilities. Instead, by early 1942 further reorganization returned planning responsibility to the War Department General Staff. See Kent Roberts

This partly reflected McNair's belief in keeping staffs small and efficient, rather than allowing bloat and bureaucracy to limit their effectiveness and keep talented officers on staffs when they could contribute far more in command positions. However, it also resulted from the clamor for commanders and staff officers for newly formed units, many of whom came from the War Department General Staff and other staffs and schools. This limited the pool of officers from which to draw on to increase the size of the GHQ staff, even had McNair desired such an increase. This also meant many of the officers who developed and understood existing war plans left their staff positions just as the time approached to put them in practice. Marshall's policy of placing youthful officers in important positions, which led him to assign only officers below fifty years of age to GHQ, did help McNair keep his staff small by ensuring its members possessed high energy and innovative minds.[449] Nevertheless, the GHQ staff found itself increasingly overstretched by its growing responsibilities.[450] In the midst of these transitions, Marshall recommended McNair's promotion to the temporary rank of major general, which occurred on December 1, 1940, commensurate with his increased level of responsibility.[451]

One of the first officers assigned to GHQ, Lieutenant Colonel Mark Clark, arrived in Washington shortly after the headquarters' formation, only to discover McNair had already departed Washington to observe units conducting field training. As Ely Kahn noted, although "sometimes called the most intellectual of generals, McNair preferred being in the field to sitting at a desk." Finding air transport of his own, Clark tracked McNair down at Pine Camp, New

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Greenfield, "Memorandum of Conversations with Maj. Gen. Harry J. Malony, Hq 94th Division," 10 January 1944, National Archives and Records Administration, College Park, MD, RG 319, Box 123.

[449] McNair disdained large staffs and the inertia their administrative requirements caused; see Greenfield, Palmer, and Wiley, *The Organization of Ground Combat Troops*, 12; Kahn, *McNair, Educator of an Army*, 21.

[450] Greenfield, Palmer, and Wiley, *The Organization of Ground Combat Troops*, 26-30.

[451] War Department Adjutant General, "Promotion Orders and Oath of Office for Promotion to Major General (Temporary)," December 1, 1940, McNair Papers, National Archives and Records Administration, St. Louis, MO.

York observing the First Army conducting maneuvers. As McNair's G-3 Operations Officer, and later his Executive Officer, Clark enjoyed a degree of access to McNair that far exceeded that of most GHQ staff officers. Therefore, he observed McNair's highly respected work ethic and dedication to duty first hand, flying over 80,000 miles with him in just one year to observe unit training and oversee GHQ maneuvers across the continental United States. This lengthy and near-continuous exposure to McNair led Clark to hold him in such high regard that he termed him in his autobiography published ten years later as "one of the most brilliant, selfless and devoted soldiers" he had ever encountered.[452]

Mark Clark also soon learned that McNair suffered significant hearing loss, probably resulting from his decades of service in the field artillery. While McNair made up for this disability in part by reading lips, it did create challenges for him. He generally disliked attending large conferences – a responsibility he increasingly delegated to his subordinates – and he preferred to do most of his work alone, interacting with only a few trusted agents on his staff to whom he delegated the responsibility of overseeing day-to-day operations. His hearing loss also appears to have been a factor in his being passed over for field command during the war.[453] Nevertheless, Marshall recognized the immensity of the tasks he had assigned to McNair, and praised the skill and determination with which McNair and his staff sought to accomplish them. Writing to Lieutenant General Charles D. Herron on October 29, 1940, Marshall admitted:

[452] Kahn, *McNair, Educator of an Army*, 41; Mark Clark, *Calculated Risk* (New York, NY: Harper and Brothers, 1950), 11-13. These various unit field maneuvers served as an important prelude to the large-scale GHQ maneuvers of 1941, and McNair's frequent presence enabled him to impart a common understanding of the latest doctrine to leaders of newly activated units.

[453] _____, *Calculated Risk*, 17; Bland, ed. *Vol. 4, Marshall: "Aggressive and Determined Leadership"*, 210.

“McNair has taken a considerable load off my shoulders, but is having a pretty hard time himself. He has a ten-passenger plane and he and his staff are on the go almost constantly.”[454]

John T. Whitaker wrote a series of articles profiling several of the Army’s most senior officers for the Saturday Evening Post, entitled “These are the Generals,” later compiled and published as a book. In his piece on McNair, Whitaker provided insight into McNair’s character and work ethic during these early days overseeing Army mobilization training at GHQ. While long, the following passage deserves repeating for the insight Whitaker provided regarding the personality and work habits of the rather enigmatic McNair:

> That is why the mild-mannered general with the blue eyes and sandy hair is hell on "metallic generals." A "metallic general" is described as a gentleman who has silver in his hair, gold in his teeth and lead in his pants. McNair is the man who turns them in for scrap. If you have a son or husband in uniform, you may owe his welfare or even his survival to "Whitey" McNair. "It's plain murder," says the general, "to send boys into battle under incompetent officers. You can't live with your conscience and you can't win that way." Nevertheless, McNair claims that he has never sacked an officer without giving him a chance to make good elsewhere. The general can be so ruthless in making and breaking careers only because the word "favoritism " is not in his vocabulary. He has scrapped personal friends and at least one West Point classmate. On his own staff there is only one officer whom he has known or leaned on before—Brig. Gen. John M. Lentz, from the artillery, which is McNair's own service. Unlike other ranking generals, McNair did not ask for individual officers he had known and liked. He asked the engineers, artillery. Signal Corps, and the like, to send him officers with certain qualifications. The qualifications are purely military. McNair doesn't care about an officer's bridge game or his wife's social connections. He has told his own wife that during this war they can accept exactly one dinner engagement a month. "And just think," she says with a rueful smile," of the wonderful invitations pouring in. I refuse them all. The general works every night. He is true to Elsie." "Elsie" is the name the McNairs have given the L. C. Smith typewriter which rests on a packing case beside the general's bed. He pecks away long after taps.[455]

Perhaps McNair’s consistently long workdays explain the lack of personal letters or diaries in the historical record. One must rely on accounts like Whitaker’s and Khan’s accounts, or interviews of officers who served with McNair, to gain an understanding of his personal views and the way he interacted with his staff. Fortunately, many archival records, some seemingly previously

[454] ———, ed. *Vol. 2, Marshall: "We Cannot Delay"*, 345.
[455] Whitaker, "These Are the Generals - McNair," 12.

neglected or unknown, reveal much about McNair that historians might otherwise never have had a chance to learn.[456]

One of McNair's most significant responsibilities upon his arrival at GHQ consisted of planning the army-level maneuvers scheduled to take place throughout 1941. Marshall and McNair intended these maneuvers to increase the proficiency of Regular Army personnel conducting large unit operations, to test the updated *FSR* and the experimental armored and mechanized cavalry divisions, and to prepare the Regular Army to train the many National Guard units and conscripts that would mobilize over the coming months. However, the Army lacked previous experience conducting such large-scale maneuvers and that caused, their planning to be particularly challenging.

As historian Christopher Gabel described in his preeminent work, *The U.S. Army GHQ Maneuvers of 1941*, most European armies possessed a long tradition of conducting large-scale maneuvers. Gabel cited Frederick the Great as a particularly relevant example, since he enjoyed a significant advantage at the Battle of Leuthen, although heavily outnumbered, because he had previously used the same ground for his annual maneuvers. By contrast, the U.S. Army had no such tradition, mostly because it rarely possessed an active duty force large enough to warrant

[456] See, for example, Kent Roberts Greenfield, "Notes of KRG on General McNair Correspondence," April 30, 1946, National Archives and Records Administration, College Park, MD, RG 319, Entry 488, CMH Manuscript File: AGF, Box 129; Maclyn P. Burg, "Interview with Leroy Lutes," http://www.eisenhower.archives.gov/research/oral_histories/oral_history_transcripts/Lutes_LeRoy_408.pdf (accessed February 14, 2012); Robert M. Ward, "Interview with Thomas T. Handy," http://www.eisenhower.archives.gov/research/oral_histories/oral_history_transcripts/Handy_Thomas_486.pdf (accessed February 14, 2012); Greenfield, "Memorandum of Conversations with Maj. Gen. Harry J. Malony, Hq 94th Division."; and the recently discovered War Department Operations Division (OPD), "Operations Division Files."

maneuvers, and those it had conducted in the past never reached the scale of those planned for 1941.[457]

Remembering the AEF's costly frontal attacks and difficulty conducting the open warfare Pershing envisioned, Marshall and McNair intended to prepare the Army in advance for the possibility of another war – one they expected to take place primarily under open warfare conditions due to the significant technological advances of the previous two decades. Congress authorized funds for the "Protective Mobilization Period" after Germany invaded Poland in the fall of 1939, and increased funding even more upon Germany's victories in France, Holland, Denmark, and Norway the following spring. This resulted in an eightfold increase in the size of the Army, which grew to a force of 1,200,000 by late 1941. This enabled the War Department to field thirty-three divisions, providing the units needed to conduct large-scale maneuvers. However, as Christopher Gabel pointed out, "The Army that had once had the time to modernize but not the money now had the money but not the time."[458] The 1941 maneuvers revealed the impact of these time constraints in areas including individual soldier skills, leader proficiency, weapons development and availability, and gaps between doctrine and practice resulting from various unresolved debates.[459]

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[457] Even after Elihu Root's military reforms, motivated by the weaknesses revealed in America's military by the Spanish-American War, the relatively small-scale annual maneuvers served more as scripted training events than true competitive simulated battles. This contributed to the "American amateurism" that remained evident in 1918, when after a year and a half of preparation the AEF still barely possessed the skill necessary to conduct effective offensive operations at the Meuse-Argonne. See Gabel, *GHQ Maneuvers of 1941*, 3-4; and Ferrell, *America's Deadliest Battle*; see also Mark Grotelueschen's account of the 1st Division's reduction of St. Mihiel in Grotelueschen, *The AEF Way of War*, 106-25. This account describes the AEF and 1st Division's ability to conduct set-piece attacks when supported by massed fires, and challenges transitioning to deep attacks and exploitation.

[458] Gabel, *GHQ Maneuvers of 1941*, 4-5, 12.

[459] Ibid.; Jean R. Moenk, *A History of Large-Scale Army Maneuvers in the United States, 1935-1964*, (Fort Monroe, VA: United States Continental Army Command, 1969), 38-70.

Between 1940 and mid-1941 key military and political leaders began to see flaws in the nation's primary strategy for a modern war that added to the complexity of the mobilization problem and drastically slowed down the process. This strategy, developed and refined over the previous two decades and encapsulated in War Plan Orange, envisioned a Japanese attack on U.S. territories in the Pacific or against the U.S. West Coast, requiring a response primarily by naval forces with the main effort in the Pacific. As Jim Lacey described in *Keep from all Thoughtful Men* – a book that seeks to overturn the accepted wisdom regarding military and industrial strategic planning prior to World War II – War Plan Orange did not fit the actual situation in which America found itself in 1940. After Germany defeated Poland in 1939 and France in 1940, American strategic planners anticipated Germany would next set its sights on Great Britain. This made Europe and the Atlantic a far more significant strategic concern than the Pacific. Both General Marshall and Chief of Naval Operations Admiral Harold R. Stark grasped the inapplicability of War Plan Orange to the current situation, and realized the defeat of Great Britain by Germany would leave the United States in an extremely vulnerable strategic situation.[460]

By June 1940, Marshall observed at a strategic planning conference, "Are we not forced into reframing our naval policy, into one that is purely defensive in the Pacific, with the main effort in the Atlantic?" This matched Stark's viewpoint, and by November he sent a plan to Marshall, who concurred and forwarded it to the president, recommending this adjustment in

[460] James G. Lacey, *Keep from All Thoughtful Men* (Annapolis, MD: Naval Institute Press, 2011), 19-22; much of the accepted wisdom on American strategic planning before and in the early stages of WWII stems from the official histories, for example, Richard M. Leighton and Robert W. Coakley, *The War Department: Global Logistics and Strategy: 1940-1943*, United States Army in World War II, ed. Kent Roberts Greenfield (Washington, D.C.: U.S. Army Center of Military History, 1955; reprint, 2006); in particular, Lacey convincingly dismantles the myth of General Albert C. Wedemeyer's supposed authorship of the WWII Victory Plan - a myth that remains central to modern understanding of WWII as seen in works like Charles Edward Kirkpatrick, *An Unknown Future and a Doubtful Present: Writing the Victory Plan of 1941* (Washington, DC: Center of Military History, United States Army, 1990).

national strategy, to which President Roosevelt gave his tacit approval. This new plan, known as Plan Dog and later integrated into the Navy and Joint Rainbow 5 Plan, included one particularly relevant insight – defeat of Germany would require, in Stark's words, "military success on shore." This led to the logical conclusion that, since Great Britain did not possess the strength to defeat Germany on land, ultimate victory would require the intervention of U.S. ground forces.[461]

This shift made decades of strategic war planning obsolete and also highlighted the fact that existing strategic plans lacked a realistic analysis of the demands the military would place on industry if called upon to mobilize and deploy forces to fight a war with the main effort in Europe. Therefore, America did not merely have to change its military strategy – a challenging task but one that at least had the rainbow plans to build upon. Instead, American strategists faced the far greater challenge of creating an integrated industrial mobilization plan based on an unanticipated strategic situation. Without such a plan, industrial leaders could not develop plans to equip and supply the Army, or even project how soon the Army could feasibly begin to undertake ground combat operations in Europe if necessary. Michael Matheny highlighted the increased emphasis on logistics considerations in the Army War College curriculum throughout the 1920s and 1930s, and made a strong case for the resulting improvement in senior military leaders' appreciation for the importance of logistics in the execution of campaigns – a key element of operational art. However, Lacey argued Army War College instruction of future

[461] Lacey, *Keep from All Thoughtful Men*, 20-22. Roosevelt had just won an election having promised to keep America out of the war, so he could not officially approve any military strategy for direct American participation in it – however, had he disapproved of the plan, the Secretaries knew he would not have been, in Lacey's words, "slow to demolish" it. The official history, however, implies Roosevelt officially endorsed this change in strategy, although "Plan Dog" only warrants a single mention, in a footnote in the official history volume covering this period. See Leighton and Coakley, *Global Logistics and Strategy: 1940-1943*, 43n61.

senior Army leaders did little to prepare civilian industrial leaders for the actual requirements the military would place on them in time of war.[462]

Even the Industrial Staff College, founded in 1924, failed to prepare the nation for the industrial mobilization required to support possible future offensive operations, despite graduating over 1,000 senior officers by 1941. James Lacey has argued both schools failed in this mission for a common reason: their instruction rested on the assumption the nation would implement the Industrial Mobilization Plan (IMP) developed after World War I (WWI) and updated periodically ever since. The IMP placed all responsibility for leading the nation's industrial mobilization effort in military officers' hands. When the time came to begin industrial mobilization, President Roosevelt scrapped the IMP, primarily because he refused to consider placing such responsibility in the hands of military officers, rather than the civilian leaders of U.S. industry and economic development. Therefore, when protective mobilization began in 1940, the Army struggled to create a proficient and well-equipped expeditionary military force in the absence of a feasible national strategy or industrial mobilization plan – a shortfall unrecognized for months, and one that delayed Army readiness significantly.

The Army's rapid expansion in the absence of a viable national strategy created innumerable difficulties for those military personnel tasked with the various requirements associated with military mobilization. As McNair's Army War College experience demonstrates, officers during the interwar period prepared, reviewed, and updated a wide range of war plans annually, and War College students reviewed these plans, identifying shortfalls and recommending remedies, such as implementing an organized reserve system to augment the Regular Army in a crisis. Nevertheless, in 1940 America still lacked a federal organized reserve (beyond a list of ROTC graduates who had received no mandatory training since graduation),

[462] Matheny, *Carrying the War to the Enemy*, 55-91.

relying instead on an inconsistently trained and organized National Guard – the same situation that existed when McNair graduated from the War College in 1929.

The first step the nation undertook to increase the size of the Army, the Selective Training and Service Act of 1940, proved a sub-optimal solution to these challenges. The act required counties and parishes to create local draft boards, where local leaders would decide where individuals could best serve the nation – whether in the Army, or through service in industry, agriculture, or other non-military activities. The act required all male citizens and aliens between the ages of 21 and 36 to register for the draft, but depending on their classification, determined by local boards to fill quotas set by the services, men received deferments from military service based on occupational status, dependents, legal restrictions, or any condition that made them unfit for service. Since no opportunity for service in an organized reserve existed, many men who might have possessed excellent potential for military service had instead worked to develop a civilian skill now considered indispensable to the mobilization effort. With no guidance from the federal government for prioritizing these skills, local draft boards could only subjectively weigh potential for military service against the criticality of any particular civilian skill. This severely limited the Army's ability to influence the quality of men inducted into military service. The act also allowed individuals to bypass selective service by volunteering for a military enlistment, but again set no clear standards for implementing the policy, forcing some local draft boards to meet their selective service quotas by enlisting men from deferred classes.[463]

[463] The nation had initially allowed volunteering during the mobilization for WWI, but experienced similar problems and soon suspended the practice. Nevertheless, during the mobilization for WWII volunteering remained an option through December 1942. George Stephen Lauer, "Perspectives on Infantry: Quality and Cohesion - Comparison of American, British, and German Army Manpower Policies and Effects on the Infantry Small Unit During the Second World War, 1939-1945" (PhD Diss, Florida State University, 2010), 140-42.

In addition to causing local variances in the classification levels of men selected for the draft, selective service policy also empowered local draft boards, not military leaders, to decide whether each potential inductee could best serve the nation by remaining in his civilian job or serving in the military. Given the lack of a viable national strategy or industrial mobilization plan, the local boards lacked any coherent national guidance for making these decisions. Making matters worse, individuals could bypass the normal inductee placement process by volunteering for service in a specific arm or specialty, and few volunteered for service in the combat arms – particularly the infantry. This made the pool of selectees from which to choose ground combat troops much smaller than it might have been, resulting in the combat arms receiving significantly lower-quality recruits than the service forces and the Army Air Corps.[464]

The small pool of Regular Army officers who had studied and prepared for modern war recognized that the increasingly complex, mobile form of combat they were likely to experience in a future war required not only physical strength and endurance, but also high mental capacity. As Army historian Robert Palmer noted in one post-war report,

> The wits, skill, and stamina of semi-isolated riflemen and small-unit commanders determined not only individual survival on the battlefield but also the outcome of the battle itself. These facts were increasingly appreciated as the war proceeded. They were realized, however, from the beginning. . . . It was therefore desirable to select a high grade of manpower for combat units.

The Selective Service and Training Act of 1940 did not include provisions that resulted in the placement of the highest quality men in ground combat units. Instead,

> The net result was that men having established trades or businesses in civilian life tended to be assigned to the noncombat elements of the Army. The problem of technical training in the Army was thereby simplified. The problem of tactical and combat training was rendered more difficult.

Ironically, even relatively simple trades that the Army could have taught new recruits quickly qualified for the purposes of exclusion from the draft, while the skills required of an infantryman

[464] Robert R. Palmer, "Study No. 5: Procurement of Enlisted Personnel for the AGF: The Problem of Quality," (Washington, D.C.: Historical Section, Army Ground Forces, 1946), 1-2.

required far more training, in addition to advanced physical and mental abilities, that the typical low-quality infantry recruit rarely possessed. Therefore, the implementation of the Selective Training and Service Act significantly added to the challenges McNair already faced in planning and conducting mobilization training of new recruits and units in a rapidly expanding Army.[465]

As the GHQ Chief of Staff, McNair observed the performance of officers aspiring to division and corps command at the 1940 and 1941 maneuvers. This enabled him to serve as the principal advisor to General Marshall on the selection of combat commanders. Both McNair and Marshall possessed strong opinions, very similar to General Pershing's when he commanded the AEF, regarding the qualities necessary to make an officer suitable for division command. They usually only saw these qualities in Regular Army officers, and they agreed the officer corps as a whole consisted of many officers too old to command troops in combat.[466]

The shortage of trained and capable officers represented one of the Army's most significant mobilization challenges. By late 1941, McNair had only observed two National Guard colonels he recommended for promotion, and recommended these officers only reluctantly, writing to Marshall on 24 October 1941, "I fail to see the wisdom of promotions such as these when one ponders the welfare of the Country and of the troops commanded. I believe that a citizen officer in general should be content to reach the highly respected grade of colonel, and that the high command should be by selected professional soldiers."[467]

Accompanying General Marshall to a meeting with Secretary of War Henry L. Stimson on October 27, 1941 McNair described to Secretary Stimson the stark contrast between the capabilities of Regular Army officers and National Guard officers – a situation nearly identical to

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[465] Ibid., 9.

[466] Taaffe, *Marshall and His Generals*, 6. While Marshall saw the promotion and assignment of general officers as one of his primary duties, he admitted his work pace forced him to rely on key subordinates for recommendations, "especially General Lesley McNair."

[467] Bland, ed. *Vol. 2, Marshall: "We Cannot Delay"*, 657.

the one Pershing faced when mobilizing the AEF. Partly due to their education during the interwar period at Fort Leavenworth and, for some, at the Army War College, Regular Army officers proved far more capable than those in the National Guard did, leading McNair to recommend in 1940 a wholesale demobilization of the National Guard. Marshall and Stimson knew such a decision would lead to disastrous political backlash, but Marshall had also witnessed the excessive time and effort GHQ expended attempting to bring National Guard commanders up to Regular Army standards, detracting from the overall training of their divisions. Marshall therefore sought a compromise solution that prioritized collective training over the careers of individual officers but minimized political repercussions. He advised Stimson to retain the National Guard as an organization, while supporting McNair's recommendations to relieve all but two of the senior National Guard commanders after their initial unit mobilization training, replacing them with younger and more capable Regular Army officers.[468]

This effort to ensure officers with the appropriate youthful vigor led combat formations applied not only to the National Guard, but also to the Regular Army. As Stephen R. Taaffe pointed out,

> Marshall looked at an officer's age when making promotions and assignments, especially for combat commands. Marshall's World War One experiences convinced him [like McNair] that leading soldiers in combat was a job for younger men because they had the necessary energy, stamina, and vigor. When he became chief of staff, Marshall was dismayed that elderly officers past their prime led so many field armies, corps, and divisions. To rectify this, in 1940 a new War Department policy limited the maximum age of officers serving with troops to sixty-two for major generals and sixty for brigadier generals. Marshall applied this new rule in a tenacious and cold-blooded campaign to supplant overage officers with younger men in their fifties and even forties.

Marshall did attempt to consider officers' feelings when making these decisions, many of whom felt slighted because they missed an opportunity to lead soldiers in combat after a long period of often-tedious peacetime service. Nevertheless, age remained one of Marshall's top

[468] Coffman, *The Regulars*, 397.

considerations in selecting officers for troop command, and McNair recommended only officers who met Marshall's age limits and possessed youthful vigor for combat command, despite resistance from both the War Department and senior commanders who petitioned to retain subordinates who exceeded age limits. When necessary, Marshall bluntly and definitively asserted his authority to include age as a criterion for selecting generals for troop command. As Taaffe pointed out, "on one occasion he bluntly told a group of officers, 'All four of you are too old to command divisions in combat.'"[469]

The relief of elderly officers in favor of their more energetic subordinates, and the mobilization training these officers received improved the overall quality of the officer corps. However, the rapid expansion of the Army made it impossible to place a well-trained and experienced officer in every key leadership position; rather, inexperienced officers consistently outnumbered experienced officers, and many of these young officers shared little more enthusiasm for combat than the soldiers they would lead.

In addition to the Selective Training and Service Act, other factors led to problems acquiring high-quality enlisted personnel for service in the ground forces. Soon after the end of the World War, as rapid demobilization gutted the Regular Army, the War Department found itself forced to relax physical and mental recruitment standards to attract enough new soldiers to maintain the Regular Army's personnel strength, even at its severely reduced interwar low. Few men wanted to experience another war like the one that had just ended, leading to widespread reluctance to serve in either the Regular Army or the National Guard. Combined with America's tradition of maintaining a large Army only in time of war, and generally low regard for military service as a career, this led the Army to reduce quality standards significantly after the war.[470]

[469] Taaffe, *Marshall and His Generals*, 7-8.
[470] Lauer, "Perspectives on Infantry", 128-38.

From 1919 to 1926, volunteer recruits did not have to pass any form of intelligence testing, and by 1927, a man only had to achieve a ten-year-old intelligence level on entrance tests to pass (and the recruiter could even waive this requirement). The onset of the Great Depression increased the number of volunteers, allowing for greater selectivity, but by 1932 a man still only had to demonstrate an eighth grade intelligence, and due to widespread food shortages recruits could weigh several pounds less in each height range than those volunteering in the 1920s. Perhaps most troubling, President Roosevelt's Depression-era proposal to cut 2,000 officers from the Regular Army prompted Chief of Staff Douglas MacArthur to opine of all the personnel authorized in the 1920 NDA, the government should cut officers last, since each "would be worth a thousand men at the beginning of a war. They are the only ones who can take this heterogeneous mass and make of it a homogeneous fighting group." This comment reflected the generally lower concern in the Army over enlisted quality than that of officers during the interwar years.[471]

The Army also considered non-commissioned officer quality relatively unimportant, since new recruits would overwhelm their numbers in the event of a rapid Army expansion in time of war. Therefore, after twenty years of relaxed or no physical and intelligence standards for new recruits, when the government finally began a peacetime draft in September 1940 it actually reduced standards for new recruits. Induction policy lowered the existing height restriction from sixty-four to sixty inches, while implementing a new mental test, the Army General Classification Test (AGCT) that tested general mental powers or ability to learn – intended to provide a good indication whether a recruit would succeed in Army training. As historian Steve Lauer argued, "acceptance of low quality standards in the enlisted ranks, including the infantry, was the key condition of the period . . . . As long [as] their officers were well trained and highly

[471] Ibid.

motivated to lead them, the American fighting man possessed an almost mystical quality of endurance and fortitude in battle."[472] Ultimately, the relaxation of physical standards necessary to enable rapid Army expansion, mental aptitude tests that classified men according to their potential as learners, and the decision to exempt from the draft men deemed to possess skills essential to industry resulted in intense competition for mentally and physically high-rated recruits – a competition that had the greatest impact on the infantry.

The Army also still relied on equipment deficient in both quality and quantity. As described above, Army Chief of Staff Craig realized in 1936 that it would take at least two years to develop, test, and field a new weapons system. His decision to freeze development programs in 1936 enabled him to use the limited funds Congress allocated to the Army primarily to reequip the small Regular Army – in which many units still relied on World War vintage weapons (or, if those on hand were no longer serviceable, none at all). Had the Army found itself at war in 1937 or 1938 Craig might have appeared prescient. Instead, his decision meant the Army in 1940 still employed the same weapons systems it purchased in 1937 – most simply remanufactured versions of even older weapons. Even given the time afforded by the Protective Mobilization Period, soldiers had to rely on outdated or even simulated weapons for mobilization training, particularly since industrial leaders had to develop a comprehensive mobilization plan before they could begin new weapon development programs. Therefore, fielding of new weapons took well over two years to complete.

Several issues added to the basic problem of limited time the Army faced in its effort to replace obsolescent weapons now that Congress finally started to appropriate additional funds. Throughout 1940 and most of 1941 those funds remained limited because, as mentioned above, the president still maintained the position that he intended to keep America out of the war.

[472] Ibid., 138-39.

Therefore, Congress appropriated only enough funds to create a defense force, and those funds had to pay not only for new recruits and weapons, but also for infrastructure upgrades such as barracks, dining halls, parade grounds, and training facilities. Therefore, weapons still received funding on priority basis, and none made it through the complex development and fielding process as quickly as desired.

As Jim Lacey argued, "although by early 1941 the United States had cast a new strategic conception of how it would fight a future global war, the planners had yet to match that strategy against national resources and capabilities."[473] When President Roosevelt finally requested information regarding the industrial requirements necessary to support offensive operations in July 1941, the Army could still only provide industrial planners extremely vague information – rough numbers of military personnel, with no numbers of specific types of equipment the U.S. Army would employ and no details regarding the enemy it would face. This made detailed production planning for munitions and equipment impossible. As late as early 1942, production experts still only expected initially to support an army of two million personnel, which would increase in size according to a rough estimate of annual growth.[474]

This forced the economists and leaders of industry who actually facilitated the nation's industrial mobilization to project the amount of munitions and equipment necessary to field new units and replace combat losses based purely on their own best guess. Army officers proved unable or reluctant, after decades of operating in a climate of extremely limited funds, to provide accurate projections of equipment requirements. For example, in 1940 a leader of civilian production sought projections of textile requirements from the military. One of his

[473] Lacey, *Keep from All Thoughtful Men*, 22. President Roosevelt did not request munitions and equipment production estimates to support offensive operations until 9 July 1941, and did not receive a response until 11 September.

[474] Ibid., 25-27.

manufacturers, Robert Stevens, asked a military procurement officer how many parachutes he thought the Army would require during the war. The officer told him 9,000 would suffice – an estimate Stevens increased to 200,000. When the procurement officer asked him to defend this seemingly excessive number, Stevens replied, "The President wants to build 50,000 planes and they will have an average crew size of four. I simply multiplied."[475]

Therefore, McNair not only faced the challenge of training ground forces made up of the lowest-quality subset of the Army's pool of new recruits, he also was forced to rely on outdated equipment as he attempted to train them to fight in accordance with the latest doctrine. After a long interwar period in which limited funds and interbranch rivalries hamstrung Army modernization efforts, the Army began to prepare for war with mostly obsolete or overmatched equipment, and no hope of receiving updated models any time soon. Further, the lack of a strategy appropriate to the situation or an industrial mobilization plan to support it served to exacerbate the interwar haggling so often identified as the cause of most of the WWII Army's challenges, and proved during the mobilization period the most significant impediment to preparing for war.

Doctrine also matured slowly as the Army began to mobilize. Debate over the update of the 1939 *FSR* meant its replacement did not gain War Department approval until May 1941. Therefore, the 1939 doctrine guided mobilization training during most of the Protective Mobilization Period.[476] Perhaps this explains why Odom devoted only two pages in *After the Trenches* to the 1941 *FSR*. However, while the units participating in maneuvers in 1940 and 1941 either had not yet seen the final approved 1941 *FSR* or lacked adequate time to study it before the maneuvers, the manual's publication in May, 1941 preceded the mobilization of most

[475] Ibid., 17. The United States produced and used almost ten million parachutes during the war.
[476] Kretchik, *U.S. Army Doctrine*, 148.

of the Army's divisions. In addition, the manual's longevity (it remained in effect until publication of the next *FSR* on June 14, 1944) provided doctrinal stability for most of the war. Even of those units that conducted maneuvers before its publication, most had several months to study the new doctrine before they had to apply it in combat. Further, as Odom described,

> German victories in 1939 and 1940 ended much of the debate over methods of war. With the blueprint of modern war provided by German operations, the army raced to revise its doctrine. . . . The army published *FSR 1941* based on information received from the world's battlefields and its own growing experience with large-scale exercises. The new manual was a vast improvement over its predecessor if only because it more accurately reflected current technological capabilities and represented a truly revised doctrine. The new, battle-tested prescriptions for successful combat erased doubts about trends in modern warfare and swelled the new manual to twice the size of its predecessor. The biggest difference between the 1939 and 1941 editions was in emphasis on armored and air operations. Use of air and tanks, as well as means for antitank and antiaircraft defense, dominated the work. Fire superiority, previously a function of infantry-artillery cooperation alone, now hinged on integration of combat aviation and tanks into the partnership.

Nevertheless, after describing the manual's qualities, Odom made clear why he devoted such a small section of his conclusion to it.[477]

In *After the Trenches*, Odom focused on the doctrinal development challenges the Army faced during the interwar period, and, as he pointed out, "ultimately, the North African battlefield exposed the shortcomings of the army's crash course in modern warfare." While he admitted, "the army would learn from its defeats, and eventually emerge from World War II as the most skilled and powerful fighting force of the war," he emphasized "the price exacted in soldiers' blood for neglect of peacetime training, equipment modernization, and doctrine development." This led to a somewhat unbalanced emphasis on the longevity of the 1923 doctrine and the ill effects Odom attributed to it and its marginally updated 1939 successor, while relegating the 1941 doctrine, which guided the Army's efforts through most of the war, to a mere afterthought in his analysis.[478]

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[477] Odom, *After the Trenches*, 242.
[478] Ibid., 242-43.

Walter Kretchik described the 1941 manual as "the combined product of the 1939 version, service criticism, German *Blitzkrieg*, and lessons taken from the Louisiana Maneuvers." He identified significant changes from the 1939 to the 1941 versions of the manual, although both emphasized offensive, combined arms warfare. For example, the 1941 manual described two forms of the attack: envelopments and penetrations, breaking envelopments down into three types – single and double envelopments, and turning movements. Both envelopments and penetrations sought the ultimate goal of striking enemy rear areas, creating disruption, and exploiting the breakdown in enemy cohesion through pursuit operations. The new doctrine also continued to describe a close air support role for Army Air Forces (AAF), a separate and complementary mission to interdiction of enemy air power. The doctrine acknowledged airpower by itself would not prove decisive, but did describe air support of ground forces as an important source of firepower in mobile warfare.[479]

By contrast, Peter Schifferle argued the 1941 manual did not reflect a significant degree of change, but instead "maintained the basic conceptualization of war found in the 1923 and 1939 *FSR*s." Schifferle did describe the numerous additions to the manual that incorporated the various aspects of branch doctrine previously at odds with or ignored by the *FSR*. For example, Schifferle pointed out the new manual covered the different types of divisions (infantry, cavalry, motorized, and armored), and various types of operations not previously described in the *FSR*, such as combat in woods or towns, operations in harsh terrain like jungles and deserts, static and mobile (retrograde) defensive operations, and many others.[480] Thus, both Schifferle and Kretchik recognized the additional detail contained in the *1941 FSR (FM 100-5, Operations)* and the manual's attempt to resolve branch and service discrepancies with overarching Army operational

[479] Kretchik, *U.S. Army Doctrine*, 148-51.
[480] Schifferle, *America's School for War*, 53-55.

doctrine, even if they did not agree regarding the degree of change from one manual to the next.[481]

While Kretchik's and Schifferle's assessments of the 1941 doctrine stand out as exceptions in a large body of overwhelmingly negative analyses, most accounts of the Army's mobilization efforts and combat effectiveness have shared an overemphasis on the failings of the Army's modernization efforts during the interwar period. This stems from the work of a generation of historians who developed a narrative that credited American success to materiel superiority rather than fighting prowess. This remarkably resilient narrative implies that the relatively inept Americans simply adapted upon encountering the tactical expertise of the German Army, learning to fight just well enough to achieve success by relying on the nation's overwhelming materiel superiority. The preceding analysis seeks to demonstrate the flaws in this narrative by demonstrating the nation was no better prepared in terms of strategy or industry than in its fighting prowess as it faced the prospect of war in 1940-41. In fact, in many ways the Army proved more ready than the nation for war, due to its effective interwar officer education system and the vibrant discourse that took place in military schools and journals. By contrast, industry leaders, handed responsibility for the IMP without warning, confronted Protective Mobilization flat-footed, and lagged behind the Army's tactical and operational training for several years, struggling to create merely adequate weapon systems in time to meet the Army's needs. The demands caused by the breakneck pace of industrial effort upon the nation's awakening in 1940 also highlight limitations that make the materiel superiority narrative difficult to defend. America hardly possessed a limitless pool of personnel, shipping, or production capacity – factors that all had a far greater effect on America's attempt to mobilize for war than Army doctrine and

[481] Kretchik describes the manual as "both a guide and a reference work, an operational and tactical education stuffed between two covers." Kretchik, *U.S. Army Doctrine*, 150.

training. As the industrial base struggled, the U.S. Army learned to fight effectively by building on a solid foundation of individual and unit mobilization training and sound doctrine that accounted for lessons learned from German success in Europe and American large-unit maneuvers at home.[482]

Throughout McNair's two years as Chief of Staff of GHQ, he worked to train a rapidly expanding Army in the midst of these industrial mobilization challenges. Adding to these difficulties, Army equipment, doctrine, and training remained matters of heated debate throughout the mobilization period and beyond. McNair's efforts to lead the Army's development of a concept for antitank defense provides a particularly relevant example of the difficulties he faced attempting to prepare the Army to deal with the realities of modern warfare, since many historians now view McNair as the main proponent of antitank guns and tank destroyers. This had led many to single him out for criticism on this issue – some warranted, some not.[483]

McNair believed that guns, not tanks, should serve as the primary means of defense against enemy tanks. He supported this conviction on several grounds, generalizable as efficiency and effectiveness. However, most histories that describe McNair's support of the antitank gun as the best defense against the tank distill a long and complex debate into a greatly oversimplified anecdote. A few examples of the details of this debate rarely described in modern accounts should suffice to demonstrate this point.

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[482] For just a few examples of the works that created and maintain this interpretation, see Weigley, *Eisenhower's Lieutenants*; Martin van Creveld, *Fighting Power: German and U.S. Army Peformance, 1939-1945* (Westport, CT: Greenwood Press, 1982); Max Hastings, *Overlord: D-Day, June 6, 1944* (New York: Simon and Schuster, 1984); and John Keegan, *The Second World War* (New York: Penguin Books, 1990).

[483] The antitank defense issue provides a particularly useful example of the misrepresentation of McNair's views and actions in many historical accounts, and shares much in common with other matters of controversy that have made him the target of criticism. Therefore, the following provides a detailed analysis of the issue of antitank defense, while more briefly covering other issues due to space limitations.

One commonly encounters assertions that McNair based his concept of antitank defense on a flawed view of modern mechanized warfare. For example, Chris Gabel identified McNair in *The U.S. Army GHQ Maneuvers of 1941* as one of the few Army officers who worked on the question of antitank defense throughout the 1930s, receiving "little encouragement from his superiors." Research confirms few Army officers devoted significant intellectual effort to the question of antitank defense before 1940. However, McNair wrote a letter to a Field Artillery officer in the Missouri Reserves in June 1940, responding to that officer's own detailed study of existing antitank gun capabilities and limitations. McNair noted his superiors in the Office of the Chief of Field Artillery tasked him in 1936 to "draw up the initial study which has resulted in the present 37-mm antitank gun." Therefore, McNair may have initially studied antitank defense purely out of professional curiosity, but his superiors formalized his role upon Malin Craig's cancellation of the antitank gun development program in 1936. McNair also pointed out in this memo, "this gun [the 37-mm eventually adopted and still in use in 1940, merely a copy of a German model] is not what I proposed, in that it has insufficient muzzle velocity and its sighting apparatus is too crude for effective firing."[484]

This illustrates, as some historians including Chris Gabel have pointed out, that in 1940 McNair supported an antitank concept, while recognizing the deficiencies in existing antitank weapons. It also shows that McNair's work on an antitank gun serves as another example of a test or experiment senior Army leaders assigned to McNair due to his record of diligence and merit in such work. It also highlights the significance of the delayed development of a realistic strategy and industrial mobilization plan – factors that drastically slowed down production of many new weapons or forced the Army to rely on a single, "good enough" model where faster

[484] Lesley J. McNair, "Lesley J. McNair to Earl W. Bacon," June 20, 1940, National Archives and Records Administration, College Park, MD, RG 337, Entry 58, Box 8.

production and shipping capability might have allowed for fielding of progressively better weapons. Therefore, contrary to the many histories that imply McNair failed to recognize the flaws of the 37-mm gun, research shows McNair provided specific criticisms in this memo and many others of not only the 37-mm gun, but also the other guns available in 1940 to both the U.S. and the British Army for potential employment as antitank weapons. Therefore, he focused on organizing and training the Army to employ a viable antitank *concept,* understanding the limitations of the weapons currently available and seeking to minimize them, while counting on industry and Army Ordnance to provide improved models in time to equip Army divisions before they engaged in combat.

McNair emphasized that an effective antitank gun must possess a flat trajectory to improve its odds of scoring a hit (since a flat trajectory allows for error in range as long as firing azimuth is accurate), and high muzzle velocity combined with the proper ammunition to ensure it penetrated the armor it hit. No existing American or British antitank gun could hit and penetrate modern German armor reliably and at an acceptable range in 1940. McNair specifically cited the inadequacy of European antitank guns during the 1939 and 1940 offensives to demonstrate the need for a more powerful gun to defeat German tanks. However, McNair emphasized antitank guns possessed many advantages in principle, beyond simply their low cost relative to tanks. He pointed out the ease with which crews could conceal and cover their guns, giving them a significant defensive advantage over exposed tanks. He emphasized their ease of mobility, demonstrated in tests that showed a trained crew could unhook a gun and fire an initial aimed round within 10-20 seconds, depending on the type of vehicle towing the gun. He also

highlighted their ability to create layered, combined arms belts to defend a position against tanks from all sides, and to operate effectively on the offense as well, or act as mobile reserves.[485]

McNair's work on antitank defense in the 1930s culminated in the study he authored while serving as Commandant at Fort Leavenworth entitled *Antimechanized Defense (Tentative), May 22, 1939* – a manual that reflected McNair's views on modern mechanized warfare and antitank defense in 1939, which remained consistent from then on. Gabel argued that the most fundamental concept in this study "was the inaccurate notion that armored forces equated to massed tanks (as opposed to combined arms task forces) and that antitank guns should likewise be pooled in order to defeat them." This interpretation has appeared so frequently in the subsequent secondary literature that it equates to accepted wisdom regarding McNair's vision of modern mechanized warfare. For example, Harold R. Winton, writing fifteen years later in *Corps Commanders of the Bulge,* argued, "McNair proved to be incorrect: combined arms of infantry, artillery, *and* tanks were the norm, not the exception."[486]

It seems unlikely that a man known for his long record of championing the importance of combined arms warfare would assume the enemy would not also employ combined arms in a future war. His views on combined arms remained consistent from his post-WWI views on improving artillery support to the infantry by task organizing mobile artillery and spotters with front line infantry units. In fact, a close read of *Antimechanized Defense* does not reveal a view of modern warfare dominated by massed, independent formations of tanks conducting individual missions. Rather, the manual describes employment of tanks much like that actually observed in the German campaigns against Poland and France, with tanks operating primarily as elements of

[485] _____, "Folder: Anti-Tank Doctrines and Development," 1940-41, National Archives and Records Administration, College Park, MD, RG 337, Entry 58, Box 8.

[486] Gabel, *GHQ Maneuvers of 1941,* 31-32; Harold R. Winton, *Corps Commanders of the Bulge: Six American Generals and Victory in the Ardennes*, Modern War Studies, ed. Theodore A. Wilson (Lawrence, KS: University of Kansas Press, 2007), 88.

combined arms teams, and occasionally as independent formations to exploit their speed and mobility. The manual consists of seven chapters – the first titled "General" followed by six describing employment of antitank units in various scenarios (during the advance, halts, the development, the defense, retrograde movements, and offensive operations). McNair described his concept of modern mechanized warfare, and his specific concept of tank employment, in the various sections of Chapter 1.[487]

In the section titled "Types of Interference to be Expected from Tanks," the manual lists: scout vehicles and armored cars "bent on reconnaissance" which might also harass or delay friendly elements upon contact; "the operations of well organized tank units" conducting delaying actions, independent attacks, or attacks "*in conjunction with organized attacks by elements of all arms*"; and tanks seeking surprise by launching attacks under cover of smoke or fog.[488] This does not seem to predict employment tanks only in massed, independent formations. Further, historians have emphasized McNair's arguments regarding the economic advantage provided by using guns to defeat tanks, but the manual listed the gun as only one of four different weapons available as "Positive Measures of Defense": antitank guns, tank mines, tanks, and aviation. The manual also identified the potential employment of artillery, antiaircraft weapons, small arms firing armor-piercing ammunition, and various weapons like hand grenade clusters and other "track-throwing devices" to serve a defensive role against tanks.[489] In short, *Antimechanized Defense* presents a reasonably accurate prediction of the future employment of tanks, and a logical summary of the various means of defense against them.[490]

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[487] The Command and General Staff School, *Antimechanized Defense (Tentative)*, (Fort Leavenworth, KS: Command and General Staff School Press, 1939), Table of Contents.

[488] Ibid., 8-9; emphasis added.

[489] Ibid., 10-11.

[490] Compared to the fantastical visions of future armored warfare propounded by theorists like J. F. C. Fuller and B. H. Liddell-Hart, who both foresaw modern mechanized warfare defined by masses of

The rest of *Antimechanized Defense* merely described various schemes for use of antitank defenses against the three forms of attack described in the first chapter. Nothing in these later chapters indicated a belief that tanks would only fight in independent masses, would never seek out combat against enemy tanks, or would not serve as effective weapon systems to defend against enemy tanks. The document did highlight the specific capabilities of tanks that made them a unique threat on a modern battlefield characterized by open warfare. For example, the document highlighted the tank's speed and mobility which, when combined with the lack of a stabilized front, increased the need to ensure protection of flanks and rear areas against armored attacks. However, nowhere did the document present this threat as the sole manner in which a future enemy would employ its tanks, or argue massed, independent antitank guns represented the best form of defense against them. Thus, at least in the case of *Antimechanized Defense*, it appears secondary sources have ascribed views to McNair that he did not necessarily hold, presenting them as mistaken predictions regarding the nature of modern warfare.

By comparison, anonymous faculty at the Leavenworth Schools published in 1936 a document entitled *Principles of Strategy for an Independent Corps or Army in a Theater of Operations.* Michael Matheny pointed out that this document emphasized the criticality of achieving overwhelming mass at the decisive point to achieve victory through annihilation, achieved in the age of mechanization, radios, and improved road networks by employing wide envelopments. While contemporary Soviet writings emphasized deep battle beginning with penetrations of the enemy's line, German and British theorists, like the authors of *Principles of Strategy*, emphasized the wide envelopment. This text demonstrates both a familiarity with European ideas of modern warfare, and an emphasis on the unique capabilities of the tank not

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tanks fighting independently and exploiting the "indirect approach," the concepts in *Antimechanized Defense* seem quite sensible. See Robert M. Citino, *Quest for Decisive Victory: From Stalemate to Blitzkrieg in Europe, 1899-1940* (Lawrence, KS: University Press of Kansas, 2002), 185-89.

only attributable to authors other than McNair (since it predates his arrival at Leavenworth by three years), but also more extreme than those he described in *Antimechanized Defense*.[491]

Interestingly, the self-propelled gun or tank destroyer has come to represent in historical memory McNair's flawed views of modern war and his irrational support of flawed concepts of antitank defense. However, as historian Harry Yeide pointed out in *The Tank Killers: A History of America's World War II Tank Destroyer Force*, McNair initially opposed the idea of self-propelled guns, believing towed guns would prove easier to conceal and less vulnerable to enemy fire. However, by May 1941 the Army had made no significant progress on the issue of antitank defense, largely because differing views between the branches led to inertia. Finally, the statement forced General Marshall to take matters into his own hands. This resulted in the Army's development of antitank weapons and doctrine based not only on McNair's ideas, but also on Marshall's preference for self-propelled guns, and organizational decisions Marshall made from necessity simply to break the deadlock.[492]

On May 14, Marshall ordered the War Department G-3 division to study the issue, writing, "one of our urgent needs is for the development, organization and immediate action on the subject of defense against armored forces, to include an *offensive weapon and organization* to combat these forces." Alluding to the inertia caused by the ongoing interbranch debate, Marshall wrote, "at the risk of placing G-3 in the operating field, I believe that for the solution of this problem you should take energetic and positive steps to push this matter as fast as humanly

[491] Matheny, *Carrying the War to the Enemy*, 70-74.

[492] Harry Yeide, *The Tank Killers: A History of America's World War II Tank Destroyer Force* (Havertown, PA: Casemate, 2004), 11. Yeide stated, "Interestingly, McNair objected to the choice of SP guns, arguing that they would be too difficult to conceal on the battlefield. He pushed the use of towed antitank guns. Mashall, however, favored pursuing the SP option."; Gabel, *Seek, Strike, and Destroy*, 12-13. Gabel pointed out Marshall "had reached the same impasse with regard to mechanized forces" causing him to "withdraw all tanks from the existing arms and place them under the authority of a new 'quasi-arm,' the Armored Force."

possible." He also emphasized that the matter must remain a War Department responsibility, writing, "I do not want the question of another branch or arm brought up at this time." Instead, Marshall wanted his G-3 to organize a section within his division focused on

> thinking and planning on improved methods of warfare. Our organization and methods should not lag behind developments abroad. You should organize in your division a small planning and exploring branch, composed of visionary officers, with nothing else to do but think out improvements in methods of warfare, study developments abroad and tackle such unsolved problems as measures against armored force action, night bombardment, march protection and the like. Such a group should be divorced of all current matters and should work closely with the National Defense Research Committee, Inventor's Council, G-2 and the development people in G-4.

This memo serves as a vital document for understanding not only GHQ's role in relationship to that of the War Department, but also the fact that association of the Army's WWII antitank doctrine and weapon systems purely with McNair's name grossly oversimplifies the process and exaggerates McNair's control over it.[493] It demonstrates that McNair, although responsible for training the Army, did not make decisions; like any staff officer, he made recommendations. Marshall decided, based on the recommendations of McNair and many other officers, and on his own observations. Once Marshall made a decision, McNair did his utmost to carry it out, whether or not Marshall followed his recommendation.[494]

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[493] For a particularly egregious example, see Johnson, *Fast Tanks and Heavy Bombers*, 149-52. Johnson began his short discussion of antitank defense at the end of the 1941 maneuvers, naming McNair alone as the source of the Army's antitank defense concept. He mentioned Marshall only to describe his trust in McNair and the "authority" this supposedly gave McNair to do as he saw fit. He completely neglected the role of the War Department General Staff or General Marshall in the longstanding, Army-wide antitank debate, consistently referring to McNair's "decisions" regarding matters of antitank defense that he did not have authority to make or even agree with. Johnson even stated, "The tank destroyer was the artilleryman's solution to the problem posed by a mobile, armored target," ignoring the fact that none of the other key individuals involved in antitank defense development – Marshall (the decision maker), Bruce, or Wedemeyer – were field artillerymen. For a less critical description of McNair's role in WWII antitank defense, but one flawed nonetheless by oversimplification and an excessive emphasis on McNair's role, see Jonathan M. House, *Combined Arms Warfare in the Twentieth Century*, Modern War Studies, ed. Theodore A. Wilson (Lawrence, KS: University of Kansas Press, 2001), 144-45.

[494] Bland, ed. *Vol. 2, Marshall: "We Cannot Delay"*, 500-01; Robert S. Cameron, *Mobility, Shock, and Firepower: The Emergence of the U.S. Army's Armor Branch, 1917-1945* (Washington, DC: United States Army Center of Military History, 2008), 312-18.

During the same month that Marshall sent the above memo to the War Department G-3, an article appeared in the *Field Artillery Journal* (and the *Infantry Journal*) that added significantly to the discourse on German armor operations and highlighted the need to find a method to combat the threat posed by modern tanks. The article, simply titled "Antitank Defense," by Major Albert C. Wedemeyer, received a resounding endorsement from the editors of the *Field Artillery Journal*, due to Wedemeyer's two years as a student at the German *Kriegsakademie* followed by two years working as an instructor at the Infantry School, which they argued gave him "unusual opportunities for securing data on antitank employment." Wedemeyer provided a description of tank employment very similar to McNair's in *Antimechanized Defense*. In particular, he pointed out the employment of German tanks both as members of powerful combined arms teams and as a "tank mass" used to penetrate enemy defenses and exploit their mobility to continue the attack in depth against rear areas, supported by aerial bombardment once beyond the range of supporting field artillery. The Germans went to great lengths to achieve surprise by disguising the intended point of attack, and preceded the commitment of the tank mass with massive preparatory fires (high explosive and smoke) to neutralize static antitank defenses. Therefore, Wedemeyer argued an effective defensive scheme would require, in addition to towed antitank guns, mines, artillery, and medium tanks, a highly mobile "tank chaser," pooled at G.H.Q. to provide a flexible and mobile antitank reserve for use defeating enemy tank masses as needed.[495]

Wedemeyer's "Antitank Defense" included a photograph of an early German "tank chaser" that illustrated that American thinking regarding antitank defense differed from that of

[495] Wedemeyer recognized, like McNair, the 37-mm gun could only penetrate armor up to 2-1/2 inches thick, and therefore the Army would require a more powerful gun to defeat new tanks with thicker armor. A. C. Wedemeyer, "Antitank Defense," *The Field Artillery Journal* 31, no. 5 (May, 1941): 258-61; Gabel, *Seek, Strike, and Destroy*, 13.

Germany less than some suppose. This tracked vehicle, adapted from a captured British Bren machine gun carrier, had an open turret, thin armor, and an approximately 47-mm antitank gun. Taken together, Marshall's memo and Wedemeyer's article provide useful insight into the foundation on which the War Department built American antitank doctrine and equipment, a responsibility the G-3 assigned to Lieutenant Colonel Andrew D. Bruce, head of the new G-3 planning branch, formed the day after receipt of Marshall's memo. Bruce led a conference on antitank defense eleven days later, leading to a War Department order issued on June 24, 1941 directing activation of an antitank battalion in each division in time to participate in the upcoming GHQ maneuvers. This gave the triangular division both a divisional antitank battalion and antitank companies in each regiment, as McNair originally envisioned and described in *Antitank Defense*. However, not all mobilizing divisions could adopt this structure since the National Guard had not yet reorganized to the triangular structure. This resulted in a variety of antitank unit arrangements among divisions participating in the maneuvers later that year.[496]

Despite the lack of standardization among Regular Army and National Guard divisions in 1940-41, the overarching concepts of streamlining, pooling, and task organization guided their organization and employment. Another concept often attributed as a McNair preference forced upon the Army, these basic concepts had been in place for several years, and served as foundational concepts in the initial development and refinement of both the triangular infantry division and the armored division.

As described above, the ability to quickly and logically task organize infantry divisions into combined arms Regimental Combat Teams (RCTs), and armored divisions into combined arms Combat Commands (CCA, CCB, etc.), served as a fundamental organizing principle driving the structure of the new divisions. Additionally, keeping the division lean and

[496] ———, *Seek, Strike, and Destroy*, 12-13.

maneuverable by pooling larger specialized units (armor, antiaircraft, and antitank in particular) proved just as important as the number and type of organic units in enabling the triangular division to task organize quickly and effectively. The pooling of transportation assets (like the venerable 2-1/2 ton truck) provided non-mechanized elements of the Army motor transport when needed, while keeping their core organization light and freeing them of fueling and maintenance responsibilities. As Christopher Gabel argued, "the policy of 'streamlining and pooling' . . . underlay the U.S. Army's organization for World War II." Therefore, it seems only natural McNair supported these concepts, but works that imply McNair invented them or possessed the authority to dictate their implementation misrepresent the truth. Given his involvement in the provisional division tests and his desire, shared by Marshall, to optimize the Army for open warfare based on their World War I experience, it seems reasonable he would support these ideas. However, it remains important to keep McNair's true level of authority in mind when assessing his actions as GHQ Chief of Staff.[497]

McNair routinely emphasized the need for efficiency, and he did not support the creation of a "type" (uniquely organized) armored corps. He did support the pooling of large numbers of tanks in GHQ tank battalions, but this did not simply represent the outcome of interbranch debates between the cavalry and infantry, or a decision to relegate the GHQ tank battalions to a role involving only massed, independent attacks against enemy rear areas as historian David Johnson suggested.[498] Rather, McNair supported pooling key assets both to keep the division lean, mobile, and easy to task organize, and to maintain a large reserve of additional assets to reinforce divisions' combined arms teams at decisive points on the battlefield. Even Russell

[497] House, *Combined Arms Warfare*, 97; Weigley, *History of the United States Army*, 461-62; McKenney, *The Organizational History of Field Artillery*, 145-46; Gabel, *Seek, Strike, and Destroy*, 14.
[498] Johnson, *Fast Tanks and Heavy Bombers*, 145-47.

Weigley, one of the most critical analysts of the WWII Army and earliest standard-bearers of the "materiel superiority" narrative, admitted:

> Perhaps McNair pruned the standard division too much [note Weigley, too, implies McNair possessed the authority to make such decisions on his own], since tank and engineer and other supporting troops beyond those called for in the T/O&E's [Tables of Organization and Equipment] had to be attached more or less permanently. But McNair's pooling system made such attachments possible with a minimum of difficulty. The shaping of the standard infantry division, before there could be much American combat experience on which to draw, was a notable achievement of American military organization.[499]

One must also consider the fact that efficiency represented a real and constant priority that significantly influenced the Army's efforts to prepare for war. While many historians have concluded America's soldiers went to war with inadequate equipment and misguided training due to a flawed view of future war, making up for these deficiencies through improvisation and materiel superiority, this fails to recognize the necessity of McNair's emphasis on streamlining and pooling. Even in 1940-41 American planners realized if the president committed U.S. forces to combat overseas they would have to maintain lines of communication and logistics support over vast distances and across oceans, conduct numerous amphibious assaults to establish beachheads, and maintain a steady flow of equipment, repair parts, and personnel replacements or new divisions as combat losses mounted. As described above, as early as the implementation of the Protective Mobilization Plan and Selective Service, planners realized the nation must balance the demands of the military and industry – even America's personnel and industrial capacity had limits, which posed an even greater constraint once Lend/Lease took effect. In short, efficiency mattered, not as an abstract concept but a real constraint on America's mobilization for and sustainment of an overseas war effort.

Many topics of debate slowed the process of doctrinal development and limited cooperation between the Army's various arms and branches. Just as significantly, the nation's

[499] Weigley, *History of the United States Army*, 471.

failure to prepare for industrial mobilization meant the Army lacked equipment on par with many of the great powers well after the initiation of the Protective Mobilization Period. Nevertheless, McNair set out to train the rapidly expanding Army for war by developing an aggressive training plan intended to achieve large-unit collective proficiency in 1941. This plan reflected McNair's basic training philosophy that emphasized tough, realistic training. Peter R. Faber described McNair's training scheme in *American National Biography*:

> The standardized phases included fundamentals, small unit operations, combined arms, and lastly, corps and army maneuvers. By adopting this gradualist approach, McNair not only promoted efficiency, he also trained combatants to perform a variety of tasks and therefore protected the U.S. Army from overspecialization. Lastly and perhaps most importantly, McNair introduced realistic training into the American Military. He used live ammunition (more than 240,000 tons) in combat education; he turned mere obstacle courses into mock battlefields; he organized twenty-seven large-scale maneuvers in the United States, one of which involved 1.5 million people; he used the 180,000-square-mile Desert Training Center in California and Arizona to simulate theater-level warfare; and he demanded 'free' maneuvers, in which local commanders had to solve battlefield problems with little or no guidance from superiors.[500]

As Faber pointed out, the training reforms McNair instituted have remained core principles of the U.S. Army's combat training methodology to the present. It is remarkable that he managed to establish these enduring principles while shouldering the burden of transforming the small and unevenly trained Army of 1940 and the masses of National Guardsmen and conscripts that swelled its ranks into a combat ready force. Even as he managed these massive responsibilities, McNair remained committed to keeping his staff small, and never even employing the traditional services of an aide-de-camp.[501]

McNair and his seven-man GHQ staff began this process by assessing the state of Army training based on their observation of the August maneuvers of 1940. McNair delivered this assessment in the form of a draft letter to the army commanders to General Marshall on

[500] Peter R. Faber, "McNair, Lesley James," in *American National Biography*, ed. John A. Garraty and Mark C. Carnes, *American National Biography* (New York: Oxford University Press, 1999), 164-65.

[501] Greenfield, Palmer, and Wiley, *The Organization of Ground Combat Troops*, 156-57.

September 5, 1940. Marshall directed his staff to publish GHQ's findings on January 7, 1941, summarizing the observed training deficiencies in ten general points:

1. Obviously deficient training of small units and in minor tactics.
2. Faulty employment of the infantry division and of its combat teams.
3. Failure fully to appreciate the purpose of motor vehicles and exploit their capabilities.
4. Inadequate reconnaissance and lack of contact between adjacent units.
5. Inadequate support of infantry by division artillery.
6. Faulty signal communications.
7. Too passive employment of antitank guns.
8. Improper employment of horse cavalry.
9. Neglect of ammunition supply and evacuation of wounded.
10. Unreal situations due to faulty umpiring.

Official historians Greenfield and Palmer stated all but points eight and nine proved enduring challenges in the training of Army ground combat troops. National Guard observers at the 1940 maneuvers not only concurred with these deficiencies in their divisions' training readiness, but also noted other challenges, including shortages of qualified staff officers and commanders, and deficiencies in individual training that would delay the effectiveness of unit training.[502]

McNair and his staff developed a training plan for 1941 focused on correcting these deficiencies and distributed it to the four field army commanders on January 15, 1941. This schedule reflected McNair's training philosophy, allowing individual and small-unit training to take place in a distributed fashion, building up to corps maneuvers as the final phase of independent unit training before the armies and corps participated in one of several GHQ-level maneuvers (army vs. army or corps vs. corps/army). The initial target date of August 1941 for completion of the training plan and combat certification of the Protective Mobilization Army proved overly optimistic. This led GHQ to allocate more time for training at the individual and unit level, rescheduling the first GHQ maneuver to begin in September and the final maneuver to

[502] Ibid., 33-34.

end in November, ensuring all nine Army corps completed unit training and participated in GHQ maneuvers in 1941.[503]

Given the overall supervisory role McNair would fulfill at the maneuvers, Marshall recommended McNair for promotion to the temporary rank of lieutenant general on May 28, 1941 in a memorandum to Secretary of War Stimson. Marshall noted the scope and difficulty of McNair's role at GHQ, pointing out he had flown 43,000 miles in less than a year in the conduct of his duties, and regularly interacted with five lieutenant generals and thirty-five major generals. He also noted McNair's involvement with the "critical and delicate matter of relief or re-classification of high ranking officers, as a result of training inspections and of the coming maneuvers." Marshall closed the memorandum by observing,

> General McNair has one of the best minds in the Army. He is conspicuous for loyalty, modesty and soldierly qualities. He should have greater prestige for his arduous and highly responsible duties of the coming months, especially since I am being held rather closely to Washington. Therefore I urge his immediate advancement to the temporary grade of Lieutenant General.[504]

McNair received notification from the Adjutant General in a memorandum of June 21, 1941 that President Roosevelt approved his promotion, effective June 9, 1941. McNair took the oath of office one week later.[505]

While some historians have criticized McNair's hands-on role in the planning of the GHQ maneuvers, Christopher Gabel identified the most logical reason for his direct involvement: "given the smallness of the GHQ staff (only twenty-nine officers and sixty-four enlisted men as of June 1941), General McNair himself became closely involved with the myriad details of organizing the maneuvers."[506] However, this explains only part of the reason, and

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[503] Gabel, *GHQ Maneuvers of 1941*, 44-45.

[504] Bland, ed. *Vol. 2, Marshall: "We Cannot Delay"*, 519.

[505] War Department Adjutant General, "Promotion Orders and Oath of Office for Promotion to Lieutenant General (Temporary)," June 9, 1941, McNair Papers, National Archives and Records Administration, St. Louis, MO.

[506] Gabel, *GHQ Maneuvers of 1941*, 45.

many historians have questioned McNair's level of involvement. For example, Chris Prigge wrote in his recent dissertation on U.S. Armored Cavalry Regiments, "Lesley McNair directly supervised and participated in writing the *Umpire Manual*, and it reflected his interest in stopping tanks and faith in antitank guns." Prigge went on to repeat the frequent criticisms of the seemingly biased rules in the *Umpire Manual* that credited kills to existing antitank guns well beyond their effective ranges, while only allowing tanks to destroy antitank guns by overrunning them – something very difficult to accomplish given the gun's standoff advantage. However, Prigge failed to mention that by the time of the maneuvers, development of the Army's antitank weapons systems fell under the supervision of the War Department G-3, and reflected not only McNair's, but also Marshall's ideas on antitank defense, which did not match those of McNair.[507]

Neither did Prigge mention McNair's extensive experience with umpire procedures, dating back to his Army War College education, his experience as the senior umpire at the Third Army maneuvers in 1939, and his observation and critical analysis of the 1940 maneuvers. Finally, Prigge, like many of McNair's critics, implied McNair wrote the rules for tank versus antitank engagements based on either bias or an unfounded belief that existing antitank weapons possessed capabilities that Ordnance Branch tests proved they lacked. In fact, McNair acknowledged the limitations of the 37-mm antitank gun, pointing out it lacked essential features for effective aiming and firing, and could not penetrate modern armor at acceptable distances. The Ordnance Department fielded many pieces of equipment just prior to the 1941 maneuvers, but the next generation of antitank guns remained in development well after their conclusion. Therefore, McNair had to develop a set of rules that reflected the anticipated capabilities of the

[507] Prigge, "Tradition and Transformation: The Origins of the U.S. Armored Cavalry Regiments", 354. Manuscript of approved but unpublished draft dissertation provided to the author.

antitank weapons that the War Department expected Ordnance to develop; he never expected the Army to enter combat overseas relying on the 37-mm gun.[508]

No other Army officer possessed stronger qualifications than McNair to oversee the writing of the *Umpire Manual*. Neither did McNair intentionally favor antitank guns out of personal bias or ignorance of existing weapons' limitations. Instead, McNair simply encountered a difficult situation, and he did the best he could do deal with it. Preparation of the *Umpire Manual*, which GHQ distributed to the field armies in February 1941, required him to develop rules to adjudicate engagements between units using weapons systems that remained either in production or, in the case of new antitank guns and tank destroyers, in a preliminary design phase. This has proven a challenge for Army leaders throughout time who work to prepare the army of the present for the war of the future.

The 1941 GHQ maneuvers in Louisiana and the Carolinas served as an immensely valuable training event for the U.S. Army. McNair and his small staff planned and oversaw these epochal maneuvers, providing the Protective Mobilization Plan Army with invaluable experience in combined arms fighting, while enabling the War Department to test new doctrine and equipment, and identify issues the Army still needed to resolve. The above analysis focuses on two particular issues commonly identified with McNair, examining antitank defense and the maneuver *Umpire Manual*, largely to enable an in-depth analysis of McNair's actions lacking in many other histories of the period. However, much of the emphasis on antitank defense stems from the fact that the tank – antitank debate remained in 1941 perhaps the most hotly contested issue of Army doctrine and equipment. As Christopher Gabel pointed out, "McNair summarized

[508] Ibid. Manuscript of approved but unpublished draft dissertation provided to the author; Gabel points out McNair fought hard to acquire actual equipment before the maneuvers, wanting to avoid situations like those in which "one man with a flag is a tank." Gabel, *GHQ Maneuvers of 1941*, 49. New equipment received just before GHQ manuevers included "the first M3 medium tanks, 105-mm. howizters, halftracks, jeeps, and modern aircraft."

the upcoming Louisiana maneuver as being '. . . a test of tank warfare and antitank defense . . . we are definitely out to see . . . if and how we can crush a modern tank offensive.'" During the lull between the Louisiana maneuvers and the Carolina maneuvers that took place later that year, this question remained unanswered, but McNair's and Marshall's faith in the antitank gun and tank destroyer remained unshaken even though modernized weapon systems remained in development.[509]

However, commanders employed antitank weapons more aggressively in the Carolina maneuvers, leading to greater success against armored forces and seeming to Marshall, McNair, and members of the War Department G-3 to vindicate the weapons and justify their continued development. Despite the protests of Major General Jacob Devers, the new chief of the Armored Force who blamed armor's poor performance in the later maneuvers on biased umpire rules, antitank development accelerated after the maneuvers. Bruce's Special Planning Branch of the War Department G-3 recommended creation of a massive independent antitank arm of 220 battalions, but GHQ disagreed with various aspects of Bruce's proposal, prompting Marshall to hold an antitank conference on October 7, 1941 to resolve the remaining issues and set this aggressive plan in motion. The participants, including McNair and Clark, agreed the War Department should establish a separate force of GHQ antitank battalions.[510]

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[509] ———, *GHQ Maneuvers of 1941*, 54. Gabel argued "the Louisiana maneuvers revealed that virtually nobody but McNair believed in or practiced the aggressive antitank concept." Instead, most commanders, either unaware of or lacking faith in their intended method of employment, used their antitank units in a passive defensive mode. This led Marshall and McNair to see the key problem as one of doctrine and education, while staging demonstrations for dignitaries including the vice president and secretary of war to encourage continued support for rapid production of new weapons and fielding of units. See ibid., 123-24.

[510] Ibid., 175-76. Armor advocates also argued the poor performance of armor during the Carolina maneuvers had more to do with flawed employment than the effectiveness of antitank guns, referring primarily to rushed, independent attacks by massed tanks. While this did not halt the development of the antitank defense force, it did lead the Armored Force to recognize the vulnerability of independent tank formations and to work towards more effective combined arms operations and a division organization that improved the proportion of infantry to tanks. See ———, *Seek, Strike, and Destroy*, 17-18.

On November 27, 1941, the War Department issued an order activating the Tank Destroyer Tactical and Firing Center at Fort Meade, Maryland and a Tank Destroyer Board, placing both under the command of Colonel Bruce and giving him the initial task of activating fifty-three new GHQ antitank battalions. Another War Department order of December 3, 1941 more firmly established the independence of antitank units, redesignated "tank destroyer battalions," and ordering the inactivation of antitank units in cavalry divisions and field artillery battalions. Further, this order required infantry divisions to drop the name "infantry" from their antitank battalions and renumber them, although allowing them to retain the units as divisional tank destroyer battalions. Despite later criticism of the tank destroyer concept, the official history concluded the War Department shared GHQ's ideas concerning antitank policy in late 1941, and had developed "an organization well fitted to meet future demands."[511]

Many other issues remained unresolved after the maneuvers, including the role of Army air forces (particularly close air support and independence of air units from ground force commanders), the ability to train for combined arms operations in the midst of ongoing branch disputes, and lengthy delays in fielding of updated weapon systems. Further, the difficulty of adjudicating air-ground and artillery attacks during the maneuvers left the effectiveness of these key sources of fire support open for debate. While the War Department, GHQ, and the Army's various branches and arms worked to resolve these issues, the Japanese attacked Pearl Harbor on December 7, 1941 prompting America to declare war on Japan, and Germany to follow suit by

[511] Greenfield, Palmer, and Wiley, *The Organization of Ground Combat Troops*, 82-84. See pages 85-142 for an excellent summary of GHQ's role in the many other training matters and debates the headquarters dealt with throughout 1941, many of which remained unresolved at the end of the year. These included airborne and amphibious training, air support training and doctrine, organization of continental defense commands, questions of ground force control of antiaircraft and air units, and mostly failed efforts to increase GHQ's authority to achieve its many assigned missions.

declaring war on America. This led to a dramatic increase in the rate of mobilization, and a shift in the focus of planning from continental defense to expeditionary operations overseas.

The sudden strategic shift prompted by the declaration of war highlighted not only the continued limits on GHQ's authority, but also a more general need to improve War Department organization. As described above, ever since its formation in the summer of 1940, GHQ had shouldered a broad range of responsibilities while lacking the authority to make any decisions of significance. Instead, General Marshall retained ultimate authority, and despite his trust in McNair, never granted him the degree of autonomy or authority implied in many histories. Further, Marshall retained a full War Department General Staff, even after adding war planning to the list of GHQ's missions. After receiving McNair's July 1941 memo requesting the enlargement of GHQ's authority commensurate with its responsibilities, Marshall formed a board consisting of representatives from GHQ and the five divisions of the War Department General Staff, and the Chief of the Army Air Forces. This board determined that only a complete reorganization of the War Department would resolve the issue, and planning throughout the remainder of the year led to the reorganization of 1942 that, among other changes, elevated McNair once again in rank and responsibility.[512]

[512] Ibid., 143-55.

## CHAPTER TEN

### Training the Army Ground Forces to Fight World War II

The massive reorganization of March 8, 1942 eliminated GHQ, forming instead three functional headquarters subordinate to the War Department – the Army Ground Forces (AGF), Army Air Forces (AAF), and Army Service Forces (ASF). Command of the AGF went to McNair and with it the task of expanding the ground forces from their current strength of 780,000 officers and men to more than 2.2 million total personnel by July 1943. McNair's duties grew significantly upon the formation of the AGF, encompassing all boards, schools, training centers and camps, and special activities having to do with the combat arms. The commanders of the other functional headquarters – Brehon Somervell of the Services of Supply (SOS), later renamed the Army Service Forces (ASF), and Henry H. "Hap" Arnold of the Army Air Forces (AAF) – held (or in Somervell's case, would soon hold) the same rank as Lieutenant General McNair, emphasizing their (at least theoretical) equivalent level of authority.[513]

Upon disbanding GHQ, the reorganization gave overall command and control of all theaters of operations including the four continental defense commands to the War Department General Staff, while delegating responsibility for Zone of Interior functions to the new functional headquarters. Therefore, in his new role as AGF commander McNair took direct responsibility for the four traditional ground force arms (infantry, artillery, cavalry, and coast artillery), which no longer had their own chiefs. The newly formed combat arms – armored, tank destroyer, and

[513] Lesley J. McNair, "Assumption of Command, Army Ground Forces," March 9, 1942, McNair Papers, National Archives at St. Louis, MO; Greenfield, Palmer, and Wiley, *The Organization of Ground Combat Troops*, 1-37; "Army: Streamlined Army," *Time*, March 9, 1942, http://www.time.com/time/magazine/article/0,9171,885926,00.html (accessed February 19, 2012); Kleber, "McNair," 697; one finds many of the difficulties associated with AGF's role in formation and training of new divisions at various training facilities described in H. Hildring, "Formation of a New Division - Memo from Major General H. Hildring to Lieutenant General McNair," 14 October 1942, National Archives and Records Administration, College Park, MD, RG 319, Box 122.

antiaircraft artillery – also fell under McNair's command, but in accordance with the reorganization, they either remained or became distinct commands, simply consolidated under AGF rather than falling under one or more of the four traditional arms. Somervell's headquarters took control of the technical services and the two combat support services – the Engineers and the Signal Corps, along with several other non-supply related Army functions. Arnold's AAF controlled all air force functions in the Zone of Interior.[514]

This reorganization failed to achieve its primary goal of improving Army command structure and function, largely due to self-interest, competition for resources, and struggles for independence among the various organizations and their staffs. The War Department implemented this major reorganization largely to resolve the issues that had plagued GHQ and its relationship with Marshall's staff, as recorded in the official history:

> By these changes the War Department sought to relieve the General Staff and its Chief of operative and detailed administrative duties in order to set them free to devote themselves to planning and over-all supervision. This purpose had also been one of the main objectives of GHQ, but had not been fully realized largely because the powers delegated were insufficient.[515]

However, similar problems plagued the new arrangement, and new ones emerged that significantly increased friction within the War Department.

Establishment of the new functional commands did not lead to resolution of the many contentious issues that had hindered cooperation among Army's various arms, branches, and services over the preceding years. Rather, the different approach each commander took in forming his staff and exercising power only further limited cooperation both within the War Department and among the various elements of the combined arms team, which mobilized under the supervision of three separate organizations, even though they would have to operate as an integrated force upon deployment. This new arrangement, intended to streamline the War

[514] Greenfield, Palmer, and Wiley, *The Organization of Ground Combat Troops*, 152.
[515] Ibid., 152-53.

Department functions, instead created “stovepipes” that violated the traditional principle of unity of effort.

Foreshadowing the competitive relationship that emerged among the three functional commanders, Secretary of War Stimson told the press on March 5, 1943, three days before the reorganization took effect, that it would “create an organization to fight this war and not any past or obsolete wars.” Stimson emphasized that, “the second objective was to give to the Air Corps its proper place, to recognize that this war is largely an air war and to put the Air Corps to proper relation to the function it will fill.”[516] Further complicating matters, the onset of American combat operations overseas added the voices of many theater, army group, army, and naval commanders to the din, and given their proximity to the front, their advice carried more weight than that of any staff officer.

The official history acknowledged in *The Organization of Ground Combat Troops* that the Army Air Forces “took the lead and applied the drive” that made the contemplated reorganization a reality, largely because the authority delegated to GHQ under the previous organization had overlapped the authority “the Air Forces had gained as an autonomous entity on 20 June 1941.” This explains why the Air Forces had joined those who opposed the expansion of GHQ’s power to that of a true theater command over the Zone of the Interior, and why they strongly supported the reorganization of 1942, which clearly delineated the authority of each command, thereby protecting the Air Forces’ independence and increasing their power.[517]

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[516] "Army Aims to Lift Air Force Status: Stimson Says Reorganization Will Recognize That This Is Largely an 'Air War'," *The New York Times*, March 5 1943. The article also reported Somervell's authority would extend "much further than is indicated by his designation as Commander of the Service of Supply," including "the Judge Advocate General, the Provost Marshal General and the Adjutant General, as well as probably half a dozen other large branches of the Army.”

[517] ———, *The Organization of Ground Combat Troops*, 153.

Army historian Kent Roberts Greenfield's interview of Major General Harry Malony, conducted while Malony served as commander of the 94th Division on January 10, 1944, provides an insider's view of the perceptions at GHQ headquarters regarding the reorganization of 1942. Malony served as the GHQ Deputy Chief of Staff and oversaw the headquarters' operational and planning functions before returning to the War Department General Staff after the March 1942 reorganization. In his interview with Greenfield, Malony highlighted the challenges created by the lack of a realistic strategy or industrial mobilization plan in 1940. Malony argued that this violated the principle that all planning must start with an assessment of means available. To illustrate his point, Malony described a brief meeting he had with Mr. Harry Hopkins in England in 1940, during which they discussed resources required for the ongoing mobilization effort. When Hopkins asked Malony what primary things America needed to wage war, Malony replied simply, "personnel and materiel."[518] This reflected a significantly different view than that found in many histories of the American war effort during WWII that argued faulty training, doctrine, leadership, and inadequate equipment posed the main challenges to the U.S. Army during the war, while asserting the almost limitless personnel and materiel resources America possessed explain the real reason for the Army's success.

Malony also stated that upon the reorganization of 1942, when he served as Deputy Chief of Staff of the War Department Operations Division (OPD), OPD made no effort to adopt or glean lessons from the planning process GHQ put in place during the second half of 1941, when Malony headed GHQ's operational planning section. Neither did the War Department move GHQ's operations section personnel to the War Department to form the core of the new OPD –

[518] Greenfield, "Memorandum of Conversations with Maj. Gen. Harry J. Malony, Hq 94th Division." Hopkins, a long-time adviser on economic issues to President Roosevelt, and his Secretary of Commerce from 1938-1940, served during the war as FDR's unofficial emissary to Great Britain and overseer of Lend-Lease to the Soviet Union; Gerhard L. Weinberg, *A World at Arms: A Global History of World War II* (New York, NY: Cambridge University Press, 1994), 242-43.

something Malony believed would have significantly improved the division's effectiveness. He argued, "the War Department should have utilized the valuable experience of GHQ in setting up the OPD. This transition threw the defense commanders into great confusion." Malony saw this as an unnecessary problem given the highly effective planning process that GHQ had developed, and OPD could have adopted and built upon.[519]

Malony stated OPD's reluctance to embrace GHQ personnel or procedures probably resulted from frustration within the War Department General Staff caused by the expansion of GHQ's authority in 1941, which resulted, according to Maloney, in the staff believing it "had virtually lost the power it was supposed to exercise. The GS [General Staff] Divisions were 'dead on the vine.' Yet they refused to relinquish the right to interfere." Malony saw little difference in the reorganization of 1942: "That is the situation now. Look at WD G-1: it plays around with replacements. . . . What does G-3 do? OPD directs operations; AGF directs training. Who is G-4? Gen. Somervell."[520] Malony said he believed the solution would have been to expand GHQ's power in 1941 by making "a little man Commander in Chief of the Field Forces" [Greenfield's handwritten notes on the interview transcript indicate Malony referred here to General McNair]. Even after Marshall refused to take this step his staff continued to complain

[519] Greenfield, "Memorandum of Conversations with Maj. Gen. Harry J. Malony, Hq 94th Division."

[520] To illustrate Malony's point about Somervell, on April 3, 1943 the ASF Commander sent a seven-page memorandum to Marshall pointing out several areas where he believed the War Department staff duplicated efforts that fell under ASF's purview. This led Somervell to recommend the abolishment of the War Department G-1 and G-4 Divisions, transferring all their personnel, records, facilities, and authority to the ASF, and the Logistics Group in OPD, splitting it as appropriate between the ASF and AAF. Somervell sent this memo on the same day he sent a four-page memorandum directly to Assistant Secretary of War John J. McCloy, recommending establishment of a "Joint Economic and Political Council" and a "North Africa Economic Board," including detailed considerations for the composition and function of each – which naturally included participation of the ASF. For these two examples of Somervell's ever-expanding perceived scope of responsibility and quest for power, see War Department Operations Division (OPD), "Operations Division Files." Both memos appear in Box 42, Book 8. Marshall directed OPD to respond to Somervell's reorganization recommendations; they replied by recommending an increase in the War Department's logistics capability in all three sections. Marshall sided with OPD.

about its loss of authority – regarding which, Malony observed, "it was ridiculous to say that the interposition of GHQ was interfering with effective action. The WDGS was dead and didn't know it. It had no conception of the demands of the war we were about to wage."[521]

The reorganization of 1942 appears to have had as much to do with the desire to reestablish centralized control at the War Department as it did with achieving the goal of clearly dividing Zone of Interior responsibility between AGF, AAF, and ASF. The reorganization failed on both counts. Responsibilities overlapped significantly between the three functional commands, leading to continued debate over matters long in contention, only made worse by the "stovepipe" nature of the new arrangement. War Department staff officers had to contend with and attempt to coordinate the frequent recommendations and requests from these three subordinate commands within the Zone of the Interior, where before they had only GHQ to coordinate (and argue) with.

The official history recorded the haphazard process by which the War Department attempted to centralize operational control:

> In the reorganization as announced no explicit provision was made for centralized control of operations in widely scattered theaters, specifically, for 'an executive group' within the War Department which 'would in reality be a command section.' The absorption of the operational element of GHQ into the War Department as a means of meeting this need had been rejected and the officers composing that element in GHQ were not utilized to form a new group in the War Department. But a new group was formed in WPD [War Plans Division], which, under its later title of Operations Division, became, in effect, the command post of General Marshall in Washington. GHQ, in its executive activities, had forecast and confirmed the need for such an agency, but was not made that agency. It is evident from the foregoing study that the motives and circumstances that led to its rejection were complex. They included organizational and personal interests and rivalries which inevitably attend the development of a new and forceful institution.[522]

The reorganization of 1942 simply created two new power brokers in the Zone of the Interior – Arnold and Somervell – to compete with McNair for preeminence in the various areas of overlap

[521] Greenfield, "Memorandum of Conversations with Maj. Gen. Harry J. Malony, Hq 94th Division."

[522] Greenfield, Palmer, and Wiley, *The Organization of Ground Combat Troops*, 154-55.

between their functional responsibilities. Each of these men proved more ambitious and clever than McNair in the power politics that ensued. Further, numerous problems stemmed from the War Department's failure to establish centralized command and control over the various combat theaters, relying on the informal appointment of that role to OPD (purely as a staff oversight function rather than a formalized source of centralized control with the requisite authority to establish true unity of command).

The reorganization also led to several areas of conflict between AGF, ASF, and AAF that McNair simply chose not to engage in – or only slowly recognized and pointed out to Marshall and his staff with limited results. As a rule, McNair simply followed orders and tried to accomplish his mission as efficiently and effectively as possible, and he assumed (perhaps naively) that Arnold and Somervell would do the same. McNair's lack of interest in publicity and sincere willingness to get the job done without caring who got the credit significantly disadvantaged him in the competition that emerged between the three functional commands. An interview Greenfield conducted with AGF Chief of Staff Major General James G. Christiansen on February 7, 1945 provides excellent insight into this particular aspect of the challenges the reorganization caused for McNair.

During this interview, Greenfield pointed out that some critics argued the Army's inferiority in tanks stemmed from the reorganization of the War Department, because it placed responsibility for armor training with the AGF, while the ASF retained oversight of the technical aspects of armor development. He then mentioned the provision in the reorganization that granted control to the AAF over technical air support services and aircraft procurement, which led to improvements in the production of new aircraft and sustainment of the existing Air Forces.

Greenfield asked how the failure to grant the same authorities to the AGF affected its challenges procuring new combat equipment. Christiansen replied,

> our position with relation to the technical services goes back to General McNair's decision when he organized the Special Staff of this headquarters. He decided to set up the Special Staff Sections solely for training purposes, leaving the initiative in developing equipment to the technical services. His object was economy of personnel. He refused to duplicate services that already existed, and believed that they must be trusted in this war, whatever the ideal set-up might prove to be. This decision may have been a mistake but it was rooted in his conviction that the enemy could be beaten only by the application of superior combat power when and where needed. With limited shipping and limited available manpower, this would, he believed, be possible for us only by the strictest economy in the services. . . . It was the principle behind his proposal, early in the war, to divide the total manpower available to the ground forces by 35,000 per division and plan accordingly. It was not followed, and we have gone to 80,000 per division. At the time of Anzio he pointed out that we were stopped dead by the 100,000 combat troops whom the Germans could put opposite our 100,000 combat troops. We had 500 - 600,000 [more troops] behind them; with 20,000 of these we could break the deadlock and go wherever we wanted, with lighter losses than we were suffering by attrition – the losses which our overwhelming support was designed to minimize. But we could not gain the superiority required because our troops were frozen into overhead and services.[523]

This observation reveals many challenges American ground troops faced in fighting the war.

Two memos containing extracts from the observations of Major General George S. Patton, prepared on August 4, 1943 by Major General Thomas T. Handy, Chief of OPD, confirm the excess overhead Christiansen mentioned in his interview with Greenfield. Handy quoted Patton,

> it seems to me that perhaps we have an exaggerated idea of the proportion of SOS [ASF] troops to combat troops. There is a tendency for the SOS to work on the eight-hour day principle. While this is o.k. in quiet sectors, in emergencies they should work 24 hours a day as do the combat troops.

Curiously, Handy prepared two versions of the memo – one addressed to all three functional commanders, and the other only to Arnold. These memos are identical except that the above paragraph only appears in the memo addressed to Arnold alone. One can only wonder why Handy prepared two different versions of this memo. Regardless, the paragraph above

[523] Kent Roberts Greenfield, "Gen. Christiansen - Conversation with Col. Greenfield," February 7, 1945, National Archives and Records Administration, College Park, MD, RG 319, Entry 488, Box 136.

demonstrates that at least one combat commander shared Christiansen's (and McNair's) concern over the excess number of service troops relative to combat troops.[524] Nevertheless, histories of WWII often attributed the AGF's primary challenges to poor decisions McNair made, without considering the organization of the various agencies responsible for industrial mobilization, the authority of their military and civilian leaders, or the decreased efficiency of the War Department resulting from the reorganization of 1942.

Historian James Lacey exposed many long-overlooked flaws in America's industrial mobilization for WWII, and the many myths that resulted from historians' failure to recognize these flaws until recently. After dismantling the Wedemeyer myth and exposing the "Real Victory Program," Lacey described the development of the "Production Victory Program," revealing the striking similarities between the flawed industrial mobilization efforts preceding WWI and WWII. As mentioned above, in 1940 President Roosevelt scrapped the longstanding Industrial Mobilization Plan, refusing to entrust America's wartime civilian economy to military planners. As President Wilson and Secretary of War Baker had done in 1917, President Roosevelt created various boards and committees to coordinate the military's strategic plans and industry's production capacity. However, with basic American military strategy not agreed upon until early 1941, Lacey pointed out "the planners had yet to match that strategy against national resources and capabilities." Frequent requests from civilian production chiefs for military requirements finally prompted Roosevelt to direct Secretary of War Stimson and Secretary of the Navy Knox on July 9, 1941 to "explore the munitions and mechanical equipment of all types which in your opinion would be required to exceed by an appropriate amount that available to our potential enemies." Thus, Roosevelt did not ask until the summer of 1941 for a coordinated

[524] Thomas T. Handy, "Comments of General Patton Concerning Certain Aspects of the Sicilian Invasion," August 4, 1943, National Archives and Records Administration, College Park, MD, RG 165, Entry 422, Box 44.

civil-military plan that addressed the nation's requirements to conduct offensive operations, rather than simply its needs to defend the United States.[525]

One of the first products of this effort, involving planners within the United States and their potential allies, according to Lacey, "were not flattering to the United States. With 2.5 times the combined population of Britain and Canada, America's installed munitions production capacity was lagging far behind its ultimate potential and what the other two nations were producing. The stark numbers clearly demonstrated that the United States was a long way from being the 'arsenal of democracy'."[526] Lacey also revealed that by late 1941, initial plans existed that described the industrial requirements to support an 8-million person American Army, and the manner in which the military would employ that combat equipment, but it still remained an open question when industry could actually provide that equipment. Two economists, Robert Nathan and Simon Kuznets, provided an answer to that question in November 1941 that "led to some of the fiercest and nastiest military-civilian debates of the war." In short, Nathan and Kuznets found that production of the required materiel by the fall of 1943, including Lend-Lease projections, would require America increase its expenditures on the defense program by over 200%, requiring both a massive increase in Gross Domestic Production (GDP) and commitment of half the target GDP to defense spending to meet its production goals.[527]

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[525] Lacey, *Keep from All Thoughtful Men*, 22. Paul A. C. Koistinen's three detailed studies of America's political economy from 1865-1945 remain essential references; however, Lacey provided a very accessible account that shatters several myths regarding the WWII industrial mobilization effort; See Paul A. C. Koistinen, *Mobilizing for Modern War: The Political Economy of American Warfare, 1865-1919*, Modern War Studies, ed. Theodore A. Wilson (Lawrence, KS: University Press of Kansas, 1997); ———, *Planning War, Pursuing Peace: The Political Economy of American Warfare, 1920-1939*, Modern War Studies, ed. Theodore A. Wilson (Lawrence, KS: University Press of Kansas, 1998); ———, *Arsenal of World War II: The Political Economy of American Warfare, 1940-1945*, Modern War Studies, ed. Theodore A. Wilson (Lawrence, KS: University of Kansas Press, 2004).

[526] Lacey, *Keep from All Thoughtful Men*, 30.

[527] Ibid., 68-69.

Civilian industry leaders also could not meet the military's production requirements without accurate estimates of the military's requirements – something Lacey revealed the military could never provide with any reliability. The military still suffered from the same unclear relationship that had long existed between the combat personnel who employed military equipment and the Ordnance personnel who designed and procured that equipment, and the same lack of unity of effort or oversight in a single agency or individual over the various organizations involved in military industrial production. In his usual manner, President Roosevelt attempted to resolve the impasse by forming committees and boards of men who did not see eye-to-eye or even work well together (or, in Lacey's words, "chosen with typical political astuteness by Roosevelt"), believing lack of consensus led to original thought and insightful solutions.[528] However, the dysfunctional process Lacey described casts doubt on the effectiveness of this practice. It also identifies one key military individual as primarily responsible for the military's inadequate, even counterproductive contribution to the process: Lieutenant General Brehon Somervell, Commander of the ASF.

Referencing the minutes of the many boards responsible for various aspects of industrial mobilization, Lacey recognized an ongoing trend between November 1941 and the fall of 1942 in which the military consistently questioned the civilians' production estimates and economic analyses, while insisting on unrealistic materiel production quantities. Lacey highlighted the October 6, 1942 War Production Board meeting to demonstrate the severity of the civilian industrialists' frustration with Somervell by this point in the war. All parties arrived at the meeting already in intense disagreement regarding the feasibility of the 1942 and 1943

[528] Ibid., 51. Lacey focused on the War Production Board, while acknowledging it "was not the final or most powerful of the war production agencies," because it was the lead industrial mobilization agency during the period he covered in his book; Koistinen highligthed the poor leadership qualities of the WPB chair, Donald M. Nelson, whose "guileless" desire for consent and consensus left him open to attack from more skillful bureaucratic infighters. Koistinen, *Arsenal of World War II*, 213.

production plans, about which Somervell remained far more optimistic than the civilian industrialists and economists. Somervell had consistently criticized the civilians' reports and estimates before the meeting, and he continued to do so once it began. The civilians provided detailed production and economic analyses that showed American industry and GDP simply could not support the military requirements provided by the Joint Chiefs for 1942 and 1943. At a seeming impasse, it appeared the meeting might end still having failed to resolve these issues. Somervell and Under Secretary of War Robert Patterson refused to support the civilians' recommendation for formation of a new production-strategy board, asserting they saw no need for civilians to concern themselves with strategy. Instead, they insisted the civilians should focus on finding ways to meet military requirements, rather than questioning their feasibility.[529]

At this point Leon Henderson, head of the Office of Price Administration (OPA), finally lost his patience with Somervell, who continued to insist the figure Nathan set at the nation's maximum productive effort in munitions, construction, and other military expenditures, was insufficient for the conduct of the war. Lacey recounted,

> 'The amount in question, 90 billion dollars, was interesting,' said Henderson, 'because it exceeded by far the value of our entire national product both for 1933 and 1934.' Then, as if a great light were dawning, he said, in substance, 'Maybe if we can't wage a war on 90 billions, we ought to get rid of our present Joint Chiefs, and find some who can.'[530]

This brought the meeting to dead silence. According to Lacey's narrative, this pause, "allowed Henderson to turn to Somervell and proceed to make the most violent personal attack ever heard in a meeting of the WPB." Henderson stated that, "he found himself disgusted with Somervell's repeated obstinacy, overbearing manner, and ignorance of production problems. He stated flatly his belief that Somervell had always padded his requirements, and that the general had no idea of

[529] Lacey, *Keep from All Thoughtful Men*, 96-110. Only Somervell, of the three functional commanders, served on the WPB or participated in negotiations with civilian industrailists; Patterson theoretically represented the entire military, but he prioritzed AAF and Navy needs over the AGF's.

[530] Ibid., 112.

the disastrous implications of infeasible goals."[531] This last point highlights the central issue with the entire war production process. In a planning effort based on flawed assumptions and unrealistic requirements, leaders lack the ability to make informed prioritization decisions.

Given the longstanding dysfunction associated with the production planning effort, President Roosevelt had simply continued to insist the industrialists meet military production goals that the nation's economy could not support, while simultaneously refusing to impose significant sacrifice on the American people. In fact, Lacey argued:

> The myth that in the pursuit of total victory the American people sacrificed so that consumer production facilities could convert to war production is demonstrably untrue. Consumer spending in America went up (as a percent of GDP) every year of the war, and virtually all wartime munitions production can be accounted for by GDP growth and not by limitations placed on consumer production.[532]

In fact, as Paul A. C. Koistinen revealed in *Arsenal of World War II: The Political Economy of American Warfare, 1940-1945*, civilian production companies began hoarding essential raw materials needed for the mobilization effort to support their increased output of consumer durables. Koistinen highlighted "between April and May 1941 – within months of Pearl Harbor – automobile output had grown by 27 percent over the same months in 1940, and that pattern was continuing. This situation was breaking down the entire priority system."[533]

The blowup at the October 6, 1942 WPB meeting finally led to the realization that America's military strategy required major revision among most members of the board – only Somervell remained unconvinced obstinate in his conviction the civilians must find a way to meet military production demands. To break the impasse, Nelson formed the Production Executive Committee (PEC), placing Charles E. Wilson of the General Electric Corporation in charge of the committee and charging him with the responsibility of perfecting production

[531] Ibid.
[532] Ibid., 4.
[533] Koistinen, *Arsenal of World War II*, 133.

schedules. Nelson formed this new committee specifically to backpedal from the cooperative spirit in which the WPB had theoretically operated, realizing Wilson, described by historian John Kennedy Ohl as "a crackerjack production man . . . who was thought to be sympathetic to the civilian outlook," would reassert civilian control over the production process." In essence, this represented a reversal of the original WPB arrangement in which the military determined requirements and the civilians found ways to accomplish them.[534]

By November 1942, Somervell recognized the implications of Nelson's actions and engaged directly in conflict with Wilson, attempting to retain military control over development of production requirements. At this point, even navy and Maritime Commission representatives had accepted the need to turn over production requirements and scheduling to the civilians; only Somervell remained in opposition. This led to further debate, prompting President Roosevelt to invite Nelson to the White House to hear the WPB's case, which Nelson summed up as the need for "proper, orderly scheduling." Roosevelt offered to help, but Nelson declined, asking only that the President not help "the other fellow" [Somervell]. From this point on, Nelson dealt directly with Secretary of War Stimson, enabling him to bypassing Somervell, who remained belligerent even after Roosevelt called a meeting between Nelson, Stimson, and Secretary of the Navy Frank Knox directing them to work together to quickly resolve the production debate. Ohl argued Somervell's futile attempts to influence the negotiations between Nelson and Stimson suggest "that, if Roosevelt and Stimson had not entered the picture, there probably would not have been an agreement at all."[535]

After months of bureaucratic squabbling, the civilians had finally gotten through to the military leaders – and President Roosevelt – that America had been pursuing an infeasible troop

[534] John Kennedy Ohl, *Supplying the Troops: General Somervell and American Logistics in WWII* (DeKalb, IL: Northern Illinois University Press, 1994), 85-86.

[535] Ibid., 86-88.

basis and military strategy. This led to two significant military consequences. First, the Joint Chiefs reduced spending projections for 1943 by $12 billion, $3 billion of which came from the Navy, and $9 billion from the Army (all from the Ground Forces – further demonstrating the War Department's prioritization of AAF and ASF over AGF requirements throughout the industrial mobilization process).[536] Further, it led to the realization among senior American military leaders in early 1943 that America could not pursue a cross channel attack that summer even if Britain supported one.

Lacey devoted particular attention to this second point, because it shatters another longstanding myth in the standard narrative of WWII:

> Sometime between Torch and the Casablanca Conference, however, Marshall abandoned his single-minded crusade for a second front in 1943 and supported a major post-Torch diversion of resources to further Mediterranean operations. In this, too, the remainder of the Joint Chiefs joined him. The Americans were not overawed or overwhelmed by superior British negotiating skills or staff procedures, as historians have often suggested they were. Rather, they had simply changed their minds about the wisdom of a major 1943 invasion, though they do appear to have been more than a bit reticent about announcing their change of heart and thereby admitting that British strategists had been right from the beginning.

Lacey argued it was not simply the realization after the amphibious landings of Operation TORCH that a cross-channel invasion would present far greater challenges than previously assumed (illustrated by Eisenhower's doubling his estimate for the number of divisions he would require to accomplish the invasion) that led to Marshall's change of heart. Rather, the Joint Chiefs' admission that the civilian industrialists had finally convinced them they had pursued for nearly a year highly unrealistic goals for military materiel production proved just as instrumental in changing Marshall's mind. Lacey provided numerous examples from the transcripts of the Casablanca Conference where Marshall's acquiescence to or lack of comment on British demands indicate he did not in fact arrive determined to fight for a 1943 invasion of France.[537]

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[536] Lacey, *Keep from All Thoughtful Men*, 114-15.
[537] Ibid., 129-32.

Lacey concluded his analysis of the "Victory Production Plan" debate by answering the question why Marshall changed his mind about the timing of an Allied amphibious invasion of mainland Europe. Lacey argued once the industrialists had made it clear he would not have the size force originally anticipated for the summer of 1943 until a year later, "the decision was made for him." Further, Lacey argued, "the blame must fall squarely on Somervell's shoulders."[538] Koistinen arrived at similar conclusions regarding Somervell's intransigence through the spring of 1943, but failed to grasp just how severely Somervell disrupted the mobilization process. Referring to Somervell as Marshall's "attack dog," Koistinen recounted Marshall's postwar statement regarding Somervell's ambition, in which he acknowledged, "of course I had to fight Somervell down or he would have taken the whole damn staff," and that the desire to avoid "any future development of a man like General Somervell" played a key role in postwar reorganization. However, Koistinen also quoted Marshall's conclusion that, "if I went into control in another war, I would start looking for another General Somervell the very first thing I did," leaving the reader with a much more positive interpretation of Somervell's participation in the mobilization process than Lacey did.[539]

The implications of the haphazard progress of industrial mobilization regarding the analysis of McNair's role as AGF commander extend far beyond determination of the date when the Allies could first attempt a cross-channel invasion. In short, during a period when the AGF, AAF, and ASF commanders should have worked closely together to arrive at a feasible, integrated, and unanimously supported plan to support the mobilization effort, Somervell consistently hindered McNair's efforts to mobilize and equip ground forces. Along with the

[538] Ibid., 133. Lacey arrived at this conclusion based on Somervell's exclusive role in the civil-military mobilization debate, and his obstinacy and ignorance of economic realities throughout the process.

[539] Koistinen, *Arsenal of World War II*, 235-36.

various squabbles described below, Somervell's stubborn refusal to listen to the industrial mobilization experts or give them realistic military materiel requirements delayed the entire process of producing necessary weapons systems to mobilize, train, equip, and deploy AGF units. Further, Somervell's refusal to accept the sound advice from industrialists and economists meant the Army not only pursued an unrealistic mobilization plan for over a year; it also made many military leaders doubt the significance of shipping shortages and other limitations that McNair clearly understood from the start. This understanding, probably based on McNair's experience with the mobilization along the Mexican border and prior to the First World War, led him to design the Ground Forces for both efficiency and effectiveness – a conviction for which he drew criticism from combat commanders during the war and military historians ever since.

**Commander, Army Ground Forces, 1942-1944**

McNair's emphasis on efficiency through streamlining, pooling, and task organization did not merely apply to his thoughts on ground forces organization – he also emphasized efficiency in staff and services (in other words, limiting "overhead" or non-combat personnel).[540] He therefore continued to rely on a small staff, for the same reason that he believed the ground forces should keep overhead to a minimum. McNair also did not possess the nature of an empire-builder. He kept his staff far smaller than that of the War Department or the other two functional headquarters, and he remained the loyal follower even as Arnold and Somervell competed to exert ever-increasing influence over Marshall while building ever larger and more powerful staffs. He even refused to join the mass movement of staff personnel to the newly opened Pentagon, preferring to keep his "intimate" staff at the Army War College, in part because,

[540] In a July, 1943 letter on unit organization revisions, McNair wrote, "Staffs are being revised downward. They are to be provided solely for combat needs. Operations cannot possibly be swift and effective if staffs are large and clumsy." Greenfield, Palmer, and Wiley, *The Organization of Ground Combat Troops*, 377.

unlike Washington, the grounds retained a distinctly military atmosphere. While this may indicate a certain naiveté, McNair simply did not desire to engage in such power struggles.[541]

The Equipment Review Board (or Cook Board, presided over by Major General Gilbert R. Cook) found numerous flaws after the war in the Army's weapons development process. The board included a cover letter with its various reports on specific equipment types that addressed several points related to this topic.[542] For example, the board found that effective peacetime weapons development required that

> a weapon or a piece of equipment should be developed for a specific purpose and must represent the best possible solution to the needs of the user." [This meant] "the user who is to fight the weapon in the combat zone must completely control the development of the weapon he is to employ. The complete and sole objective of the development agency must be to reflect the needs of the user. . . . Neither a development agency nor a using agency should at the same time, be a procurement agency."

These findings led the board to recommend integration of effort under a "unified Department of National Defense," with "responsibility for the development of all army ground force weapons and materiel . . . assigned directly to Army Ground Forces."[543] During World War II, AGF lacked this authority.

This presents a striking parallel to post-WWI debates regarding equipment procurement organizations and authorities. Secretary of War Baker had highlighted this very issue in his testimony before the House Committee on Military Affairs in 1919, stating that the Ordnance Department "makes what the other soldiers use and you have a controversy in the Army all the time between the user of the weapon and the maker of the weapon. The user says that 'The man that makes it is a manufacturer and he knows nothing about what I am going to do with it and

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[541] Kahn, *McNair, Educator of an Army*, 47.

[542] Equipment Review Board, "Equipment Review Board Report," June 20, 1945, National Archives and Records Administration, College Park, MD, RG 319, Entry 488, CMH Manuscript File: AGF, Box 128, 1-2.

[543] Ibid., 3; emphasis in the original. While the AAF might have approached this level of unified effort, AGF complied with the War Department organization, leaving the technnical details of weapons design to the ASF.

therefore he must make it the way I want it.' The manufacturer on the other hand says, 'These fellows in the field have no technical knowledge; they do not know a good weapon; my duty is to give them a good weapon." Nevertheless, after WWI military traditionalists failed to adopt a streamlined, modernized command system, leading to various inefficiencies including the existence of precisely the same friction between Ordnance and the AGF during both World Wars.[544]

Upon his retirement in 1930, General Summerall had predicted the continuing problems that would result from the failure to resolve this issue. Summerall warned, as paraphrased by historian Daniel Beaver, "the failure to consolidate command and control of supply and logistics under the chief of staff in the 1920 legislation [the 1920 NDA] would bring difficulties similar to those encountered in 1917 and 1918." Instead, as Beaver explained, "The National Defense Act placed responsibility for procurement planning and industrial mobilization in the office of the assistant secretary of war and responsibility for military planning in the office of the chief of staff. Limited interwar funding or a specific military threat combined with the purely consultative relationship between the procurement and mobilization planners and the war planners left the Army and the civilian industrialists no better prepared for World War II than they had been in 1917.[545]

The reorganization of March 1942 elevated McNair to his highest level of responsibility during the war, but if anything, at AGF he possessed even less ability to influence key decisions than he had as GHQ Chief of Staff. He certainly lacked any ability to break the logjam between military war planners and leaders in the military and civilian sector responsible for industrial mobilization. McNair remained an influential figure, but his scope of authority and responsibility

[544] Beaver, *Modernizing the American War Department*, 200.
[545] Ibid., 203-04.

remained limited, and many of his achievements have gone unrecognized in histories of the war, which tended instead to identify McNair as the target of blame for various deficiencies they sought to demonstrate in the Army's combat effectiveness. The following analysis describes how the Army recognized and overcame several key difficulties that hindered its mobilization and entry into combat, demonstrating that it achieved success not through materiel superiority, but by learning how to fight in accordance with the operational doctrine and organizational principles developed during the interwar period – efforts in which McNair played a significant role. The vitality of the discourse in the 1920s and 1930s refutes the myth that inactivity and stagnation defined the Army's interwar years, even if this vibrant intellectual activity took place mostly in the officer education system and various branch journals. The absence of adequate funds to pay for the large army, organized reserve system, and modern equipment that made Germany such a formidable military power by 1939 delayed the U.S. Army's ability to achieve parity on the battlefield. Nevertheless, its foundation of clear doctrine and extensive unit mobilization training enabled the Army to overcome the initial shock new units experienced in combat and evolve as a highly effective fighting force.

The analysis that follows revisits the same themes discussed in the previous chapter to describe how McNair, as AGF Commander, dealt with the issues he had faced during his tenure as GHQ Chief of Staff. This highlights the continuities in McNair's efforts to prepare the ground forces for war before 1942, and his efforts to improve their fighting effectiveness once committed to combat during the period of rapid Army expansion from 1942-1944. McNair's actions during this period reveal that his ideas not only represented a continuation of the evolution in his thinking in the 1920s and 1930s – they also served as the foundation for the successful fighting techniques that enabled the U.S. Army to prevail on the WWII battlefield.

The Army doctrine and organization McNair helped develop before the war proved quite effective in practice with a reasonable amount of learning and adaptation, as demonstrated by the stability of organizations like the triangular division and the longevity of the *1941 FSR (FM 100-5, Operations).* This seems particularly remarkable given the fact that progressive mobilization and deployment of new divisions after 1942, combined with reliance on an individual replacement system, meant that the forces that fought each successive campaign included a significant percentage of units entering combat for the first time. These units typically entered (or reentered) combat after receiving individual replacements to bring them up to strength, relying on many troops that had received minimal and poorly standardized individual training. Nevertheless, the overall quality of the system of doctrine, organization, and unit training McNair helped developed before the war and oversaw during mobilization helped these units achieve success against professional, combat-hardened military forces in one campaign after another.

Additionally, this admittedly brief survey of McNair's service as AGF Commander builds on the preceding analysis of McNair's early career to demonstrate the stability of the fundamental views and innovative spirit he pursued throughout the thirty-five years preceding the start of World War II. McNair's career-long efforts, guided by several fundamental characteristics, enabled the U.S. Army to overcome key deficiencies in organization, doctrine, and policy to mature from 1940-42 into an effective fighting force – despite often working against strong institutional resistance. Finally, it reveals a continuation of the trend seen in many histories that have mentioned McNair's service at GHQ and AGF of placing blame on McNair for problems he lacked the authority to resolve, or failing to balance criticism of his flaws with a fair assessment of his achievements.

This analysis not only sheds new light on McNair's achievements and missteps, it provides further support to the growing body of work that challenges the standard narrative many historians have embraced as accepted wisdom that criticizes the combat effectiveness of American combat troops throughout the war. The U.S. Army did not succeed during WWII due to overwhelming personnel or materiel superiority. In fact, historians have long overstated the nation's advantages in this area. America certainly possessed vast resources, but was almost completely unprepared to apply them to a war effort in 1940, when the threat Germany posed to Great Britain finally forced the nation's leaders to realize they must begin mobilization. The U.S. Army also did not succeed due to a Western democratic tradition or American exceptionalism that gave it moral superiority over its opponents. Rather, the Army learned to fight by employing methods developed and firmly entrenched in the psyche of the Regular Army personnel who served during the interwar period, and passed on from these Regulars to new recruits through the most effective unit mobilization training the U.S. Army had ever undergone.[546]

The initial challenges the Army faced should not serve as an indictment of McNair's efforts to prepare the Army for World War II. Instead, they reflect realities stemming from America's lack of preparedness for war, which forced the nation to mobilize hastily after a lengthy period of peace, in which significant fiscal constraints prevented the Army from exploiting its intellectual development with a viable modernization effort. Even after mobilization began, McNair's power remained far more limited than many historians have implied, although his name recognition value ensured he featured in many of their critiques of the U.S. Army's performance during the war. Ultimately, McNair and his colleagues could not

[546] For a particularly overblown grand theory regarding this supposed Western democratic superiority, see Victor Davis Hanson, *Carnage and Culture: Landmark Battles in the Rise of Western Power* (New York, NY: Doubleday, 2001); For a strongly-argued counterpoint to Hanson's work, see Lynn, *Battle: A History of Combat and Culture*.

solve many of the problems the Army struggled with during the interwar years and the mobilization period until combat experience enabled them to find answers to the many questions debated throughout the interwar period. This led some critics to question the competence and boldness of the Army's officer corps.

In his comparison of German and U.S. Army performance during the war, *Fighting Power*, Martin van Creveld argued, "the American officer corps of World War II was less than mediocre." While Creveld qualified this assessment by pointing out the challenge presented by time pressure during the hasty mobilization of U.S. Army divisions, Creveld's assertion that "between them and their German opposite numbers there simply is no comparison possible" seems unjustifiably oversimplified. Creveld's comparative analysis appears biased by an excessive admiration of German tactical prowess, and an uninformed acceptance of the American materiel superiority myth that, in Creveld's view, explains the U.S. Army's eventual success in combat.[547] *Fighting Power* serves as a perfect example of the result of what historian William J. Astore referred to as "*A Case of* Wehrmacht *Penis Envy*."[548] While Astore's book chapter focused on a primarily American post-WWII phenomenon, the excessive admiration of German fighting prowess he described has also long existed among non-American historians, as demonstrated by works like van Creveld's *Fighting Power*.

Despite the efforts of many historians to correct the record in recent years, criticisms of American combat leadership continue to appear in the historiography of World War II. For example, in his recent book *Command Culture*, Jörg Muth relied on timeworn assessments like that found in Russell Weigley's *Eisenhower's Lieutenants* in his attempt to demonstrate

[547] van Creveld, *Fighting Power*, 168; Furthermore, Steve Lauer's comparative analysis of U.S., German, and British infantry during the war not only demonstrates that such a comparison is possible, it also shatters many longstanding myths regarding German fighting superiority. See Lauer, "Perspectives on Infantry".

[548] Astore, "Loving the German War Machine," 7.

American commanders' supposed lack of aggressiveness ("command culture"). Weigley asserted unaggressive American generalship led to unnecessarily lengthy operations, false expectations that the Germans would demonstrate similar caution in battle, and the discouragement by superior officers of any boldness among their subordinates. Muth repeated Weigley's assessment, still often heard today, that America could have shortened the war through bolder generalship, but relied instead on materiel superiority to win in a slow, methodical fashion.[549]

Muth cited various standard-bearers of this flawed but remarkably resilient narrative like Martin Blumenson, who in a 1989 article on America's World War II leaders in the European Theater of Operations (ETO), assessed American generals as "generally workmanlike rather than bold, prudent rather than daring, George S. Patton, Jr. being of course a notable exception." Muth even cited the deeply flawed *Fighting Power* in his effort to prove the ineptitude of America's World War II combat leaders, despite Muth's admission that "some of his [van Creveld's] findings have been proven incorrect by recent research."[550]

Criticism of American officers usually focuses on their supposed lack of boldness and daring, and Blumenson ranks among many historians who hold Patton up as the exception among an otherwise mediocre pool of officers. Part of the reason for this narrow view probably lies in the historical focus on the better-known commanders of armies and army groups, and to a lesser extent the most famous senior aviators and navy admirals. Such histories often contrast Patton's constant requests for more resources and freedom of action (along with counterfactual

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[549] Weigley, *Eisenhower's Lieutenants*, 432-33, 589-94, 729.

[550] Muth, *Command Culture*, 3-6; Martin Blumenson, "America's World War II Leaders in Europe: Some Thoughts," *Parameters* 19, no. 4 (December 1989): 3. For example critiques of *Military Power*, see Milan Hauner, "Fighting Power (Book Review)," *American Historical Review* 88, no. 5 (December 1983): 1287-88; Patrick M. Morgan, "Fighting Power (Book Review - Untitled)," *Annals of the American Academy of Political and Social Science* 471, no. 6 (Jan., 1984): 175-76. Recent revisionist historians of World War II expand significantly on these criticisms. See, for example, Peter R. Mansoor, *The GI Offensive in Europe: The Triumph of American Infantry Divisions, 1941-1945* (Lawrence, KS: University Press of Kansas, 1999).

assessments of what he could have accomplished had his requests been granted) against accepted Allied strategy, such as Eisenhower's determination to maintain a broad-front strategy. Eisenhower emphasized keeping pressure up along the entire Western Front and avoiding any action that might overextend part of the line and form a salient for German counterattacks to exploit.

Even recent histories continue to criticize Eisenhower for his adherence to this strategy, supporting the image of the unimaginative American general capable only of grinding down the Germans in a laborious and bloody attrition-based strategy. In *Decision at Strasbourg: Ike's Strategic Mistake to Halt the Sixth Army Group at the Rhine in 1944*, historian David P. Colley quoted historian Stephen Ambrose, who claimed, "attrition is always a cautious and unimaginative strategy." Building on this broad oversimplification, Colley argued, "with Ike in command, there would be no grand envelopments, no surprise or bold maneuvers by the 6th Army Group to outwit or outflank the Germans," and assessed General Eisenhower "lacked the boldness of a Patton or a Rommel; and he did not have Montgomery's detailed understanding of tactics and strategy." Colley made these claims to support his criticism of Eisenhower's decision to refuse Lieutenant General Devers' request to attack across the Rhine into Germany in November 1944. Colley blamed this "mistake" on Eisenhower's supposed lack of boldness and imagination, while discounting the many reasons Eisenhower found Devers' plan flawed. Primarily, Eisenhower concluded the attack would create unacceptable risk by creating weak points in the Allied line, while offering little promise for the decisive results Devers imagined due to the rough terrain that Allied forces would face once across the river. Eisenhower had learned from the disastrous results of giving Montgomery free reign to launch the bold and complex Operation MARKET-GARDEN two months earlier, and only a month after he refused

Devers' request, the Germans executed a bold counterattack against a weak point in the Allied line in the Ardennes. This led to the costly and morale-shaking Battle of the Bulge – just the sort of opportunity Eisenhower did not want to offer the Germans in 6th Army Group's sector.[551]

Histories of World War II often describe Patton's counterattack during the Battle of the Bulge as an example of the kind of bold maneuver most American commanders simply lacked the capability to plan or lead. This maneuver did prove significant in limiting the success of the German offensive, but commanders in many units, both American and British, contributed to the Allied victory. Analysis of this offensive also demonstrates the fallacies that can result from comparisons of American and German commanders' combat leadership. Senior German Army officers attempted to convince Hitler to call off the counterattack he planned in the Ardennes because they knew they lacked the resources to exploit an initial penetration, however successful, and their forces would culminate quickly and with significant losses that they had no means to replace. Despite these protests, Hitler insisted on executing the counterattack – demonstrating the motivation for this high-risk operation stemmed from his irrational leadership, rather than his officers' boldness. Although the Battle of the Bulge ended as Hitler's staff predicted, the operation illustrates the wisdom of the broad front strategy Eisenhower adhered to,

[551] David P. Colley, *Decision at Strasbourg: Ike's Strategic Mistake to Halt the Sixth Army Group at the Rhine in 1944* (Annapolis, MD: Naval Institute Press, 2008), 158-59; Mark T. Calhoun, review of Decision at Strasbourg: Ike's Strategic Mistake to Halt the Sixth Army Group at the Rhine in 1944, *Army History* 78, no. 2 (Winter 2011): 51-52. Colley also claimed "Eisenhower lacked the hard-nosed attributes necessary for effective combat command," a surprisingly harsh criticism to level against the General who alone bore the responsibility of authorizing the incredibly risky and costly D-Day landings in Normandy, despite predictions of possible poor weather that could keep Allied aircraft from flying when the ground troops most needed their support. Eisenhower's bold leadership was never clearer than on this day, June 5, 1944, when he authorized the assault for the next day and then privately penned a letter for release to the press in the event the landings failed, assuming full responsibility for the decision and the outcome. See Stephen E. Ambrose, *D-Day, June 6, 1944: The Climactic Battle of World War II* (New York: Simon & Schuster, 1994), 188-90.

since the Wehrmacht remained dangerous even in its weakened state, and such setbacks, while temporary, still proved damaging to morale among the troops and on the home front.[552]

Even in those areas where terrain might have favored more bold maneuvers, limited logistics capacity meant supplying a bold localized offensive would require limiting fuel, ammunition, and other supplies along the rest of the front – a significant risk Eisenhower wisely chose not to take. Winton's *Corps Commanders of the Bulge* highlighted the fallacy of equating officer quality with boldness and daring by focusing on six corps commanders who provided crucial leadership during the two-month long operation. Winton revealed the key contributions of six American general officers: Gerow, Middleton, Ridgway, Millikin, Eddy, and Collins – many of whom remained in relative obscurity in the historical record due to historians' tendency to focus on large unit commanders (even Ridgway remains better known for his service in the Korean War than WWII). Historians should produce more studies like Winton's, something which might help shatter the myth of the "workmanlike" American general.[553]

Peter Schifferle provided additional rationale for the broad front strategy in *America's School for War,* arguing that despite mechanization and other technological advances, the unit density along the relatively short Western Front caused the lines to stabilize much as they did during the First World War. While this never led to the trench warfare the AEF experienced, it did cause the Allies to resort to a slow, steady, attrition-based offensive, simply due to the physical characteristics of the theater of operations. However, the officers responsible during the interwar period for educating the Army's future senior leaders drew from their experience of stabilized front operations – particularly during the Meuse-Argonne offensive – when

[552] Charles B. MacDonald, *A Time for Trumpets: The Untold Story of the Battle of the Bulge* (New York, NY: Perennial, 2002), 28-32, 68-69, 418-21; such comparisons still frequently appear, and highlight the popularity of histories of World War II's "Great Captains." See Dennis Showalter, *Patton and Rommel: Men of War in the Twentieth Century* (New York, NY: Berkley, 2005).

[553] Winton, *Corps Commanders of the Bulge*.

formulating the doctrine and designing the organizations the Army employed in 1944-45. This doctrine and organization, relying on penetrations achieved through massive firepower and infantry-artillery cooperation, turned out to be perfectly suited for the form of combat the Allies encountered in the campaigns of 1944-45.[554]

Historians such as Creveld, Ambrose, Blumenson, and Colley have long criticized American generals for the doctrine they employed, along with forward-thinking officers like McNair who worked between the wars to develop that doctrine. The U.S. Army's interwar officer education system also serves as a comment target of such critiques, leading to accusations of stalled intellectual development between the wars. Few historians have recognized the appropriateness of the doctrine developed by veterans of the AEF for the dynamics of the Second World War, which turned out, particularly on the Western Front of the European Theater of Operations, more similar to those of the First World War than different. Instead, histories of WWII often argue American officers' employment of this doctrine demonstrates their lack of imagination or incompetence, rather than recognizing that it served as the key source of their ability to lead America's rapidly mobilized forces to victory against one of the most experienced and tactically competent armies the world has ever seen.

Critics of American officers have mistakenly devalued competence, assessing the quality of their leadership based on criteria like boldness, charisma, and maverick behavior – characteristics necessary to satisfy admirers of the Wehrmacht and the myth of *Auftragstaktik*. Peter Schifferle provides a particularly insightful explanation for this phenomenon:

> Perhaps the greatest irony of the interwar General Staff School education was that the failure to resolve a very controversial issue – whether to focus on teaching future commanders or teaching future staff officers – was itself of great benefit to the fielded force in World War II. The conflation of commandership and staff officer skills, exemplified in the name change in the early 1920s to the Command and General Staff School, actually assisted the leaders of combat

[554] Schifferle, *America's School for War*, 184-87.

> divisions in World War II. They were educated like the dragoons of old who, when on foot, were told they could defeat any mounted force and, when on horseback, were told that they could defeat any dismounted unit. Leavenworth students were continually informed that as general staff officers they needed to know everything the generals had to know so they could assist them with proper staff work. As potential generals, they were told they would need to know everything that their staff knew to better teach less qualified subordinates and to better appreciate the estimates they would receive from a staff during combat.

This dual focus on generalship and staff skills enabled the relatively small pool of Leavenworth-trained officers to not only bring their own individual skills to either job, but also train and assist those officers around them who found themselves in a command or staff role having had no Leavenworth education or only the abbreviated course offered during mobilization. Combined with the War College education received by most of the Army's senior leaders, the American officer corps' broad and challenging educational experience during the interwar period resulted in a level of competence that enabled them to fight effectively despite lacking a so-called "command culture."[555]

Lesley McNair made essential contributions to this educational system and the doctrine and organizations officers studied in the Army schools, ranging from his service on the post-WWI inaugural faculty at Leavenworth to his appointment as Commandant there in 1940. He also benefited from the War College education, which gave him invaluable experience that prepared him for his wartime roles at GHQ and AGF. U.S. Army officer education stands out as one of America's greatest successes during the interwar period, and an area in which America prepared more effectively before World War II than any other war.

Along with McNair's increased responsibility as AGF commander came new challenges, many of which resulted from the rapidly expanding mobilization process. The problem of categorization and allocation of new recruits to the various military specialties emerged as one of

[555] Muth, *Command Culture*.

the most significant challenges he faced. As Robert Palmer described in Army Ground Forces "Study No. 5" on "The Problem of Quality" in procurement of AGF enlisted personnel:

> There were various reasons for the relatively inferior quality of the human raw material made available to the ground combat arms. One was the absence of a central system of personnel classification and assignment for the armed forces as a whole. Another was the Army's own system of Classification.[556]

As described above, Selective Service allowed the practice of volunteering, which served as the sole source of Navy and Marine recruits through the end of 1942 (the Navy and Marine Corps also procured most of their officers through volunteering, usually before they had received any military training, selecting them on the basis of civilian education and experience). This ensured "many thousands of men of the finest physical types, and of high degree of education and personal initiative, remained outside the operations of Selective Service and hence outside the Army."[557]

Of those men who did end up in the Army, many volunteered – and an overwhelming percentage of volunteers in 1942 chose the Army Air Forces, while only five percent chose infantry or armor. These factors combined to divert the vast majority of the highest-quality recruits to the Navy, Marine Corps, and Air Forces, and many of these recruits served in the technical services in non-combat roles. Intelligence testing only added to the problem. Throughout 1942 and 1943, War Department policy required diversion of an ever-increasing percentage of the Army's best recruits from the AGF to either the AAF or ASF based on their score on the Army General Classification Test (AGCT). After two years of reliance on the

[556] Palmer, " AGF Study No. 5," 2.

[557] Ibid.; A survey conducted in September 1942 revealed that of the 4,021 soldiers surveyed, 25% of infantrymen liked their branch the least, while only 3% of soldiers in other branches liked their branch the least of all branches. Special Services Division Research Branch, "What the Infantrymen Thinks About the Infantry," September 14, 1942, National Archives and Records Administration, College Park, MD, NARA II, RG 160, Box 700. Additional question responses indicated infantrymen believed their training less effective than members of other branches in preparing them for war and post-war civilian employment.

AGCT, first implemented in 1940, War Department personnel believed they had validated the test's ability to measure a recruit's capacity to learn by comparing their test scores to their performance in Army training courses. By 1942, the test served as the primary tool for measuring recruits' learning ability, allowing classification of each recruit in Army Grade I through V ("rapid learners" to "slow learners"). War Department policy directed an even distribution of inductees by intelligence classification to the three functional commands; however, the classification system further disadvantaged the AGF by aligning civilian skills with military specialties. Since no civilian skills translated directly to service in the infantry, armor, or artillery, almost every recruit received a specification serial number (SSN) below 500 (technical fields) leaving very few for classification to a combat specialty (SSNs above 500). Every step of the classification process incrementally reduced the pool of recruits available for assignment to combat positions.[558]

Therefore, the AGF received soldiers far shorter, weaker, and less intellectually capable (according to the Classification System's standardized tests) than the average recruit. Army historians noted, "one commander observed in a moment of exaggeration, his hardest problem was to find competent enlisted men to act as instructors, because 'everybody higher than a moron' was pulled out for one reason or another."[559] As historian Theodore Wilson noted, "The AAF claimed nearly twice as many Group I and II men than the AGF, and the proportions of Is and IIs grabbed by the ASF was 30 per cent higher than that of the AGF. At the other end of the

[558] Palmer, " AGF Study No. 5," 3-5. The association of civilian skills to military specialties led to assignment to each recruit a specification senial number (SSN) which, combined with the AGCT, justified assignment of skilled, intelligent recruits to non-combat roles; Lauer, "Perspectives on Infantry", 144-47.

[559] Palmer, " AGF Study No. 5," 6. War Department policy included two clauses that only added to the problem, one that diverted recruits with skill in any civilian trade to the technical services, and another that gave the AAF priority over those with high AGCT scores.

scale, the AGF contained more than five times as many Group V soldiers as the AAF and almost four times as many as the ASF."[560]

General Lear, commander of the Second Army, urged McNair in July 1942 to use the kind of advertising the Navy, Marine Corps, and Air Forces used so effectively to attract volunteers. McNair disdained personal publicity, but recognized the wisdom of Lear's advice, particularly since his efforts to influence War Department Policy directly since assuming command of AGF had no effect. This led McNair to make an Armistice Day Address to Troops of the AGF titled "The Struggle is for Survival." While directed to the AGF, the transmission of this address over national radio networks ensured it reached a wide cross-section of the American populace. In the speech, McNair noted the nation's observation of Armistice Day every year since 1918, recognizing an achievement largely stemming from the valor displayed by the AEF's ground forces during the First World War. McNair reminded his listeners of "war-hardened enemies pouncing on green American troops, taking every possible advantage of our lack of training and battle experience. Pearl Harbor was another such case."[561]

Pointing out that Germany and Japan "comparatively speaking, both always have been at war or preparing for it," McNair described the enemy not as admirable for their military tradition, but formidable – and argued America's non-militaristic tradition made its preparation to fact this enemy in combat particularly challenging. He noted this preparation required both personnel and materiel – and emphasized the latter requirement gave "even our vast industrial system a few headaches." Regarding the personnel question, McNair described the achievements of the previous year – particularly at the 1941 maneuvers – and stated the ground forces

[560] Theodore A. Wilson, "Who Fought and Why? The Assignment of American Soldiers to Combat," in *Time to Kill: The Soldier's Experience of War in the West, 1939-1945*, ed. Paul Addison and Angus Calder (London: Random House UK, 1997), 300.

[561] Lesley J. McNair, "The Struggle Is for Survival," *Vital Speeches of the Day* 9, no. 4 (1 December 1942).

possessed generally competent soldiers and officers. However, he argued training alone could not prepare an army for the demands it would face – "soldiers – our kind of soldiers – must be right inside." This meant,

> Our soldiers must have the fighting spirit. If you call that hating our enemies, then we must hate with every fiber of our being. We must lust for battle; our object in life must be to kill; we must scheme and plan night and day to kill. There need be no pangs of conscience, for our enemies have lighted the way to faster, surer, and crueler killing; they are past masters. We must hurry to catch up with them if we are to survive. Since killing is the object of our efforts, the sooner we get in the killing mood, the better and more skillful we shall be when the real test comes. The struggle is for survival – kill or be killed.[562]

Even today, one can imagine the immense impact of these words on the American public, and the present or future members of the Army that fought the war. With American forces only just beginning to engage in direct combat in the Pacific and Mediterranean Theaters, many Americans remained in a state of denial or ignorance regarding the immensity of the task the nation faced.

As Palmer noted, this speech prompted negative reactions from some members of the public, "even after a year of declared war with enemies well known to be ruthless." However, oversimplifications of the speech and its impact dominate the historical record, like the brief mention of it in *Nothing Less than Full Victory*, in which historian Edward G. Miller summed up the content of the speech by merely stating, "[McNair] told the public that the purpose of an army was to make skillful killers of men." Miller described the speech's impact even more simply: "the media had a field day." Not only have most histories similarly neglected to describe the contents of McNair's speech in detail, they also typically (and incorrectly) implied that it caused an overall negative public reaction. A review of dozens of newspaper clippings and letters that contain responses to the speech, collected by Clare McNair in folders and scrapbooks

[562] Ibid.

that she later donated to the Library of Congress, revealed that the majority of both the media and individuals who wrote to McNair directly responded favorably to the speech.[563]

McNair's efforts throughout 1942 to raise awareness in the War Department of the significant deficiencies in quality caused by the Selective Service and classification processes echoed the ever-increasing number of complaints from field commanders, who the official history noted, "protested repeatedly to Headquarters, Army Ground Forces that they were receiving men of too low a mental quality to be trained." Commanders argued it made no sense to develop expensive equipment only to entrust it to un-trainable soldiers, and said AGCT Class V soldiers posed a danger to themselves and their units when given access to lethal weapons. The Air Forces and Service Forces used exactly the same arguments to support their need for the majority of the high quality recruits, but they remained the strategic priority throughout 1942 based on the assumption America's initial engagement in combat would largely entail Army Air Force operations. A number of additional factors worked in the AAF and ASF's favor, from the difficulty of changing bureaucratic policies in effect since 1940 to the widespread belief that the War Department planned only temporary preferential assignment of high-quality troops to the AAF and ASF. As these policies continued throughout 1942, various branches or units of the ground forces used similar arguments to petition McNair for preferential allocation of the best soldiers assigned to the AGF. McNair refused these requests largely out of principle, arguing that

[563] Palmer, " AGF Study No. 5," 9; Miller, *Nothing Less Than Full Victory*, 16. Miller also incorrectly identified McNair as the "commander of GHQ."; Various, "Folder: 1942 Armistice Day Address."; ———, "Oversized Folder: Scrapbook of Clare McNair's Newspaper Clippings, 1940-1944," McNair Papers, U.S. Library of Congress.

favoring part of the ground forces would disadvantage the rest – particularly the infantry – just as War Department policies disadvantaged AGF as a whole.[564]

Two additional factors added to the severity of the AGF's quality problem. Even before the reorganization of March 1942, the Air Forces recognized the Selective Service Act's classification system did not divert nearly as many recruits to its ranks as it did to the Service Forces. The aviation industry, still in its infancy, represented a small minority of America's skilled workers. This led Selective Service boards to exclude potential recruits with aviation expertise from conscription. Therefore, the Army Air Forces requested the War Department institute a policy that required at least seventy-five percent of all white inductees assigned to the Air Corps have an AGCT score of at least on hundred. Convinced by the Air Corps' argument that it required this proportion of above-average intelligence personnel to accomplish its mission, the War Department put the requested policy in place. This set in motion a yearlong battle between the Air Corps and McNair, who argued the Ground Forces needed intelligent personnel just as badly to serve as combat leaders. Twice in 1942, McNair convinced the War Department to rescind the preferential policy, but in each case, it quickly reinstated it, with minor modifications. In fact, the strategic decision taken in the summer of 1942 to employ air power over Europe in large numbers before commitment of ground troops enabled Arnold to gain War Department support for a modified "71-percent" rule, which actually had an even worse impact on the Ground forces than the previous "75-percent" rule. The new rule, approved in September 1942, allocated 71 percent of personnel who scored above 100 on *both* the AGCT and the mechanical aptitude test to the AAF. This resulted in the assignment of a larger aggregate

[564] Palmer, " AGF Study No. 5," 10. McNair made only one exception, allowing a higher proportion of quality troops in airborne units - but these made up only two percent of AGF's total strength.

number of high-quality recruits to the AAF, where the majority served in non-combat roles, even though the name of the new policy implied it would have the opposite effect.[565]

The debate continued well into 1943, leading to changes in policy, but none of these changes resulted in any significant improvement of AGF's quality deficit, and preferential assignment of the highest intelligence recruits to the AAF continued well beyond the summer of 1943. In addition, the War Department continued to support a policy directing that any qualified enlisted man could apply for pilot training or officer candidate school (each required men in Class I or II with AGCT scores over 110) which siphoned even more quality men away from ground combat units.[566]

Finally, adding to the challenges posed by these various policies, a shortage of junior officers led Marshall to direct unit commanders to scour their divisions for potential officer candidates. By the summer of 1942, divisions resorted to examining men with only one year of high school, but still could not provide the desired number of qualified officer candidates. This led the War Department staff, many of whom believed division commanders simply did not want to release already trained soldiers for officer training, to seek a new solution to the shortage of junior officers. They recommend in September 1942 implementation of the Army Specialized Training Program (ASTP), which would remove high-quality recruits from the replacement pool and send them to college, and then to military training as officers. Marshall approved this program in December 1942, resulting in the drain of more than 100,000 of the best recruits (men with scores over 115 on the AGCT) from the replacement pool. McNair opposed this program from the beginning, and presented his opposition formally on October 4, 1942 in a memorandum

[565] Lauer, "Perspectives on Infantry", 148-50. The ASF supported the AGF's campaign to eliminate preferential assignment to the AAF, but since the ASF received a large pool of quality recruits with skill in civilian trades, the policy had a far more detrimental effect on the AGF; Palmer, " AGF Study No. 5," 10-11.

[566] Lauer, "Perspectives on Infantry", 151-52; Palmer, " AGF Study No. 5," 12-13.

to the War Department. He saw no value in sending these soldiers to college, believing they could receive faster and more appropriate training in military units under wartime conditions, particularly considering the AGF's severe shortage of high-quality men. McNair's memo had no effect – but Marshall had already approved the program, and AGF paid the majority of its cost. The ground forces provided forty-seven percent of the total personnel who participated in the ASTP, despite the fact that AGF already received a far smaller share of high-quality personnel than AAF or ASF, and made up less than a third of the total Army forces.[567]

The Army's replacement system represented another significant challenge related to the issue of soldier quality. The War Department announced on March 18, 1942 that the reorganization of 9 March would not change existing replacement policies or procedures. Viewing the replacement issue as a Troop Basis matter, meaning one involving broad policies regarding allocation of manpower within the Army based on projected personnel requirements by unit type and year, the War Department left the Adjutant General in charge of assignment of inductees to replacement centers, and of graduates of those centers to units and other organizations. The War Department established the priorities that drove the Adjutant General's replacement apportionment decisions. This left AGF to focus on its primary mission of activating and training units, while the Replacement and School Command oversaw the replacement system.[568]

The replacement training system added to the problem of soldier quality in 1942 because it used unit mobilization requirements, not combat losses, as the basis for replacement allocation

[567] _____, " AGF Study No. 5," 13-19; Lauer, "Perspectives on Infantry", 151-52.

[568] Robert R. Palmer, Bell I. Wiley, and William R. Keast, *The Army Ground Forces: The Procurement and Training of Ground Combat Troops*, United States Army in World War II, ed. Kent Roberts Greenfield (Washington, DC: U.S. Army Center of Military History, 1948; reprint, 1991), 173-74. In 1942 the AGF oversaw the training of replacements conducted by the Replacement and School Command, while the ASF remained responsible for movement of replacements to theaters of operations.

decisions. This meant Replacement training Centers (RTCs) failed to account for the disproportionate losses between branches and services in combat. As the official history noted,

> Hence in 1942 the Quartermaster Corps had as large an RTC capacity as the Field Artillery; the Signal Corps a larger capacity than the Armored Force; and the Medical Department half as large a capacity as the Infantry. In the Infantry the number of replacements trained as riflemen, cooks, and clerks corresponded to the number of men in each of these jobs called for in Tables of Organization of infantry units, without allowing for the fact that when battle losses began to occur the casualty rate among riflemen would be higher than among cooks.

After the declaration of war in December 1941, the War Department decided not to expand RTCs in proportion to the Army's overall expansion. New units would receive fillers from reception centers, while units overseas or alerted for overseas movement would receive replacements from RTCs. War Department policy for RTCs rested on the principle that "service units, requiring a larger number of technically trained men than combat units, should receive a higher proportion of fillers already branch-trained than should units of the combat arms."[569] This put in place yet another policy underpinning the procurement and allocation of Army personnel that funneled higher quality and better trained troops to the ASF and AAF, rather than the infantry and other ground combat units,.

By November 9, 1942, AGF again urged the War Department to streamline the process by establishing general (rather than specialty-specific) Zone of Interior replacement depots. Among the various reasons AGF recommended this policy, it would reduce the demand for quality officers to run the depots – an ongoing problem.[570] The War Department supported this request, establishing one such depot near each coast to hold and process overseas replacements

[569] Ibid., 175-76.

[570] McNair noted the poor performance of many replacement center commanders, and sometimes brought the weakest performers to General Marshal's attention. For example, McNair recommended the relief, reduction to his permanent grade of colonel, and retirement of Brigadier General Forrest E. Williford, Commanding General of the Antiaircraft Replacement Training Center at Fort Eustis, Virginia, in a memo to the War Department G-1 on December 7 1942. Lesley J. McNair, "Memorandum to Chief of Staff, U.S. Army (Attention: G-1, War Department), Subject: Reduction of General Officer to Permanent Grade," December 7, 1942, National Archives and Records Administration, College Park, MD, RG 337, Entry 58A, Box 9, File A-C.

for all arms and services except the Air Forces. It also decentralized assignment procedures, delegating this authority to the three functional commands. Therefore, as the AGF approached the end of mobilization in 1943 and shifted its focus to replacement operations, it possessed the authority to direct AGF replacements to specific units. However, it still suffered the effects of the many other longstanding policies like volunteerism and classification testing that ensured the ground forces received the lowest quality personnel. AGF also had no control over the movement of replacements to reception depots overseas, and from there to soldiers' gaining units. This process often took several weeks, resulting in replacements losing many of the benefits of the initial training they received before shipping out, arriving at their units out of shape, demoralized, and no longer familiar with basic job skills.[571]

The many problems with the replacement system's administration revealed by combat operations in North Africa prompted the War Department to assign greater responsibility for oversight of the replacement system to AGF.[572] Once Marshall assigned this task to McNair, he traveled both to various replacement centers and to Tunisia to investigate the problem personally, discovering first hand various abuses of the system. He learned that some commanders in North Africa chose to form new units from personnel at replacement centers rather than sending the

[571] Palmer, Wiley, and Keast, *The Procurement and Training of Ground Combat Troops*, 179-84. As Palmer and Keast noted, "Faults in administration lay principally outside the jurisdiction of the Army Ground Forces, which in general had jurisdiction over training only." Processing problems still plagued the replacement system, from medical examination to equipment issue, and "the experience of replacements en route tended to destroy their morale and to undo the effects of their training." Initial combat experience in North Africa from 1942-43 exposed these various deficiencies to scrutiny by field commanders and War Department personnel alike, leading to further adjustments to the system in mid-1943.

[572] George C. Marshall, "Memorandum for General McNair," November 28, 1942, National Archives and Records Administration, College Park, MD, RG 319, Box 5. Marshall noted his shock at learning some replacements arriving in North Africa joined their regiments without ever having fired a rifle. He wrote, "I supposed this is a matter entirely beyond your control. Nevertheless I want to get your reactions to the administrative set-up that produces such a result." Marshall continued, "I have not had an opportunity to talk to Somervell, or to G-1 or G-3 about any of these matters, the assignment of replacements . . . etc., but I should like to have you present when I do talk to them."

replacements to their intended units. Other commanders admitted they made it a habit to travel to replacement centers and hand-select their replacements, without regard to their intended unit or even unit type. This latter practice often resulted in problems like armor-trained replacements ending up in infantry units, negating the practical usefulness of any unit-specific training those replacements received before shipping out.[573]

In 1943, the War Department gave McNair direct responsibility for the administration of the ground forces' individual replacement system, and provided guidance for implementing various changes to the existing system, requesting AGF's response before making final decisions on those changes. The War Department based its guidance to McNair largely on the findings of The Committee on Revision of the Military Program, formed in early summer 1943 to look at Army personnel problems as a whole. This same committee recommended reduction of the Army Troop Basis to a cap of eighty-eight divisions, based largely, according to the official history, on a national personnel crisis – although as discussed above the reduction really stemmed from the inability of industry to equip any more divisions. In its recommendations, issued on June 7, 1943 the committee proposed an extension of the replacement-training program to six months, including unit training, and provision of well-trained replacements in the interim by moving soldiers from recently mobilized and trained units into the replacement pool. This recommendation resulted in part from field commanders' preference to promote soldiers from within their own unit ranks, causing them to request assignment of replacements only in the grade of private).[574]

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[573] Palmer, Wiley, and Keast, *The Procurement and Training of Ground Combat Troops*, 181-83. Palmer and Keast related on particular anecdote: "'One division commander,' wrote General McNair, 'himself told me that when he needed replacements he went to the replacement depot and chose his men individually, regardless of arm or specialty, based primarily on their appearance and actions – somewhat as one would buy a horse.'"

[574] Ibid., 181-84.

The Committee on Revision of the Military Program also suggested that AGF should consider training replacements in units rather than in replacement centers as a way to increase training effectiveness. This latter recommendation would have led to a system more like that used in the British and German Armies, in which replacements trained in units and these units replaced others in the line so they could reconstitute. Given the decision to form only eighty-eight divisions, and the preference of American field commanders to rebuild broken units with individual units rather than replace them with new (unknown and presumably not combat hardened) units made this recommendation impractical. Further, McNair believed six months of replacement training was excessive, and recommended thirteen weeks. In August 1943, the War Department increased the replacement-training program to seventeen weeks, but retained the individual replacement system, assigning implementation and oversight responsibility to AGF.[575]

To manage this new responsibility, McNair directed the establishment of the Classification and Replacement Division within the AGF. He also attempted to correct several systemic problems AGF personnel identified, in part by recommending clarifications to War Department Circular 85, which described the physical and psychological requirements for overseas service. McNair and his staff found that doctors tended to apply stricter medical criteria to replacements the nearer to the combat zone they arrived, while assuming stateside medical personnel simply took a lax approach to applying clear standards. For example, AGF inspectors discovered that some soldiers threw away issued dental appliances in hopes of avoiding overseas service by failing a later exam. To deal with such issues, McNair recommended clarification of dental standards at a minimal and simple level: "ability to masticate the Army ration." He also sought the removal of "mental" as a medical evaluation category for replacements due to the subjectivity involved in assessing a recruit's mental capacity, and the tendency for recruits

[575] Ibid., 184-85.

classified at the upper end of the intelligence scale to receive preferential assignment to the AAF or ASF. The War Department did not accept all of McNair's recommendations, but it did accept many, including them in a new policy document it published in the late summer of 1943: "Preparation for Oversea Movement of Individual Replacements" (POR). This document remained in effect until mid-1944, when the growing shortage of personnel forced the War Department to lower physical and mental standards for new recruits even further.[576]

AGF inspectors discovered particularly troubling problems when they examined the process by which the ASF moved replacements into combat theaters. The AGF staff initially had no desire to assume responsibility for the replacement system, and until reports from deployed commanders began to indicate problems, AGF leaders believed the ASF established an oversaw an effective replacement system. However, reports of poor discipline among replacements received in theater from the ASF's Shenango, Pennsylvania Replacement Center led Brigadier General Alexander R. Bolling, the AGF G-1 (Assistant Chief of Staff for Personnel) to conduct an inspection visit on May 17, 1943. The official history described Bolling and the other AGF staffers as "shocked by their findings." Bolling, "who in the past strongly favored the operations of replacement depots by the Service Forces," recommended AGF take over responsibility for operations at Shenango.[577]

After discussing the situation with the War Department, AGF instead established two new replacement depots for its own replacements, one on each coast and both in operation by August 1943, while the ASF retained Shenango for processing and movement of Service Forces replacements. Thus, after August 1943 AGF managed all replacement functions for Ground Forces from two new depots (one at Fort Meade, Maryland, capable of handling 18,000

[576] Ibid., 186.
[577] Ibid., 186-87.

replacements, and the other at Fort Ord, California, with a capacity of 7,000 replacements). In doing so, AGF implemented and ensured the efficacy of functions ranging from medical processing, equipment issue, individual training, shipment of replacements overseas. As Palmer and Keast noted,

> Improvement in the quality of replacements in the ground arms was soon noted. The Inspector General reported on 30 October 1943 that since the establishment of the depot at Fort Meade replacements reached the East Coast staging areas better equipped and clothed than before, and with more confidence and eagerness to go overseas, though a few had still not qualified with their primary weapons. Reports from Italy received through the AGF Board were in general favorable. The Fifth Army found that replacements were better than they had been in the Tunisian campaign and that infantry replacements in particular were good, though some had inadequate knowledge of their weapons. By the time of the Fifth Army reports (November and December 1943) infantry replacements had either benefited from the 17-week program in replacement centers or had come from units well along in their training. The fact that, despite all efforts, some men lacked proficiency with their weapons may be attributed to difficulties in the training and processing of certain types of specialists.[578]

Once AGF established and ran its own replacement system, the quality of ground force replacements quickly improved.

These improvements, while welcomed by field commanders, could only raise the overall quality of the ground forces to limited degree. Many other longstanding personnel procurement issues continued to divert the highest quality recruits away from the ground forces, even after AGF took over responsibility for its own replacement system and lengthened replacement training to seventeen weeks. National personnel shortages caused by the competing demands of active military service and war production made quality problems worse. This left the Army short 330,000 recruits by September 1942, and led President Roosevelt to approve a recommended massive reduction in the planned end strength of the Army, resulting in the updated Troop Basis of July 1, 1943 that allocated 500,000 fewer personnel to the Army than projected in early 1942. Most of the resulting reductions in strength affected AGF units, even though they made up less than twenty percent of the total personnel strength of the Army. For

[578] Ibid., 186-88.

example, AGF had planned to mobilize and train 125 ground combat divisions by mid-1943, but it only received enough recruits to form ninety divisions, even as both the ASF and the AAF enjoyed a net increase in personnel strength.[579]

With no end to the nation's personnel shortages in sight, the 1943 Troop Basis ended up halting AGF expansion for the rest of the war. The War Department capped AGF's end strength at ninety divisions, and total personnel in AGF grew from 2,471,000 at the end of 1942 to only 2,502,000 on March 31, 1945 – the date the war ended in Europe. This negligible increase in aggregate numbers forced AGF to create the seventeen divisions required to grow from the seventy-three mobilized by mid-1943 to the ninety authorized by the new troop basis mostly by from troops freed up by the disbanding of various non-divisional units. For example, many of the necessary soldiers came from demobilized antiaircraft battalions deemed no longer necessary because the Allies had achieved air superiority in Europe by early 1944.[580]

The low caliber of recruits assigned to the ground combat arms led to significant challenges for the Army Ground Forces upon their entry into combat. McNair foresaw this problem in early 1942 and struggled thereafter to reverse the various policies that caused it. Nevertheless, it took combat experience and the shockingly disproportionate casualties suffered by the infantry to finally convince Marshall and the War Department to take action to correct the problem.

After struggling since the beginning of 1942 to draw the attention of War Department leaders to the various policies that funneled the vast majority of quality recruits to the AAF and ASF, McNair finally appeared to get the magnitude of the problem across to General Marshall in

[579] Lauer, "Perspectives on Infantry", 154-55; The AGF shipped eighty-seven divisions overseas, and formed three more overseas; however, it inactivated one division upon arrival in theater and never committed two. Thus, eighty-seven divisions actually fought during the war. See Palmer, Wiley, and Keast, *The Procurement and Training of Ground Combat Troops*, 489-93.

[580] Weigley, *Eisenhower's Lieutenants*, 13.

February 1944. Marshall asked McNair on February 5 what he thought the War Department could do to find urgently needed infantry replacements. In response, McNair showed statistics to Marshall that demonstrated the true magnitude of the problem. The numbers demonstrated that although the infantry made up only eleven percent of all Army personnel during the campaign in Italy, it had suffered sixty percent of the total casualties incurred during that campaign. Marshall conveyed this disturbing information to President Roosevelt the next day, noting that the increased requirement for infantry sure to result from the upcoming execution of Operation OVERLORD would only exacerbate the problem. He also sent a memo to his staff directing them to confer with McNair and then propose to him means to improve appreciation of the infantry soldier. This memo read, in part,

> I am wondering just how we should go about dignifying the infantry rifleman . . . . It might well be charged that we have made the mistake of having too much of air and tank and other special weapons and units and too little of the rifleman for whom all these other combat arms must concentrate to get him forward with the least punishment and losses. I don't want to discourage the rifleman and yet I want his role made clear and exalted. I don't want to unduly alarm the families of riflemen and yet it is important that some action be taken.[581]

After years of reliance on a personnel system built on flawed logic, Marshall finally recognized the problem – just four months before the planned invasion of mainland Europe.

Meanwhile, the field commanders continued to make do with replacements that remained too few in number and of disappointingly low quality. Most of the reasons for the low quality of the infantry in early 1944 stemmed from decisions made years earlier, and neither McNair nor Marshall could do much to improve the situation this late in the war. Marshall did finally cancel the ASTP in early 1944, at McNair's urging, a decision that freed up 73,000 high-quality personnel for addition to the replacement pool. Demonstrating Marshall's awareness of the severity of the quality problem AGF struggled with, all of these men returned to the Army as

[581] Bland, ed. *Vol. 4, Marshall: "Aggressive and Determined Leadership"*, 266-67. In addition to McNair's recommendations, various field commanders highlighted the desperate need for more infantrymen of high quality and the need to "dignify the infantry" in the public eye.

AGF replacements, and 55,500 of these men went to infantry divisions. Even this made little real difference at a point in the war when for more than four years various policies had diverted the highest quality troops, both in terms of physical and mental classification, to the AAF and ASF. McNair fought these processes tenaciously from their inception, but could not convey to Marshall the severity of their impact until early 1944, far too late to correct the damage they caused before execution of Operation OVERLORD.[582]

McNair did propose several initiatives in response to Marshall's memo to his staff of February 6 intended to improve both the morale of the infantry and the image of the American infantryman among the public. His recommendations included creation of a badge that only infantrymen could earn, various speeches and engagements with leaders of industry, and a massive media campaign. One can see the result of these efforts in articles like one published in *Time* on April 10, 1944. This article described McNair's recent trip to Fort Bragg, North Carolina, to award the first new "Expert Infantryman" badge to Technical Sergeant Walter L. Bull – a twenty-six year old former steel worker from Baltimore. The article described the twelve requirements for earning the badge, including demonstrating proficiency at scouting and patrolling, field sanitation, physical fitness, marksmanship, and completion of training in "live fire" events during which bullets flew only thirty inches over the infantryman's head. The article also reported the posthumous awarding of the Congressional Medal of Honor to Private Nicholas Minue for valor in action during the Tunisian campaign the previous year. Finally, it described

[582] Ibid., 266; Theodore A. Wilson, "Deposited on Fortune's Far Shore: The 2d Battalion, 8th Infantry," in *D-Day 1944*, ed. Theodore A. Wilson (Lawrence, KS: University Press of Kansas, 1971), 217.

the respect soldiers, sailors, and aviators had for the infantry due to the arduous nature of their job.[583]

While such efforts came far too late to improve the quality of the infantry before the D-Day invasion of Normandy, they did improve the infantryman's morale, and McNair hoped they would soon result in the provision of higher quality infantry replacements. McNair's public relations efforts also appeared to have a significant impact on American leaders of industry and the media. For example, William I. Nichols, editor of *This Week*, sent McNair a symbolic check for one dollar on March 7, 1944, in payment for his "article of tribute to the Infantry," which Nichols scheduled for publication on April 2. In Nichols' words, "having served for some time as a dollar-a-year man for the War Production Board, it gives me a certain pleasure to reverse the situation and enroll a good government man like yourself as a dollar-a-year writer for *This Week*."[584]

McNair also implemented the "Soldier for a Day" initiative at various Army installations across the United States including Camp McCoy, Camp Shelby, and Fort McClellan. This three-day series of demonstrations for leaders of industry took place from 14-16 June, 1944, giving them the opportunity to interact with the combat troops preparing to deploy overseas at these installations, observe them in training, and see firsthand the employment of the clothing and equipment they had produced for the Army's combat troops. The program had a very positive impact on the many civilian industrial leaders who participated, as demonstrated by the many letters they sent to McNair after the event, expressing their appreciation of the opportunity to interact with mobilizing American soldiers, and the admiration they held for them. These letters

[583] "Army & Navy - Infantry: Credit for Doughboy," *Time*, April 10, 1944, http://www.time.com/time/magazine/article/0,9171,796524,00.html (accessed March 5, 2012).

[584] "William I. Nichols to Lesley J. McNair," March 7, 1944, National Archives and Records Administration, College Park, MD, RG 337, Entry 58A-B, Box 9.

still exist in the AGF files at the National Archives, but evidence of this and the many other initiatives McNair led to improve the lot of the infantry during the war remain largely absent in the secondary literature on the war. McNair even reached out Mr. Paul Gallico of the Writers' War Board, and thanked him on March 18, 1944 for the letter he wrote to active fiction writers across America in connection with the "Infantry Program," encouraging them to place "the Infantry story before a reading group which [AGF is] very anxious to reach."[585]

Despite these efforts, by March 1945 fewer than 1,200,000 soldiers served in one of the Army's 89 divisions (only 87 of which actually served in combat), out of a total U.S. Army strength of 8,157,386, and the vast majority of these men had come from the lowest-classified recruits inducted into the Army. McNair fought to improve the lot of the ground combat soldier, particularly the infantryman, throughout his time at AGF, but his achievements mostly remained limited to his direct area of responsibility – mobilization training of new units and, beginning in 1943, AGF replacements. He did achieve some broader successes with his "Infantry Program," but these consisted mostly of symbolic gestures like the creation of the expert infantryman's badge, along with various public relations efforts that sought to elevate the image of the infantryman both within the Army and among the public. These efforts did improve morale among the infantry somewhat, and over time led to minor increases in the quality of infantry replacements. McNair could achieve little, however, to change the systemic problems in place since 1940. These problems led to the creation of American infantry divisions that accomplished many of the war's toughest missions, despite their formation from a pool of recruits that came

[585] Lesley J. McNair, "Lesley J. McNair to Paul Gallico," March 18, 1944, National Archives and Records Administration, College Park, MD, RG 337, Entry 58A-B, Box 9. For many additional letters, memos, and photographs related to the "Infantry Program" see RG 337, Entry 58A-B, Boxes 9-11.

from the Selective Service's lowest mental and physical classification levels. These divisions bore the vast majority of battle-related casualties throughout the war.[586]

Combat experience therefore served as the most effective method of creating high quality infantry officers, noncommissioned officers, and enlisted men. Once the government capped the number of combat divisions at ninety, the personnel assigned to these units had many opportunities to gain combat experience, since large unit commanders had to leave divisions in the line for extended periods without a break, filling losses with inexperienced individual replacements. This fact does little to support the often-cited myth of overwhelming American materiel superiority, particularly given the fact that the revised troop basis of 1943 stemmed not from a personnel crisis, as the official history claims, but from the inability of industry to produce enough materiel to equip the additional divisions originally planned.

National-level management of industrial mobilization rarely features as a significant factor in histories of the Second World War. Instead, histories of the war tend to focus on limitations of various weapons systems like antitank guns, tanks, machine guns, and the tank destroyer, usually presenting these limitations as the result of interbranch quarrels between military leaders, or those officers' – particularly McNair's – inability to visualize the true nature of modern warfare. This warrants a brief review of these topics, typically presented as the most important ones related to the development of military equipment for use during World War II, before addressing the often-ignored flaws in the industrial mobilization process, and the challenges these created for McNair and the AGF – problems they had no ability to control.

The tank destroyer, in particular, has long served as a primary source of many historians' criticisms of McNair. In a document summarizing the results of his review of McNair's

[586] Robert R. Palmer, "Study No. 4: Mobilization of the Ground Army," (Washington, D.C.: Historical Section, Army Ground Forces, 1946), 38-39.

correspondence after the war, Army historian Kent Roberts Greenfield identified the tank destroyer as the topic most often discussed. This correspondence demonstrated many complaints from the field regarding mixed performance of tank destroyers in combat, and efforts by McNair to influence the modification of tank destroyer doctrine and training to improve its performance.[587] Much of the weapon systems' difficulty stemmed from fundamental disagreements festering since the early days of GHQ. As Christopher Gabel pointed out, "General Marshall favored experiments with self-propelled mounts. McNair acceded, but he was never really reconciled to the self-propelled weapon." Further, McNair advocated a more cautious approach to antitank weapon employment than that reflected in the official doctrine, finally approved by the War Department, and published on June 16, 1942 as *FM 18-5, Tank Destroyer Field Manual, Organization and Tactics of Tank Destroyer Units*. McNair "suggested that tank destroyer forces would 'emplace and camouflage themselves' when faced by hostile tanks," but the approved doctrine described a much more offensive-minded approach, exemplified in the Tank Destroyer Center's official motto: "Seek, Strike, and Destroy."[588]

The creation of a separate Tank Destroyer Center, an expedient deemed necessary by General Marshall to prevent the Infantry or Cavalry Branch from simply incorporating the new weapons into their existing organization and doctrine, led to significant problems executing this aggressive doctrine. The offensive mindset instilled in separate tank destroyer units required the ability to fight as members of combined arms teams, since the open-turreted, thin-skinned vehicles remained highly vulnerable to the guns of enemy tanks. However, isolating the Tank Destroyer Center from the other branches meant few commanders, upon receiving tank destroyer

[587] Kent Roberts Greenfield, "Memorandum for Record, Subject: McNair Correspondence," April 30, 1946, National Archives and Records Administration, College Park, MD, RG 319, Entry 488, Box 129, File 2.

[588] Gabel, *Seek, Strike, and Destroy*, 24-27.

units as reinforcements, knew how to employ them, even had the tank destroyers benefited from the necessary intelligence, road priority, advantageous terrain, and all-tank enemy threat envisioned in *FM 18-5* – factors that rarely materialized. The new doctrine's emphasis of coordination of independent tank destroyer unit operations, rather than true combined arms integration, only added to the problem.[589]

As evidence arrived at the War Department that the tank destroyer was not meeting its expectations in the Mediterranean or European Theaters of Operation, McNair and AGF adjusted tank destroyer doctrine and training methods based on guidance received from OPD. However, the late fielding of effective tank destroyers meant much of the early criticism stemmed from the poor performance of expedients as much as flaws in doctrine. The Ordnance Department debated the details of tank destroyer design with Bruce for months, leading the War Department to form a Special Armored Vehicle Board chaired by Brigadier General W. B. Palmer. The Palmer board criticized the Tank Destroyer Center for inflexibility and making unreasonable demands, but finally approved a tank destroyer design in late 1942 that met Bruce's specifications. By this time, the Army was already engaged in combat in the Pacific and North Africa, and the campaign in Tunisia exposed many challenges with the existing tank destroyer expedients and doctrine.[590]

The 37-mm, still the primary antitank gun in use during the campaign in North Africa, served as a particularly common target of criticism. However, as demonstrated above McNair

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[589] Yeide, *The Tank Killers*, 6-7. As Yeide pointed out, the War Department originally designated Bruce's organization the Tank Destroyer Command, but later, based on McNair's reminder it possessed no command authority, redesignated it a Center; Gabel, *Seek, Strike, and Destroy*, 24-26.

[590] ———, *Seek, Strike, and Destroy*, 27-48. Gabel asserted tank destroyer doctrine proved more flawed during operations in North Africa than the weapon systems themselves, which commanders found useful through various field expedients (i.e. using the weapons as additional indirect fire assets or infantry support weapons to break through enemy strongpoints). He also pointed out the towed antitank gun originally supported by McNair proved easier to conceal than self-propelled guns, but less versatile, particularly in fulfilling the field expedient roles commanders found for self-propelled guns.

had known for years the gun lacked the power to face modern tanks, and believed Ordnance Branch would field a more capable weapon before the need arose to employ antitank weapons in combat. Delays caused by debates over the details of tank destroyer design delayed this process. However, this serves as only one example of the problems caused by a system in which the AGF, whose units would actually employ new weapons systems, could only suggest the design specifications it desired. AGF relied throughout the war on the ASF's technical services to develop new weapons, and Ordnance Branch often modified design parameters as it saw fit or believed necessary. In addition, units conducting training under AGF's supervision prior to deployment used training rounds, and in many cases, they apparently did not realize different, armor-piercing ammunition existed for use in combat. Upon hearing reports of the dismal performance of the 37-mm gun in North Africa, AGF sent a team of observers to study this and other problems. In a report prepared on February 21, 1943, these observers noted that in several instances they found antitank gunners in North Africa unknowingly using 37-mm training ammo, a factor that obviously contributed to the gun's lack of effectiveness.[591]

Over time, many commanders developed field expedient methods for employment of tank destroyers that improved their usefulness. In perhaps the most important lesson commanders gleaned from combat operations in both the Mediterranean and European Theaters, they learned that antitank guns proved most effective when commanders placed them in mutually supporting positions, closely integrated them with infantry, and employed them in as members of the combined arms team.[592] The concentration of tank destroyer doctrine development and training at an independent center surely contributed to the delay among field commanders in

[591] "Observer's Report on 37mm Gun," February 21, 1943, National Archives and Records Administration, College Park, MD, RG 160, Box 1.

[592] ———, *Seek, Strike, and Destroy*, 49-65. In particular, see Gabel's description of antitank gun employment at Mortain on 60-61.

learning how to employ them as the members of the combined arms team. Nevertheless, Marshall believed, probably correctly, that only this method would lead to development of the weapon system he envisioned, rather than simply another form of tank or combat car.

Despite their flaws, Harry Yeide pointed out the ease of criticizing tank destroyers with the benefit of "20-20 hindsight," noting several factors worth considering when reflecting on the overall performance of the tank destroyer in WWII. For example, since the U.S. Army had never fought a mechanized war before, it could only plan for one based on reports received from observers, and these all agreed on one point – through the end of the German campaign against France, neither tanks nor static antitank defenses had stopped German tanks. Yeide also argues that for once, at least the developers of antitank doctrine and weapons were not "re-fighting the last campaign." Yeide concluded, like Gabel, that modification of doctrine and eventual fielding of effective weapons made tank destroyers and antitank guns effective and respected members of the combined arms team.[593] The findings of the Cook Board support this conclusion. The board did not recommend scrapping the tank destroyer concept. Rather, it not only recommended retaining the tank destroyer and antitank gun, it also advised investing more money and effort into these systems to enable development of improved weapons systems in each category.[594]

U.S. combat equipment of various types received criticism throughout the war. Much like the tank destroyer, the M4 Sherman medium tank remained a topic of debate both throughout and after the war. The M4 Sherman, with its excellent reliability, speed, maneuverability, and its medium-caliber gun seemed well suited to commanders like Patton for its intended mission of striking enemy rear areas and exploiting breakthroughs by attacking enemy infantry and artillery units. However, other commanders did not share Patton's enthusiasm for the Sherman, and by

[593] Yeide, *The Tank Killers*, 9-10.
[594] Equipment Review Board, "Equipment Review Board Report," Annex E, 2-3.

1945, complaints from field commanders about the relative superiority of German Panthers and Tigers prompted Eisenhower to seek feedback from armor division commanders on the performance of the Sherman. The commanders of the 2nd and 3rd Armored Divisions reported back to Eisenhower in March 1945 with scathing criticisms of the Sherman, complaining of excessive losses of tanks and crews, and insisting the speed and maneuverability of the Sherman did not make up for its vulnerability to German tanks and anti-tank guns. These reports supported the widespread frustration among field commanders with the War Department's apparent refusal to consider fielding a heavy tank on par with the German Panther and Tiger.[595]

Accounts of the tank issue, in particular, often imply an ignorance of the real problem on the part of Eisenhower and his superiors, and discount the challenges production, shipping, and fielding of a heavy tank would have created for American industry. They also emphasize those areas where historians find American equipment deficient, and ignore the great successes of other weapon systems. For example, American artillery represented one of the greatest success stories of the war. Not only did American combat units possess a large number of effective howitzers; by 1942 the experiments the Gunnery Department at Fort Sill had conducted a decade earlier, with McNair's support, had led to a remarkable ability to rapidly adjust and then mass fires onto enemy targets, both stationary and mobile.

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[595] Calhoun, "Defeat at Kasserine: American Armor Doctrine, Training, and Battle Command in Northwest Africa, World War II," http://cgsc.cdmhost.com/cdm/singleitem/collection/p4013coll2/id/31/rec/1 (accessed January 2, 2012), 79-80. Eisenhower had struggled with subordinate commanders' complaints regarding the inferiority of American armor ever since his first campaign in North Africa in 1942-43, where he ordered Patton to conduct demonstrations of the M3 Stuart light tank penetrating the armor of captured German Panzer IVs to improve his troops' confidence in the 37-mm gun. Eisenhower recognized his subordinates' frustration with their less capable weapons, but also understood the real limitations in American production and shipping capacity, which made fielding of new weapon systems particularly challenging if not impossible. The appearance of small numbers of upgraded or new models of tanks and tank destroyers in 1945 demonstrates that the War Department sought solutions to the problem – they simply could not design, produce, and deliver across the Atlantic and Pacific Oceans new models of heavy equipment as quickly as field commanders desired.

The U.S. Army's first combat encounter against the Germans at Kasserine Pass, usually presented by historians as a decisive defeat for the Americans, demonstrates the frequent overemphasis of German armor superiority and failure to acknowledge the capability of American artillery at this early stage of the war. Field Marshal Erwin Rommel overran the forward elements of the 1st Armored Division's defenses after two days of fighting at Sidi Bou Zid largely due to the failure to place defending units in mutually supporting positions or employ the various American combat units effectively as combined arms teams. On the afternoon of February 15, 1943, Eisenhower approved the First Army commander's request to shift the Allied line back to stronger defensive positions. However, the confusion caused by many overrun and retreating units and the lack of time to establish a well-prepared defense resulted in further tactical setbacks over the next several days. Finally, on the evening of February 21, Brigadier General Paul Robinett, leading Combat Command B (CCB) of the 1st Armored Division, joined forces with Major General Terry de la Mesa Allen's 1st Infantry Division. The two units worked through the night to assemble a strong defensive position, linking adjacent units' defensive positions, placing antitank guns in covered and concealed positions, and massing all available artillery, linking them via a centralized fire control nets and pre-registering fires in the most likely enemy avenues of advance.[596]

Once the attack came the next morning, the improved effectiveness of Robinett's antitank guns due to their proper emplacement, combined with the rapid, accurate, and devastating fires of his massed artillery stopped Rommel's attack, forcing a German retreat. By the next day Robinett and Allen even contemplated a counterattack, called off due to the need consolidate their forces as part of an overall effort to strengthen other areas in the Allied defensive line.

[596] Orr Kelly, *Meeting the Fox: The Allied Invasion of Africa, from Operation Torch to Kasserine Pass to Victory in Tunisia* (New York, NY: John Wiley & Sons, Inc., 2002), 227-48.

Thus, when one focuses on a few days of tactical defeats in the early stages of the battle, Kasserine Pass can seem to represent the decisive defeat of an American division in its first encounter with the German Army in combat. One finds this interpretation of the battle in numerous accounts. However, by viewing the battles of Kasserine Pass as tactical actions in the overall Allied campaign in North Africa, one understands they represent only brief setbacks in a largely successful campaign for the Allies that culminated in the decisive defeat of all Axis forces in North Africa after a series of Allied tactical victories in the coming months. More importantly, overemphasis in the historiography on the American defeat at Kasserine Pass has not only obscured the remarkable success of the Americans' first campaign against the Germans. It has also overshadowed the remarkable success of early-war American combat equipment when its crews employed it properly – particularly covered and concealed antitank guns and massed artillery fires coordinated through direct observation and a consolidated fire direction radio net.[597]

While historian Orr Kelly presented a generally negative picture of American performance at Kasserine Pass in *Meeting the Fox*, unlike many historians, he placed the battle in the larger context of the campaign. He also described the ultimate Allied reversal of the German

[597] Calhoun, "Defeat at Kasserine: American Armor Doctrine, Training, and Battle Command in Northwest Africa, World War II," http://cgsc.cdmhost.com/cdm/singleitem/collection/p4013coll2/id/31/rec/1 (accessed January 2, 2012), 45-46; Blumenson, "Kasserine Pass, 30 January - 22 February 1943." The author demonstrated the powerful nature of this ubiquitous interpretation in the referenced master's thesis, by focusing on the initial setback on the first day of fighting Kasserine Pass, concluding that it proved America entered combat in North Africa with flawed doctrine and equipment. This failure to recognize the operational-level success of the Allied campaign, or America's contribution to it with equipment that performed adequately (or, in the case of the artillery, superbly) when properly employed, represents the danger of an excessive focus on tactical actions over campaigns. Most relevant to this study, it also demonstrates the danger of flawed interpretations resulting from analysis of historical events lacking adequate context. The author failed to recognize the real reasons for the poor initial performance of American antitank defenses, or the remarkable effectiveness of American artillery procedures (a capability the Germans never developed the ability to match during the war) until after completing the detailed research of McNair's career presented here.

offensive at Kasserine, although he did not acknowledge directly the significance of the American superiority not just in numbers but also in employment of equipment. For example, Orr emphasized American superiority in numbers of howitzers but not in artillery fire procedures. However, Kelly did quote Rommel's observations of American performance after the campaign:

> Although it was true that the American troops could not yet be compared with the veteran troops of the Eighth Army, yet they made up for their lack of experience by their far better and more plentiful equipment *and their tactically more flexible command*. In fact, their armament in antitank weapons and armored vehicles was so enormous that we could look forward with but small hope of success to the coming mobile battles. *The tactical conduct of the enemy's defense had been first class. They had recovered very quickly after the first shock and had soon succeeded in damming up our advance by grouping their reserves to defend the passes and other suitable points.*[598]

While many historians have leveled criticisms against McNair for his contribution to the supposed inadequacy of American combat equipment during prewar mobilization, many rely on Kasserine Pass as a textbook example of these failings – an example that fails under scrutiny. When one views the Kasserine Pass battles as part of a months'-long campaign, the ultimate outcome of both the battle and the campaign provide evidence of the effectiveness of the equipment the U.S. Army employed during the war, particularly employed in accordance with the doctrine, organization, and procedures McNair helped develop during the interwar period.

Russell Weigley established the longstanding accepted wisdom regarding the performance of the U.S. Army during World War II in the Epilogue to *Eisenhower's Lieutenants*, in which he wrote, "the German army remained qualitatively superior to the American army, formation for formation, throughout far too many months of the American army's greatest campaign. In the end, it was its preponderance of material resources that carried its army through to victory in World War II."[599] The military history community owes Russell

[598] Kelly, *Meeting the Fox*, 247-48; emphasis added.
[599] Weigley, *Eisenhower's Lieutenants*, 730.

Weigley a great debt for not only writing some of the most comprehensive and well-researched histories of the U.S. military, but also for helping build the foundation on which American military history rests. However, the military history community must somehow break free of this deeply flawed but remarkably resilient narrative of the U.S. Army's experience in World War II.

Despite the ever-growing body of evidence that should cast doubt on the materiel preponderance argument (much of which contributed to the narrative above), one still hears it whenever military historians gather. For example, a panelist at the 2011 Society of Military History (SMH) Conference in Lisle, Illinois argued (to paraphrase) that the U.S. Army never learned to conduct combined arms mechanized warfare as effectively as the German army during WWII. Nobody in the room objected – not one hand went up to voice an opposing opinion, ask for a clarification, or even request a simple explanation – how, then, did the U.S. Army defeat such a qualitatively superior German army?[600]

The foregoing analysis of Lesley McNair's career demonstrates that America found itself as unprepared for industrial mobilization in 1940 as it did in 1917. Further, the nation did not turn on a dime, achieving a remarkable transformation into a powerful militarized society in a few months or even two years. Rather, several years after Protective Mobilization took effect, the Army had to adjust its troop basis in July 1943, when it stopped forming new divisions because America lacked the ability to equip them. The American soldiers who invaded the beaches of Normandy on D-Day and then fought their way across Western Europe to defeat Germany did so in the face of disadvantages that make the material preponderance argument seem like fantasy. The Army employed divisions (and ground forces in general) consisted of the nation's lowest-quality recruits, and faced a German army that Steven Lauer convincingly demonstrated measured up in 1944-45 to the German army of 1939-40 both qualitatively and qualitatively.

[600] Author's observation of remarks made during a panel at the 2011 SMH Conference.

Lauer's comparative analysis of the U.S., British, and German armies demolishes the myth of a German Army on the Western Front made up of old men and boys. The Russians encountered this phenomenon in the final effort to defend Berlin, but the American Army confronted the best the German Army had to offer in Normandy and all its major campaigns through the end of the war in Western Europe.[601]

The U.S. Army also, rather famously, relied on much equipment that one can best describe as "good enough" when compared to piece for piece against German weapons like tanks and antitank guns. However, the Army employed the M4 Sherman tank and other equipment that proved inferior to German weapons not because of a lack of awareness or imagination. As described above, American commanders frequently insisted they needed better tanks and guns, but limitations in the nation's industrial and shipping capacity meant the U.S. Army still employed in 1944-45 much of the equipment that it first used in North Africa in 1942-43. American combat commanders also relied on a flawed replacement system that kept units in the line without a break, providing inexperienced and marginally trained individuals to replace experienced casualties, rather than pulling divisions out of the line to rest and reconstitute while fresh divisions took their place.

In short, the material preponderance narrative simply makes no sense. That conclusion begs the question: what explains the U.S. Army's success during World War II, particularly against the Germans in the ETO. Something enabled those low-quality soldiers, led by "workmanlike" generals, and operating inferior equipment, to defeat the vaunted Nazi enemy. The analysis above supports the conclusion that this mysterious "something" exists in the doctrine developed between the wars, tested and refined in the maneuvers before WWII, and ingrained in the minds of the American soldier through the most effective individual and unit

[601] Lauer, "Perspectives on Infantry".

training system the Army ever implemented. The Army's foundation of solid doctrine and tough, realistic training helped it overcome its deficiencies in human raw material (as evaluated by standardized mental capability tests and measures of physical size and strength) and subpar equipment (which rarely matched the quality of the German counterpart piece for piece, but did possess the advantages of reliability and economy of shipping space).

A few historians have worked in recent years to dismantle the materiel preponderance argument, much like Brian Linn so convincingly overturned Weigley's "grand theory" of American military operations in his 2002 critique of *The American Way of War*.[602] A few examples will suffice to demonstrate the view that the U.S. Army could and did stand toe to toe against the German Army and win, on numerous occasions. These works show American success during WWII resulted largely from the Army's logical organization, sound doctrine, and the arduous training that helped the American citizen-soldier learn this doctrine and overcome his lack of combat experience to develop into a highly skilled and professional warrior.

Several "revisionist" histories have emerged in recent years that add to the slowly growing evidence that refutes the "materiel preponderance" argument. One of the earliest such histories, Keith E. Bonn's *When the Odds were Even*, provided a comparative analysis of the training and doctrine of the U.S. and German armies that met in the Vosges Mountains in the winter of 1944-45. Bonn argued that "the published American tactical and operational doctrine was so similar to the German Army's that it shared its Clausewitzian validity almost point for point. " Further, Bonn described the differences in American and German organization as an

[602] Brian McAllister Linn and Russell F. Weigley, "*The American Way of War* Revisited," *The Journal of Military History* 66, no. 2 (April 2002). To Linn's critique, Weigley replied in the same article, "I have to thank Brian McAllister Linn not only for the generous things he has to say about my book, but also for doing for me much of the rethinking that I have been unwilling to put on paper for myself. With a keen eye he has discerned the shortcomings that I would have to try to remedy if I reconsidered the book. I do not substantially quarrel with his critique.

American advantage. Often criticized for his strict adherence to the principle of generalized training, McNair accepted the creation of only a minimal number of specialized units (for example, airborne divisions and ranger units), and espoused the view that specialized soldier training should take place in the unit rather than during induction training. Bonn pointed out that the American adherence to three basic division types throughout the war, as opposed to the Germans' reliance on many specialized divisions, not only simplified American logistics, but also, "most importantly, diminished the friction in command and tactics so prevalent on the German side." Finally, Bonn argued U.S. Army doctrine was particularly well suited to work in concert with its unit organization – particularly the triangular division and its combat commands and Regimental Combat Teams. This meant, "unlike the Germans . . . whose organization for combat sometimes failed to accurately reflect the needs of tactical and operational doctrine, the Americans' organization was admirably suited to the task."[603]

Historian Peter Mansoor, in his book *The GI Offensive in Europe* sought to rejuvenate the image of the American infantry soldier by forming an argument that "the Army of the United States accomplished its mission in western Europe because it evolved over time into a more combat-effective force than Germany could sustain on the battlefield." While Mansoor makes a somewhat circular and unconvincing argument, introducing little new information into the debate, his book represents another addition to the "revisionist" American school of WWII history.[604]

In *Victory at Mortain*, historian Mark J. Reardon added another counterpoint to the "materiel preponderance" school by focusing on Germany's first major counteroffensive against an American unit on the European continent. On August 7, 1944, five panzer divisions attacked a

[603] Keith E. Bonn, *When the Odds Were Even: The Vosges Mountains Campaign, October 1944 - January 1945* (Novato, CA: Presidio Press, 1994), 52-65.
[604] Mansoor, *The GI Offensive in Europe*, 5.

single American infantry division defending in the small French town of Mortain. Reardon argued, "for the first time since D-Day, American small-unit commanders were remaining alive long enough to learn their trade [how to apply their doctrine in combat conditions]. By examining the fighting that took place, one can discern how the U.S. Army was beginning to evolve into the proven and professional military machine that went on to win the war in Europe." Among the many interesting insights in Reardon's work, he revealed the usefulness of the towed antitank gun in the hedgerows of Normandy, where the rough terrain made them far more effective than tanks in frontline anti-armor defense. While Reardon acknowledged the risk of a thin front-line anti-tank defense, lacking depth or the means to reinforce the line at a point of penetration, the effectiveness of the guns deterred the Germans from risking the heavy losses necessary to achieve a penetration. Reardon also emphasized the effectiveness of the infantry-artillery team, whose doctrine the Army had firmly established before the war. Reardon argued, "combined training was carried on until infantry and artillery became thoroughly indoctrinated in the operational procedures necessary to coordinate their actions on the battlefield.[605]

Reardon acknowledged the infantry-tank component of the doctrinal infantry-artillery-tank combined arms team lacked the efficacy of the infantry-artillery relationship, but he made the important point that this gap proved just as common among infantry and armor units from the same division as it did between infantry units and reinforcing GHQ tank battalions. Rather than lack of habitual relationships, the hedgerows of Normandy presented the primary challenge facing the infantry-armor team, since they made the motorized or mechanized infantry particular vulnerable to concealed German defenders and deterred the infantry from accompanying the better-armored tanks on the attack. Over time, however, training and combat experience enabled

[605] Mark J. Reardon, *Victory at Mortain: Stopping Hitler's Panzer Counteroffensive* (Lawrence, KS: University Press of Kansas, 2002), 11, 85.

the infantry and armor to mature into the effective combined arms element envisioned in doctrine, and combined with the power of massed, observed artillery fires, enabled U.S. combat forces to maintain a steady advance in extremely difficult terrain against well-trained and equipped German units enjoying the advantage of the defense. This maturation process did not rely on innovation – or the creation of new doctrine on the spot as some histories imply – it simply involved the learning and battle-hardening process necessary to enable American combat units to execute their doctrine effectively in demanding combat conditions. Within a month of establishing the beachhead, combat units in Normandy had learned to operate effectively as combined infantry-artillery-armor-engineer teams, supplemented with close air support when available. This enabled them methodically to fight their way through some of the toughest terrain imaginable, against the vaunted German Army, and maintain steady progress despite the lack of reserve divisions and their reliance on inexperienced individual replacements to replace combat losses.[606]

This speaks volumes about the effectiveness of U.S. Army doctrine, too often unfairly criticized based on the experience of unseasoned units encountering combat for the first time – a situation for which not even the best training can prepare a unit. One sees the true success of American combined arms doctrine in World War II when reading the accounts of units that, after their initial exposure to combat conditions, gained the experience that enabled them to apply the doctrine they learned in unit training and large-scale maneuvers in actual combat conditions. Reardon's work stands out as a superior narrative that tells this story clearly and convincingly.

Finally, in his recently published *Carrying the War to the Enemy*, Michael R. Matheny took issue with works such as David Johnson's *Fast Tanks and Heavy Bombers* and William Odom's *After the Trenches* for their overemphasis of tactical doctrine and adoption of (or failure

[606] Ibid., 11-12.

to adopt) new technologies. Matheny argued this caused these historians and many like them to miss the "evolution of U.S. military thinking at the operational level of war. It was at this level, particularly in dealing with logistically supportable joint and combined-phased operations, that senior American commanders did particularly well and laid a foundation for the Allied victory in World War II." Matheny emphasizes the Army's interwar education system, rather than the "published doctrine or scholarly works of American officers" as the source of "the rudimentary understanding of joint and combined operational art developed [at CGSC and the AWC] and . . . imparted to a generation of senior American officers."

These works illustrate the growing awareness of the fundamental importance of sound doctrine to the success of American combat units during World War II. These authors understand material preponderance does not explain American success during the war, even if they take different approaches to arguing for the effectiveness of American military doctrine and the personnel who inculcated and employed it in combat theaters around the world. These American combat personnel defeated even the vaunted German Army, despite its superior combat experience, its advantage of fighting on the defensive in extremely rough terrain, and the moral determination that came from knowing that with each step back, they grew closer to defending their homeland and families from unconditional surrender.

Lesley McNair contributed to the development of the doctrine the American soldier employed successfully during World War II throughout his four-decade long career. He served in military education assignments at Fort Leavenworth and the ROTC unit at Purdue, he tailored doctrine to organization in the development of the triangular division, he worked for years on antitank doctrine when few if any of his peers seemed interested in the topic, and he inculcated Army doctrine in mobilizing units while serving at GHQ and AGF. He also understood long

before many of his fellow officers that the American military would not enjoy unlimited resources, and ensured combat units went to war trained, organized, and equipped with doctrine that combined efficiency and effectiveness in a manner appropriate to the actual combat conditions they would face. Serving as yet another target of criticism, McNair's adherence to the concepts of streamlining, pooling, and task organization not only held true to fundamental pillars of American doctrine and organization, but proved instrumental in maximizing the effectiveness of the 88-division Army America sent to war in 1942.

Contrary to the often-read criticisms of pooling as a concept both unique to McNair and forced by him on an Army generally opposed to the concept, the official history argued, "over pooling in principle there was little or no disagreement. Differences of opinion arose over particular cases. The most controversial of these concerned tanks, tank destroyers, and antiaircraft artillery." The inherent mobility of these weapons, and their specialized nature that meant not all situations lent themselves to their employment, made them natural candidates for pooling in large, mobile reserves. This gave senior commanders the ability to mass specialized assets where needed depending on the combat situation, terrain, and other factors, many of which commanders could not predict ahead of time. The cost in the lack of formation of habitual relationships between these units and those organic to divisions did not outweigh the benefit of the flexibility their pooling gave large-unit commanders.[607]

In 1942 and 1943, the argument for pooling anti-tank (AT) guns, tank destroyer (TD) units, and antiaircraft artillery (AA) units seemed particularly compelling to McNair. He did not believe air and tank attacks would only occur in independent, massed formations, as his critics have claimed. However, he recognized from observations of ongoing combat operations that the most dangerous such attacks did come from massed air and tank attacks. This seemingly minor

[607] Greenfield, Palmer, and Wiley, *The Organization of Ground Combat Troops*, 293-94.

difference represents an important distinction between McNair's actual views and the way many historians have represented them since the war. Further, it was not until 1944 that counter-arguments for inclusion of these specialized assets as organic divisional units began to proliferate, and this stemmed more from the recognition of the value of these weapons for performing a secondary role as additional direct and indirect fire support assets when not acting in their primary role. One of the most vocal advocates of dropping the pooling concept and providing organic tank destroyer and antiaircraft units to combat divisions, McNair's former platoon leader, Jacob Devers, began to petition the War Department directly to change the pooling policy after observing combat operations in North Africa in February 1943. McNair's own G-3, Brigadier General John M. Lentz, also adopted an anti-pooling view around the same time as Devers, writing in a memo to McNair that he believed combined training suffered because of pooling.[608]

McNair responded to Devers via the War Department by pointing out Devers' argument for providing TD and AA units to divisions could just as easily apply to GHQ tank battalions, air base defense units, and command post and train defense units. McNair argued the question came down to whether America sought to build an offensive or a defensive army – in other words, whether the Army's emphasis was in providing security to all units or maintaining the flexibility to mass capability where needed to defeat the enemy's forces through offensive action. McNair also pointed out Devers' proposals would require an additional of 24,000 .50-caliber AA guns and 7,200 75-mm AT guns in addition to the number already fielded – something McNair apparently understood better than most of his peers that the industrial base simply could not accomplish. The War Department supported McNair and retained the concept of pooling in the

[608] Ibid., 295-96.

debate with Devers, and did so again in May 1943 when the ASF proposed drastically increasing the number of AA and AT units to provide defense to logistics convoys.[609]

Pooling, another concept attributed to McNair as though an original idea he "decided" to impose on the Ground Forces, stemmed from a War Department directive of October 2, 1942 to complete an Army-wide "downward revision of Tables of Organization." To comply with this directive, McNair formed a Reduction Board, constituted of "No-Men" who would accomplish the War Department's required across-the-board cut by twenty percent of motor vehicles and fifteen percent of personnel, all "without lessening the combat strength of any unit or upsetting the doctrine of its tactical employment." Given the requirement to possess "exact knowledge of every item and every individual in unit tables," McNair – one of the few men in the Army with this level of detailed knowledge regarding the composition of the Ground Forces – directed and participated in the board's efforts, "frequently saying 'No' to his own 'No-Men.'" The Reduction Board remained in existence for eight months, from November 1942 through June 1943, reviewing almost every AGF unit and methodically removing every piece of equipment not allowed in the ground rules set for the board, or determined as nonessential. "Cuts were not applied piecemeal or in a negative mood. The whole theory of army and corps organization, and hence of pooling and of inter-unit support, was undergoing constructive revision at the headquarters of the Army Ground Forces at the same time. Each unit was reshaped with an eye to its place within corps or army."

Finally, task organization dated back to the development of the triangular division, where McNair played a key role, but not as a decision maker or even a commander, but as the chief of staff of the PID. He developed the new tables of organization based on War Department guidance, planned and oversaw the tests, and prepared test reports; the RCTs and combat

[609] Ibid., 296-97.

commands that became integral components of division organizations were neither McNair's original idea or concepts he forced on the AGF once Marshall selected him as Ground Forces Commander. One wonders at the proliferation of histories that not only criticize these concepts, largely based on dramatic misrepresentations of the initiatives they actually represented, but that ascribe them to McNair as concepts he conceptualized and directed on his own authority on the Ground Forces. Historical examples abound that illustrate the effectiveness of these concepts. McNair played a key role in each, from implementing War Department policy to training the AGF to fight in accordance with these principles. If anything, he deserves credit for his loyalty to Marshall in the face of much criticism directed at McNair personally, and praise for training the Army to fight effectively even while relying due to significant and quite real constraints in materiel production and shipping capacity.

Just one example will serve to show how McNair managed to turn what some might have considered very limiting policy on its head and use it to the Army's advantage. As mentioned above, McNair provided invaluable assistance to the Gunnery Department of the Field Artillery School in the early 1930s as they worked to develop more effective and faster fire direction procedures. He proved a strong advocate because of his strong belief based on direct combat experience in the superiority of observed fires, his support of centralizing control and pooling resources when it would make them more effective, even if it meant taking resources away from commanders that had traditionally controlled them, and his inherent innovative nature. Building on the concept of pooling, McNair helped to see the Gunnery Department's experimentation of the early 1930s through to its logical conclusion in the massed fires techniques employed to such great effect in the repulse of Rommel's Afrika Korps at Kasserine Pass and innumerable other operations in every major theater and campaign of the war. The immense firepower provided by

massed, observed artillery fires emerged, according to historian Frank Comparato, as "the most powerful force (excepting the atomic bomb) to come out of the war."[610]

Even Russell Weigley recognized the wisdom of McNair's support of the concepts of streamlining, pooling, and task organization, which represented his understanding of the modern battlefield – an understanding that Weigley, unlike many historians, acknowledged as correct. Weigley quoted McNair in *History of the United States Army*, "An armored division is of value only in pursuit or exploitation. For plain and fancy slugging against an enemy who is unbroken or at least intact the tank battalion or group is adequate." Weigley went on to observe:

> The war proved to be much more a war of the old infantry-artillery team than the German campaigns of 1939 and 1940 had suggested. Once good antitank weapons had been developed and their tactics well planned, tanks alone could not force a breakthrough. What they could do well was to join tactical aviation in cooperating with the infantry as a sort of superartillery. In this role they did break at last the tactical deadlock which had gripped the battlefield for nearly a hundred years.[611]

In short, the tank by itself could not create significant, sustainable breakthroughs; it took motorized/mechanized infantry supported by mobile artillery, and advanced communications equipment. The shortage of almost all motorized and mechanized equipment and the war-long shipping constraints meant the concentration of combat power necessary to achieve McNair's vision not only benefited from, but required streamlining, pooling, and task organization. His support of these War Department policies demonstrates the validity of McNair's vision of the modern battlefield.

[610] Comparato, *Age of Great Guns*.
[611] Weigley, *History of the United States Army*, 468-69.

# CHAPTER ELEVEN

## Conclusion

### A Career Cut Short

Although Lesley McNair served exclusively in staff positions during World War II, he routinely visited commanders in the field to observe training and evaluate leadership directly. This desire to see the results of his organization and training efforts first hand led him to visit combat troops at the front on two occasions during the war. In 1943, McNair traveled to Tunisia to observe AGF troops in action. While watching American soldiers conducting an attack on April 23, during the final stages of the campaign to eject Rommel from North Africa, he suffered shrapnel wounds in the arm and head. This conferred upon McNair the dubious distinction of being the first American general officer wounded in combat during the war. It also earned him a huge amount of press coverage, in which some initial reports indicated he would be "out of action" for several weeks, and credited his steel helmet for saving his life (a piece of shrapnel was embedded in his skull, penetrating within less than an inch from his brain). True to form, McNair spent only two days in hospital before beginning his return trip to the United States, and in a little more than a week, he was back at work at AGF headquarters.[612]

The dozens of accounts in newspapers and magazines that covered McNair's wound and recovery mostly provided a positive account of a dedicated general officer traveling to the front to observe the combat performance of the ground troops he had been responsible for training. Some accounts mentioned McNair's admission that his wounds resulted from his failure to

[612] Lesley J. McNair, "Diary," April 15 - May 5 1943, National Archives and Records Administration, College Park, Maryland, RG 337, CG AGF Files, Box 1. McNair appears to have kept no diaries during his long career, with the single exception of this short trip diary documenting his visit to the front in Tunisia.

follow his own training principles and observe the attack from a properly covered and concealed position, but even these stories placed McNair's conduct in a highly positive light.

These commentaries offer a portrayal of the event that varies in tone from the account provided by Steven E. Clay in his history of the 16th Infantry Regiment, which recalled McNair's wounding through the eyes of a soldier of the 1st Division:

> An incident occurred this day that is at once humorous, tragic, and indicative of how the misinterpretation of a combat situation can cause unintended consequences. After the attack began that morning, efforts to speed up the regiment's forward movement drew criticism from a high-ranking visitor to the 1st Division, Lieutenant General Leslie [sic] J. McNair. McNair arrived in the 2nd Battalion's area to personally assess its attack: "F Company was pinned down on the ridge in front of us. General McNair wanted to see the action, apparently believing we weren't being aggressive enough. By exposing himself on the ridge, our position was subjected to artillery fire during which he was wounded and our F Company First Sergeant was killed. I remember the General's aides bringing him off the hill into a jeep and speeding away to the Bn Aid Station. So much for him."[613]

While illustrative of the cynical humor often identified with the infantry soldier, this short passage is also poignant, for it mentioned the death of a company first sergeant in the artillery barrage that wounded McNair – an event completely overlooked by the press in their frenzy to report the injury suffered by a senior officer. No media report of the artillery barrage that wounded McNair, at least none among the dozens Clare collected from newspapers all over America or located in other archives containing McNair papers, mentioned this non-commissioned officer's death. McNair also apparently never spoke of it, indicating that he probably never learned of the first sergeant's death in the barrage. A failure to comment on such a tragedy would not fit McNair's character, particularly given his tireless efforts to acknowledge the bravery and sacrifice of the American infantryman.[614]

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[613] Steven E. Clay, *Blood and Sacrifice: The History of the 16th Infantry Regiment from the Civil War through the Gulf War*, 1st ed., Cantigny Military History Series (Wheaton, IL: Cantigny First Division Foundation and the 16th Infantry Regiment Association, 2001), 167.

[614] Various, "Clare McNair's Newspaper Clippings."

McNair returned to the front a second time, in 1944, visiting Normandy to observe the breakout from the beachhead during Operation Cobra enroute to his new assignment to relieve Patton as commander of the First U.S. Army Group (FUSAG). The Allies created the simulated FUSAG headquarters, based in Dover, England, and placed it in command of some real and some fictitious units, including the Third Army, which upon the formation of FUSAG had not yet departed for England. Through an elaborate deception involving false radio messages, newspaper stories, and an increase in both real and simulated military activity, FUSAG gave the appearance of an army group preparing an amphibious assault against the Pas-de-Calais. This worked quite effectively, preventing the Germans from predicting and massing defending forces at the location of the impending Allied amphibious assault, or even knowing after the D-Day assault whether the Allies planned a second landing. The deception worked particularly well because Eisenhower selected George S. Patton, whom the Germans considered America's greatest general, as the FUSAG commander. With the impending arrival of the Third U.S. Army Group from the states, which Patton would command in battle, the Allies needed a replacement for Patton at FUSAG with a similarly recognizable name, and not only did McNair fit that bill, but with mobilization of new divisions complete, his job at AGF was essentially done.[615]

On this visit to the front, General McNair died on July 24, 1944 of wounds inflicted by errant American bombs in a preparatory attack during Operation COBRA that injured or killed hundreds of Americans. McNair's death, which the Army initially reported as the result of German fire but later admitted was the result of a poorly aimed American aerial barrage, prevented him from witnessing the eventual victory of the ground forces he worked so diligently to prepare for combat. In a final cruel twist of fate, his only son, Colonel Douglas C. McNair,

[615] Ambrose, *D-Day, June 6, 1944*, 82-83; European Theater of Operations Adjutant General, "Assignment of Command of First United States Army Group," July 21, 1944, McNair Papers, National Archives and Records Administration, St. Louis, MO.

died twelve days later on August 6, 1944 in the Pacific Theater of Operations, killed by a Japanese sniper while serving as Chief of Staff of the 77th Division on Guam.[616]

Clare McNair learned of her husband's death while rolling bandages at the War College officers' club for the Red Cross – one of many volunteer activities in which she had engaged throughout his career. A general officer from the AGF entered the room, sat down and spoke to her briefly, and escorted her out of the room. Among the dozens of letters of condolence that Clare received in the period after her husband's death, her correspondence with General John Pershing merits particular mention. The McNairs had maintained contact with General Pershing throughout McNair's career, and Pershing was one of the first to contact Clare directly upon her husband's death. On July 28, Clare received a letter from him that read:

> The sad news of the untimely death, at the front, of your distinguished husband has shocked and grieved me, and my deepest sympathy goes out to you. General McNair's services with the Punitive Expedition, and with the A.E.F. in France, are, of course, entirely familiar to me, and I have followed his subsequent brilliant career with particular interest and great admiration. Certainly, his contribution to the success of our present war effort has been considerable. In his passing the leadership of our armed forces has been dealt a severe blow. Indeed, the army, the country, and the United Nations have suffered a tremendous loss.

Clare replied on August 1, 1944, just five days before Doug's death, thanking Pershing for his kind letter and expressing her appreciation for his kind words about her husband. She sent him a birthday greeting the following month, from Santa Barbara, California, where she had traveled to stay with Doug's widow and help care for his daughter, her only grandchild, Bonnie Clare McNair. Clare described Bonnie Clare, only eleven months old at the time, as "a precious baby and so happy that she is bringing healing to our broken hearts."[617]

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[616] Kahn, *McNair, Educator of an Army*, 1-2.

[617] Various, "Letters of in Response to Lesley McNair's Death in Normandy," July - September 1944, McNair Papers, U.S. Library of Congress, 73. The McNair genealogy casts further doubt on speculation Clare might have burned her husband's papers in grief, remarking on her notable composure upon learning of his death; James Birtley McNair, *McNair, McNear, and McNeir Genealogies: Supplement, 1955* (Los Angeles, CA: James Birtley McNair, 1955).

McNair received his only wartime military awards posthumously. On August 3, 1944, Secretary of War Stimson presented Clare two oak leaf clusters for the Distinguished Service Medal her husband had earned in France during the First World War, and an oak leaf cluster for his Purple Heart. Various senior military and political leaders paid tribute to McNair on May 25, 1945, at a ceremony at the Army War College. Army Chief of Staff General George C. Marshall and General Courtney H. Hodges, commander of the First Army, made remarks in remembrance of McNair's efforts as AGF Commander. The ceremony closed with Bonnie Clare McNair unveiling a commemorative plaque that read, in part, "As commanding general of the Army Ground Forces he planned, organized, trained, and equipped the ground forces of the United States for their victorious participation in the Second World War."[618]

Despite the high praise and obvious respect he had earned from many of the nation's most senior military and civilian leaders, McNair did not die a wealthy man. In fact, as *Time Magazine* reported in 1944, when McNair died at the age of sixty-one, after forty years of military service, he left behind an estate worth only $2,720. To supplement this small nest egg – typical of officers of the time who received very meager pay and benefits, Clare received the pension of a retired major general (McNair had never received permanent promotion to Lieutenant General), which amounted to fifty dollars a month. Required to vacate military quarters upon his death, Clare moved out of the home where she and Lesley had recently celebrated their thirty-ninth wedding anniversary, renting a small apartment on Connecticut Avenue in Washington, D. C., and accepting a job with the U.S. State Department to make ends meet.[619]

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[618] "Honor to Lesley J. McNair," *Field Artillery Journal* 35, no. 7 (July, 1945): 386.

[619] Second lieutenants in 1944 earned $2,595 a year; brigadier generals with dependants earned $8,000. The handful of generals with more than one star earned an average of only $10,000 a year. "Army & Navy: Soldiers' Rewards," *Time*, August 28, 1944,

Senate Bill 2468, first proposed in 1952, sought, to secure permanent promotion to their highest position for the many retired and deceased officers who had served as high-ranking generals during the war, but due to the temporary nature of their promotions, reverted to their highest permanent grade at the war's end. Secretary of the Army Frank Pace, Jr., wrote Honorable Richard B. Russell, Chairman of the U.S. Senate Committee on Armed Services, urging him to support this bill, which he sought to "provide suitable recognition of the distinguished services of these officers rendered in positions of great responsibility and importance . . . . The promotions to be authorized by this legislation would be in keeping with the rank accorded other Army officers who held similar wartime commands during the same limiting periods." Since Lesley McNair had served as a temporary lieutenant general, but had worked directly for the Army Chief of Staff in a command considered equivalent to an army group command, the measure, if passed, would lead to a posthumous promotion for him to general (four-star). This would also improve Clare's financial situation – a desire expressed by several supporters of the bill who were friends of the McNairs before and during the war. The Senate finally passed the bill on May 4, 1954, and it gained the House of Representative's approval on July 7, 1954. Shortly afterwards, Clare McNair received a letter from the Adjutant General's office notifying her of Lesley McNair's posthumous promotion to (four-star) general, effective September 10, 1954.[620] What the gruff McNair would have thought of such instances recognizing his contributions to America's victory one can only speculate.

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http://www.time.com/time/printout/0,8816,885626,00.html (accessed March 13, 2012), The article concluded, "the military careerist, whose peactime responsibilities should be large and whose wartime responsibilities may be awesome, can expect only to die poor.".

[620] Kahn, *McNair, Educator of an Army*, 1; Kleber, "McNair," 697; McNair, *McNair, McNear, and McNeir Genealogies: Supplement, 1955*, 43-44; Herbert M. Jones, "Herbert M. Jones to Mrs. Lesley J. McNair," September 10, 1954, McNair Papers, National Archives and Records Administration, St. Louis, MO. Many historians, unaware of McNair's posthumous promotion, incorrectly refer to him as "Lieutenant General McNair" rather than "General McNair," his correct rank.

**McNair in Retrospect**

General Lesley J. McNair has long remained an enigma to many military historians, largely because no comprehensive study of his career exists in the historiography of the U.S. Army. As has been noted in this study, few historians have written about McNair's service as Commandant at Fort Leavenworth, Chief of Staff of the Provisional Infantry Division, or Chief Artillery Training Officer on the AEF Staff. Even fewer, though (Edward Coffman is an exception) have written about McNair's pre-World War I service, and even these historians have revealed the history of only a tiny fraction of his thirteen years of service before the First World War. The history of the thirty-six years of his career prior to World War II has remained, until now, mostly scattered amongst various archives, and those aspects of his World War II service that do appear in the secondary literature contain far more errors than historical fact.

McNair's relative obscurity among senior U.S. military leaders of that era chiefly resulted from his wartime service in staff positions. Even when he served as commander of Army Ground Forces, from 1942-44, he led a "functional command" giving him a role many historians equate to a senior-level staff position. The longstanding belief that no records of McNair's early career existed might have contributed to this phenomenon, but in the end this seems unlikely, given the fact that the records cited here were no harder to obtain than any others stored at the handful of major historical archives in the United States. Whatever the reason, many historians of the Second World War have analyzed General McNair's performance in his two key roles at GHQ and AGF based on limited knowledge of the history of his thirty-six years of service before the war.

One example serves to drive this point home. A panelist at the 2010 Society for Military History Conference demonstrated quite effectively the result of the widespread lack of

knowledge regarding General McNair when he opined that, with respect to Army motorization efforts prior to World War II, "McNair got *everything* wrong."[621] This statement reflects far more than one individual's shallow understanding of McNair's contributions to the mobilization effort the nation undertook beginning in 1940. It reflects the uninformed view historians who study the early twentieth century Army hold regarding McNair's service throughout his forty-year career. However, even lacking detailed knowledge of the history of McNair's military service, one might hesitate to dismiss so readily the efforts of an officer entrusted by officers like John Pershing, Charles Summerall, Malin Craig, and George Marshall with a number of the most important innovative efforts and positions of responsibility in the Army.

As has been discussed, General Pershing personally selected McNair from the many officers on the 1st Division staff to serve as the senior artillery training officer in the AEF General Headquarters in 1918, rapidly promoting him to become the AEF's youngest general officer. Shortly after the war, Charles Summerall selected McNair to serve as the Hawaiian Department G-3 operations officer, and to lead both the development of a new Oahu defense plan and a major experiment to test the ability of Army units to defend an island from a naval attack. In the mid-1930s, Chief of Staff Malin Craig selected McNair to serve as the chief of staff of the Provisional Infantry Division, making him the key individual responsible for designing the division the Army would employ during World War II. In 1939, General Marshall hand-picked McNair to serve first as the Commandant at Fort Leavenworth to redesign the officer education system there, and later to serve first as Chief of Staff, General Headquarters and then as the Army Ground Forces commander, making him the main individual responsible for training the American ground forces that fought the Second World War. If one is to believe that McNair "got

[621] Panelist's statement noted by the author at the 2010 Conference of the Society for Military History.

*everything* wrong," they must explain the longstanding professional respect, based on direct, personal interaction that officers like Pershing and Marshall had for McNair, leading them to select him for tough jobs and elevate him to positions of significant authority and responsibility.

The lack of information on McNair's early career in the historical record has led many historians to arrive at unfounded criticisms of McNair's actions both during the interwar years, and throughout World War II. A thorough understanding of the depth and breadth of McNair's experience, combined with a closer look at the dynamics that drove the dynamics of the War Department's command arrangements and its management of the mobilization effort reveal McNair has served as an easy target for a great deal of unfounded criticism. In many cases, he provides a recognizable name with which to associate an oversimplified explanation of a seemingly simple, but actually quite complex issue. In others, historians' limited knowledge of McNair's background combines with a poor understanding of various national-level strategic and political processes that exceeded McNair's span of control. The result, as argued in this study, has been a flawed analysis and a tendency to reinforce longstanding myths that make up the accepted wisdom regarding the interwar years and World War II. It is time to finally move away from this accepted wisdom and dismantle the standard narrative of World War II as a story of American materiel preponderance overcoming the U.S. Army's overmatched soldiers and workmanlike generals.

The evidence necessary to overturn this flawed narrative exists. Through the efforts of a growing number of "revisionist" historians, one can gain ready access to much of the evidence in the secondary literature on the early-twentieth century U.S. Army. One hopes that this effort to achieve an accurate and balanced assessment will continue, and detailed searches for additional data in the historical archives will yield further evidence and prompt additional insights. While

historians have made great strides in the past two decades to improve modern understanding of the U.S. Army's military effectiveness during World War II, and the interwar and mobilization period innovations that enabled the Army to achieve that effectiveness, much work remains to be done to overturn the long and resilient accepted wisdom regarding America's war effort.

This study seeks to contribute to this effort by offering several useful insights. The fact that an individual's archival records do not exist in a consolidated record stored at a single location does not mean those records do not exist. An officer's service primarily in staff roles also should not lead historians to the conclusion that officer's career does not merit detailed historical analysis. Arguably, the addition of yet another history of George Patton, Omar Bradley, or George Marshall only adds incrementally to the existing store of "great commander" histories, each of which seems to offer less original analysis. Perhaps the deepest and most plentiful area in which to conduct historical research of the early-twentieth century Army lies precisely in the much-neglected field of the staff officer. In an Army often described as commander-centric, the explanation for victory or defeat lies remarkably often in the capabilities and actions of the staff or the combined actions of the staff and its commander.

The foregoing analysis provides an example of the wealth of insights one can gain by developing a deeper understanding of the experience and ideas of one such staff officer. As the above study shows, a number of important continuities stretch across the four decades of McNair's career. Each of these help explain his contributions in the critical final four years he served, particularly when viewed within the larger context of the many complexities presented by America's interwar isolationist stance and economic crisis, and the dysfunction of the civil-military relationship that hamstrung the mobilization effort. Contrary to many critical analyses, McNair developed a remarkably accurate concept of modern warfare. In those areas that fell

within his span of control, McNair provided invaluable service to the nation in preparing the Army to fight in the conditions he anticipated they would face. In doing so, he established the model for the Army training system that is still in use today. In those areas where McNair has drawn the most criticism, such as his advocacy of antitank guns, minimal overhead, streamlining, pooling, and task organization, the analysis offered here demonstrates McNair did not invent and impose upon the ground forces these concepts. Rather, even in cases where he understood and anticipated their necessity, his efforts to adhere to them merely represent implementation of War Department policy and of General George C. Marshall's, ultimate decision-making authority.

When one considers the scope of McNair's career, which includes experience in a wide range of peacetime and combat positions as a commander, staff officer, educator, war planner, and expert trainer, several threads of continuity emerge. The continuities identifiable in McNair's early career help explain how an officer steeped in the experience of World War I navigated a myriad of contingencies throughout the difficult years of the interwar period – and the even more significant challenges of national mobilization – enabling him to train a capable ground force despite innumerable obstacles that stood in his way. These continuities included high standards of officer competence and physical fitness; an emphasis on maneuver and flexibility enabled by responsive and devastating firepower and combined arms operations; a long-term dedication to professional education; an understanding of the efficiency achieved through streamlining and pooling; and a constant quest for innovative solutions to longstanding problems. One sees evidence of these continuities throughout the first three and a half decades of McNair's career, and their recurrence in the final four years of his career, when he reached the height of his influence.

By recognizing and grasping the significance of these continuities, and the relevance they provided to McNair's ideas regarding modern warfare and the combined arms doctrine and training necessary to execute it, one can see the presence of various contingencies often overlooked in studies containing broad-brush depictions of McNair. This makes possible a more balanced evaluation of his successes and failures, and an understanding of the many factors that limited McNair's authority and freedom of action – factors that he lacked the ability to control. These systemic issues remain the centerpiece of the largely untold story of World War II, and more generally the twentieth century U.S. Army.

Ideally, the foregoing analysis not only enhances historical understanding of the career of General Lesley McNair, but also highlights the need to conduct further such studies. Historians of the U.S. Army can break free of the conventional wisdom of World War II by moving beyond analyses of tactics and technology to the systemic issues that serve as the root causes of U.S. Army effectiveness. Studies in this vein remain relevant for understanding U.S. Army effectiveness not only during McNair's lifetime, but also in the nearly seventy years since he died while observing the Ground Forces he trained as they embarked on their final campaign to defeat the German Army in the European Theater of Operations. The Ground Forces accomplished this feat not because of materiel preponderance. As has been argued, America's dysfunctional civil-military industrial mobilization effort ensured the nation never achieved its production goals or synchronized its military and industrial production strategies. Rather, they did so by relying on the fundamentals McNair helped to develop throughout the interwar period, ideas about how to fight and win wars which the Army incorporated into its 1941 doctrine, and which McNair instilled in the psyche of the American soldier by leading the most effective pre-war mobilization training effort the nation has ever implemented.

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