

# US Army War College Interwar Period Curriculum: Logistics and Joint Coordination

A Monograph

by

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## Abstract

US Army War College Interwar Period Curriculum: Logistics and Joint Coordination, by LTC Christopher J. Garvin, US Army, 61 pages.

The US Army faced many logistical challenges during World War I (WWI) that influenced the strategic, operational, and tactical levels of war. In response to WWI, the US Army sought to learn from its experience—a process that took place largely in the education system during the budget-constrained interwar years because it was cost effective. This monograph addresses the increased emphasis in the curriculum at the US Army War College (AWC) on logistics and joint coordination between the US Army and US Navy. World War II (WWII) tested the effectiveness of these curriculum changes in the earliest engagements in the Pacific Theater of Operations (PTO). During an interwar period, leaders have time to make decisions with respect to personnel, training, equipping, tactics, and organizational changes necessary for success in the next war. This monograph demonstrates how the educational changes at the AWC during the Interwar Period (1919-1939) influenced operational outcomes in the PTO. Although the US military is not currently in an interwar period, insights from the post-WWI Interwar Period and WWII in the Pacific provide a lens to view current logistics and joint operations in today's military. As the US military continues to fight the current fight while preparing for the uncertainty of the future, doing the right things will result in better preparation for the next war.

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## Acronyms

AEF	American Expeditionary Forces
ASW	Assistant Secretary of War
AWC	Army War College
COIN	Counterinsurgency
ETO	European Theater of Operations
FDR	Franklin Delano Roosevelt
JCS	Joint Chiefs of Staff
JAAN	Joint Action of the Army and Navy
NWC	Navy War College
PTO	Pacific Theater of Operation
RC	Reserve Component
SLOC	Sea Lines of Communication
SOS	Services of Supply
WPD	War Plans Division
WWI	World War I
WWII	World War II

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## Introduction

Perhaps more than any other aspect of war, logistics is critical to success at the operational level. When armies push 180,000 men onto a hostile shore, they need more than the spirit of the bayonet to sustain them. Logistics determines the art of the possible. There is a natural tension between logistics and maneuver in operational art: any imbalance between ends, ways, and means results in risk.

—Michael R. Matheny, *Carrying the War to the Enemy: American Operational Art to 1945*

After World War I (WWI), the War Department significantly increased emphasis on logistics at the US Army War College (AWC) and the US Navy War College (NWC) and established the Army Industrial War College in 1924 to improve preparation for the next war.<sup>1</sup> Additionally, the War Department directed these schools to emphasize joint operations and instruction in logistics of large operations of past wars, with special reference to WWI.<sup>2</sup> This monograph focuses on curriculum changes based on WWI experiences at the AWC during the Interwar Period (1919-1939).

For the past decade, the US Army has primarily focused on counterinsurgency (COIN)—a focus that does not appear to be ending anytime soon. Although the US military is not in an interwar period, it is in a period of great uncertainty and can learn from the post-WWI Interwar Period. As the US Army determines the best way to meet the challenges of the future while succeeding against the current threat, sustainment warfighters must continue to support the current fight while preparing to sustain the uncertain nature of future war and the potential for conventional war.

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<sup>1</sup> Michael R. Matheny, *Carrying the War to the Enemy: American Operational Art to 1945* (Norman: University of Oklahoma Press, 2011), 257-258.

<sup>2</sup> George S. Pappas, *Prudens Futuri: The US Army War College, 1901-1967* (Carlisle Barracks, PA: Alumni Association of the US Army War College, 1980), 123.

At a February 2017 Association of the United States Army conference, Chief Strategist and Director of Strategy, Plans, and Policy, Deputy Chief of Staff G-3/5/7 Major General William C. Hix said, “counterinsurgency and counterterrorism operations have shaped Army force structure, defined system development, and focused science and technology efforts on near-term requirements.”<sup>3</sup> Hix emphasized that Russia and China have simultaneously modernized and closed the capabilities gap posing a significant threat regarding nuclear weapons, cyberspace, air defense, long-range artillery, and armor. Hix proposed expanding the Army from 1 million to 1.2 million to reduce the risk to a moderate level with increases going first to fires and maneuver capabilities, particularly armor units.<sup>4</sup>

On July 22, 1940, George C. Marshall noted, “For almost twenty years we had all of the time and almost none of the money; today we have all of the money and no time. It is a long time between the appropriation of the money and the actual procurement of the article, especially when it is of a non-commercial nature.” Certainly, the US Army has not had “all of the time” in the last sixteen years.<sup>5</sup> Still, Marshall’s words have relevance for today’s military, as it continues the current fight while transforming to meet the needs of the future, including conventional, large scale, near peer wars.

This monograph assesses whether the US Army is focusing the Sustainment Warfighting Function on the right structure, training, and equipping as it continues to operate in an uncertain, complex operational environment with the possibility of a major conventional war on the horizon.

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<sup>3</sup> Association of the United States Army, “Chief Strategist: Army Must Revamp for Full-Scale Combat,” February 8, 2017, accessed March 4, 2017, <https://www.ousa.org/news/chief-strategist-army-must-revamp-full-scale-combat>.

<sup>4</sup> Ibid.

<sup>5</sup> Douglas T. Stuart, *Creating the National Security State: A History of the Law that Transformed America* (Princeton, NJ: Princeton University Press, 2009), 32.

Several factors make this particularly challenging. Today's Army is the smallest since World War II (WWII), while the number and diversity of missions have not declined.<sup>6</sup> Additionally, by 2019, 80 percent of the total sustainment force structure will be US Army Reserve Component (RC).<sup>7</sup> Because of the importance of logistics this begs the question of whether retaining a large percentage of US Army sustainment force structure in the RC assumes too much readiness risk.

Decisions during a period of reform present unique challenges because of the complexity of military change. Although there is no formula for success, there are steps to increase the odds of success. A starting point is to determine a generally accurate picture of the nature of the future war. In their book, *The Challenge of Change, Military Institutions and New Realities 1918-1941*, Harold Winton and David Mets paraphrased Clausewitz: "such a determination is the most significant and comprehensive question that erstwhile reformers must address. Even if they get everything else right, if they disregard the essential dynamics of the next major conflict, they may well find the army perfectly prepared for the wrong type of war."<sup>8</sup>

In September 2016, Army Deputy Chief of Staff, G-4, Lieutenant General Gustave "Gus" Perna wrote, "Frankly I see too many smart and talented commanders who were battle-tested in Iraq and Afghanistan but are still mentally locked into those wars. They have to stop thinking about Army Force Generation, forward operating bases, the Logistics Civil Augmentation Program, and fifty days of supply because that is not today's Army."<sup>9</sup> Perna's words are in line

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<sup>6</sup> Herbert R. McMaster and Matt Rasmussen, "Take These Steps to Change Our Army," *Army Magazine*, 67, no. 1 (January 2017): 27.

<sup>7</sup> Davie Burgdorf, *US Army Logistics Quick Reference Guide* (Fort Lee, VA: Combined Arms Support Command, Force Development Directorate, February 18, 2014), 10.

<sup>8</sup> Harold R. Winton and David R. Mets, *The Challenge of Change, Military Institutions and New Realities 1918-1941* (Lincoln: University of Nebraska Press, 2000), xi-xii.

<sup>9</sup> Gustave Perna, "Combat Training Centers: A Milestone in the Journey to Readiness," *Army Sustainment* 48, no. 5 (September 2016): 2.

with comments made by Chief of Staff of the US Army, General Mark A. Milley at the October 3, 2016 Association of the United States Army conference. Milley stated, “We are on the cusp of a fundamental change in the character of ground warfare . . . a revolution perhaps five to ten years away.”<sup>10</sup> As the Army turns from interminable COIN operations in Afghanistan and Iraq to possible conflict with nation-states such as Russia, China, North Korea, and Iran, Milley predicts a battlefield that “is going to be intensely lethal, the likes of which the United States Army, the United States military, has not experienced . . . since World War II.”<sup>11</sup> At the same time, Milley stated, “As we look towards the future, we’ve got to maintain and sustain the counterinsurgency and counterterrorist capabilities that we’ve developed and refined to a high level of expertise . . . We have to sustain that. Even as the Army focuses on future high-tech wars, it cannot forget all it has painfully learned about guerrilla fighting,” Milley said, emphasizing, “We have to be able to do both of those simultaneously.”<sup>12</sup>

It appears Milley could agree with the position of Antulio J. Echevarria, II on the US military regarding fighting COIN and conventional war. According to Echevarria, the US military has reencountered a *second grammar* of war, known as insurgency, guerrilla warfare, or irregular warfare.<sup>13</sup> Although this second grammar has dominated the US military’s recent experience, it must retain the right balance of conventional and irregular warfare readiness. The US military must continue to improve proficiency at war’s second grammar, while maintaining dominance in

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<sup>10</sup> Mark A. Milley, “Eisenhower Luncheon Keynote Address,” Association of the United States Army, October 4, 2016, accessed January 26, 2017, <https://www.ousa.org/events/ousa-annual-meeting-exposition/sessions/dwight-david-eisenhower-luncheon>.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid.

<sup>13</sup> Martin Van Creveld, *The Evolution of Operational Art: From Napoleon to the Present* (New York: Oxford University Press, 2011), 137.

its *first grammar* of war, conventional warfare.<sup>14</sup> Although Milley's guidance is clear, the debate over the balance between COIN and conventional warfare will likely continue.

## Methodology

This monograph investigates the increased emphasis on logistics and joint coordination education between the US Army and US Navy at the AWC during the Interwar Period to identify relevance in today's US Army. An even distribution of AWC curricular archives from the Interwar Period were selected to show the progression of logistics and joint coordination education at the AWC in the two decades preceding WWII. Although there were important changes at the NWC, this monograph focuses on AWC curriculum. A case study of combat in the Pacific Theater of Operations (PTO) evaluates the effects of expanded emphasis on increased coordination with the US Navy and joint coordination and logistics. The evaluation criteria enabling analysis of the case study consists of three elements of operational art: *basing*, *operational reach*, and *phasing*. These are supplemented by *unity of command*, a principle of joint operations that highlights the impact of unity of command on operations and logistics in the PTO—a key factor in that theater throughout the war, but particularly in the early campaigns.<sup>15</sup>

According to Joint Publication 5-0, *Joint Operation Planning*, basing directly affects operational reach by providing overseas, continental United States, or sea-based locations to generate and project combat power and sustainment support.<sup>16</sup> Joint Publication 4-0, *Joint Logistics*, describes basing as a fundamental requirement to sustain the force, as a theater basing

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<sup>14</sup> Creveld, 137.

<sup>15</sup> Joint Chiefs of Staff, Joint Publication (JP) 3-0, *Joint Operations* (Washington, DC: Government Printing Office, 2017), III-35, A-2, V-13.

<sup>16</sup> Joint Chiefs of Staff, Joint Publication (JP) 5-0, *Joint Operation Planning* (Washington, DC: Government Printing Office, 2011), III-34.

strategy enables translation of strategic objectives into a physical presence in theater.<sup>17</sup> Basing is an integral part of campaign and operations planning because it directly affects the ability to shorten lines of communication and provide responsive support on such critical factors as sorties or resupply rates.<sup>18</sup>

Per Army Doctrine Reference Publication 3-0, *Operations*, “Operational reach is a tether; it is a function of intelligence, protection, sustainment, endurance, and relative combat power, its limit is its culmination point.”<sup>19</sup> Extending operational reach through deliberate, advanced planning integrates sustainment and facilitates endurance.<sup>20</sup> Commanders strive to extend operational reach to meet the challenges of conducting and sustaining operations over long distances and times.<sup>21</sup>

Joint Publication 5-0 defines phasing as “a way to view and conduct a complex joint operation in manageable parts. The main purpose of phasing is to integrate and synchronize related activities, thereby enhancing flexibility and unity of effort during execution.”<sup>22</sup> Phasing is critical for arranging all tasks of an operation that cannot be conducted simultaneously. When resources are limited, phasing extends operational reach.<sup>23</sup>

Unity of command is one of twelve principles of joint operations. As noted in Joint Publication 3-0, *Joint Operations*, “the purpose of unity of command is to ensure unity of effort

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<sup>17</sup> Joint Chiefs of Staff, Joint Publication (JP) 4-0, *Joint Logistics* (Washington, DC: Government Printing Office, 2013), F-1.

<sup>18</sup> JP 5-0, III-34.

<sup>19</sup> Headquarters, Department of the Army, Army Doctrine Reference Publication (ADRP) 3-0, *Operations* (Washington, DC: Government Printing Office, 2016), 2-9.

<sup>20</sup> JP 4-0, 1-10.

<sup>21</sup> ADRP 3-0, 2-9.

<sup>22</sup> JP 5-0, III-36.

<sup>23</sup> ADRP 3-0, 2-8.

under one responsible commander for every objective with the authority to direct all forces employed in pursuit of a common purpose.”<sup>24</sup> Joint logisticians must understand joint and multinational logistical processes, structure, measures of performance, and key managers to achieve unity of effort.<sup>25</sup> In the absence of unity of command or formal command structure, commanders may be required to build consensus to achieve unity of effort.<sup>26</sup>

The case study analysis reveals how basing, operational reach, phasing, and unity of command played key roles in actions taken by the US Army and US Navy during operations in the PTO. The study exposes areas where the Army and Navy applied, or failed to apply, logistics and joint coordination lessons from the Interwar Period AWC curriculum, or when they simply learned how to apply these techniques over time as they overcame challenges and put systems in place to increase efficiency and effectiveness. The analysis of the case study offers insight into today’s logistics and joint coordination challenges. The analysis identifies key implications, areas that require additional research or study, and recommendations for changes to sustainment leader development to meet the goals of sustainment-related Army warfighting challenges.<sup>27</sup>

## Looking Back to Look Forward: The Interwar Period

Viewing logistics and joint coordination changes during an interwar period can provide a valuable lens for logisticians. In a 2014 *Joint Force Quarterly* article, the 49th Commandant of the AWC, Major General Anthony Cucolo, and AWC Provost Dr. Lance Betros (retired brigadier general) posited, “The end of American combat operations in Iraq and Afghanistan marks the

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<sup>24</sup> JP 3-0, A-2.

<sup>25</sup> JP 4-0, I-8.

<sup>26</sup> JP 5-0, II-36.

<sup>27</sup> Ed Fetla, *Army Warfighting Challenge 16: Set the Theater, Sustain Operations and Maintain Freedom of Movement*, ed. Mark Simerly (Fort Lee, VA: Sustainment Center of Excellence, 2016), 1.

start of a new interwar period for the US Army. Like its predecessors, the emerging period will see dramatic declines in military budgets and manpower.”<sup>28</sup> Cucolo and Betros continued, “If the Army is to emerge from this interwar period ready to fight and win the next war, and to accomplish the many other tasks traditionally performed by land forces, the best it can do now is to invest heavily in the intellectual development of its future strategic leaders.”<sup>29</sup> Currently, combat operations in Iraq or Afghanistan do not appear to be ending as Cucolo and Betros posited. However, their argument remains of interest regarding leader development, budgets, and manpower.

This monograph does not contend the US military is currently in an interwar period; rather, that it is facing a period requiring reform to meet future threats, while maintaining the current fight. Major General Hix asserted that the US Army requires institutional reform, noting that the structure that emerged from the transformation of the 1970s and 1980s is almost fifty years old. “It was designed for a different era. A deliberate examination of how the Army should reorganize is long overdue. Hard thinking, aggressive study and concept development, coupled with science and technology programs to develop options” for the next two decades “will ensure the U.S. Army is favorably disposed to meet this future head-on.”<sup>30</sup> In 1996, as a School of Advanced Military Studies student, Major General Wayne Grigsby, later a Big Red One Division commander wrote, “The manner in which the US Army conducts its activities during the current

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<sup>28</sup> Anthony Cucolo and Lance Betros, “Strengthening PME at the Senior Level: The Case of the U.S. Army War College,” *Joint Force Quarterly* 74 (3rd Quarter): 50.

<sup>29</sup> *Ibid.*, 57.

<sup>30</sup> Association of the United States Army, “Chief Strategist: Army Must Revamp for Full-Scale Combat,” February 8, 2017, accessed March 4, 2017, <https://www.ausa.org/news/chief-strategist-army-must-revamp-full-scale-combat>.

interwar period will have a direct impact on how successful the Army will be in the next Major Regional Conflict (MRC).”<sup>31</sup>

When the United States entered WWI, the War Department was completely unprepared and unequipped to deploy the American Expeditionary Force (AEF) to France. By the end of 1917, the War Department was dangerously close to complete collapse in the field of logistics primarily due to faulty organization and failure to realize the relationship between industrial and military mobilization.<sup>32</sup> The lack of a system to coordinate independent actions of the various bureaus prevented unity of effort to consolidate supply requests. When WWI ended in November 1918, reorganization of the bureaus was still underway. This highlighted the fact that as the war in Europe was ending the Army was still working to organize itself effectively.<sup>33</sup> Many of the logistics difficulties faced in WWI included a lack of shipping, supplies, logistics personnel shortages, and organization inefficiency, drove many of the AWC Interwar Period curriculum changes.<sup>34</sup>

In his book, *Carrying the War to the Enemy: American Operational Art to 1945*, historian Michael R. Matheny outlined many significant changes to the US military’s focus on logistics education. In addition to preparing officers for duty in the War Department general staff and

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<sup>31</sup> Wayne W. Grigsby, Jr., “The Current Interwar Years: Is the Army Moving in the Correct Direction” (Monograph, School of Advanced Military Studies, US Army Command and General Staff College, Fort Leavenworth, KS, 1996), 6.

<sup>32</sup> Marvin A. Kreidberg, *History of Military Mobilization in the United States Army 1775-1945* (Washington, DC: Government Printing Office, 1955), 310.

<sup>33</sup> Phyllis A. Zimmerman, *The Neck of the Bottle: George W. Goethals and the Reorganization of the US Army Supply System, 1917-1918* (College Station: Texas A&M University Press, 1992), 8.

<sup>34</sup> For more information on WWI logistics challenges see John J. Pershing, *Final Report of Gen. John J. Pershing, Commander-in-Chief American Expeditionary Forces* (Washington, DC: Government Printing Office, 1920); Kreidberg; Zimmerman; Allan R. Millet and Williamson Murray, *Military Effectiveness: Vol. 1: The First World War*, 2nd ed. (New York: Cambridge University Press, 2010); Charles R. Shrader, *United States Army Logistics, 1775-1992, An Anthology*, vol. 2 (Honolulu, HI: University Press of the Pacific, 2001); Mark T. Calhoun, *General Lesley J. McNair: Unsung Architect of the US Army* (Lawrence: University of Kansas Press, 2015).

higher commands, the AWC began to include “studies of an economic nature in regard to supply in general and industrial activities necessarily employed in war with a view to securing the cooperation and coordination of governmental and industrial agencies of the nation.”<sup>35</sup> According to Matheny, after WWI, “the essential question for the American military in the coming decades at the operational level was how to project, conduct, and sustain military operations in a distant theater of war.”<sup>36</sup> Following WWI, General John J. Pershing directed several boards to consider AEF lessons. The boards confirmed the importance of logistics, defined as everything that “embraces the supply of armies.”<sup>37</sup>

The War Department reestablished the AWC in 1919 with the mission to “train officers for high command and War Department General Staff Duty.”<sup>38</sup> The curriculum was based mainly on WWI experiences and included a wide range of courses: Intelligence, Operations, Personnel, Supply, Training, War Games, and Field and Map Exercise.<sup>39</sup> The AEF’s war experiences revealed that “the greatest need was for trained general staff officers and officers who could handle the proposition of supply.”<sup>40</sup> In fact, the War Department directed changes in the AWC curriculum to include more study of the logistics of past wars.<sup>41</sup> Soon after reopening in 1919, the

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<sup>35</sup> Pappas, 90.

<sup>36</sup> Matheny, 44.

<sup>37</sup> Ibid., 47.

<sup>38</sup> Ibid., 57.

<sup>39</sup> Benjamin Franklin Cooling, *A Suggested Guide to the Curricular Archives of the US Army War College 1907-1940* (Carlisle Barracks, PA: US Army Military History Research Collection, 1973), 2.

<sup>40</sup> Pappas, 91-92.

<sup>41</sup> Judith Hicks Stiehm, *The US Army War College: Military Education in a Democracy* (Philadelphia, PA: Temple University Press, 2002), 32.

AWC accepted non-combat arms branches to facilitate cooperation with the combat arms and promote logistics education in the course.<sup>42</sup>

In his 1927 opening address, AWC Commandant Major General Hanson E. Ely reinforced the emphasis on logistics and coordination between the Army and Navy. Ely explained, “We prepare plans for the National Defense and study how to most quickly bring into most effective use the man power and material of the entire nation.” With regard to the exchange of students and instructors between the Navy and the AWC, Ely stated, “By making careful study of combined maneuvers and work with the Joint Army and Navy Board, by getting free and full discussion with Naval officers, we believe we are getting an understanding between the Army and Navy which will make for full cooperation in wartime.”<sup>43</sup>

The Preparation for War Course began with the G-1, G-2, G-3, and G-4 courses as a foundation prior to the War Plans Course. About one month was devoted to each general staff section, but by 1930, the G-4 Course received more days of instruction than any other course.<sup>44</sup> Similarly, the AWC continued to emphasize the connection between combat operations and logistics, while “more time was given for the careful working out of the logistic features of operations.”<sup>45</sup> During a talk at the AWC in 1931, G-3, Deputy Chief of Staff for Operations in the AEF, Major General Fox Connor explained, “You need very few Napoleon Bonapartes in war, but you need a lot of super G-4s.” He noted, “Since the war we have paid more attention in our

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<sup>42</sup> William G. Haan, “Annual Report of the Director of the War Plans Division, General Staff. For the Year July 1, 1919 to June 30, 1920,” Carlisle Barracks, PA: US Army Heritage and Education Center (USAHEC), Army War College (AWC) Curricular Archives, War Plans Division Course, 1919-1920, 61.

<sup>43</sup> Hanson E. Ely, “Address by Commandant, Major General Hanson E. Ely, Opening the Army War College,” September 1, 1926, USAHEC, AWC Curricular Archives, Miscellaneous, vol. 8, doc. no. 2, 1926-1927, 1.

<sup>44</sup> Matheny, 74.

<sup>45</sup> Ibid., 77.

schools to matters of personnel, intelligence and supply. But we are not yet anywhere strong enough in our attention to logistics, the details of supply and the technique of G-4 work.”<sup>46</sup>

The G-4 Course added significant emphasis on logistics and joint coordination between the Army and Navy to the AWC curriculum. The G-4 Course occurred prior to the command and war plans courses to emphasize the importance of integrating logistics in future courses.<sup>47</sup> The course covered a wide range of topics each year. A few examples from 1926 included: “Army and Navy Joint Operations and Logistics Problems,” “G-4 Contribution to War Plans,” “Control of Transportation and Regulating Stations,” “Shore to Ship Operations,” “Control of Railway Traffic,” “Campaign Study of the Outstanding G-4 Features in Wars,” and lectures such as “The G-4 and Some of His Problems.”<sup>48</sup>

Specific to joint overseas expeditions, the G-4 Course featured committee studies of the relationship of the G-4 with the Navy in preparation and execution of a joint overseas operation. Students learned what information the G-4 exchanged with the Navy and which Navy Department division the G-4 coordinated. Students also studied arrangements in a theater of operations for local, allied, and joint supply with the Navy, as well as methods of establishing requirements for procurement and distribution.<sup>49</sup>

The G-4 Course also analyzed campaigns of past wars to assess how logistics shortfalls influenced operations. Students were required to recommend AEF modifications with regard to current organization, regulations, and policies. With transportation and distribution being the biggest logistics challenges of WWI, the G-4 Course studied transportation of personnel and

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<sup>46</sup> Matheny, 77.

<sup>47</sup> Lytle Brown, “Contents,” Carlisle Barracks, PA: USAHEC, AWC Curricular Archives, G-4 Course, vol. 4, 1927-1928, 1.

<sup>48</sup> Ibid.

<sup>49</sup> Ibid., 5.

supplies from point of reception in the zone of the interior to the front lines. The study required the analysis of WWI regulating stations identified in actual war plans, and the measures taken by the War Department in time of mobilization to develop and facilitate movement of troops and supplies.<sup>50</sup>

In answering questions from previous G-3 courses, students in the G-4 Course were asked to determine the number of supply and transportation units required for an expeditionary force. Major Dwight D. Eisenhower's committee studied the critical question of how to maintain or make immediately available units not normally maintained in the regular Army during peacetime.<sup>51</sup> Eisenhower's committee concluded that a force of 63,000 would require a logistics force of 11,000 to support operations. Additionally, the committee concluded that conversions and complete formation of new units would be necessary.<sup>52</sup> The balancing of active and reserve component force structure remains a challenge today with nearly 80 percent of sustainment units echeloned in the US Army RC. The topic studied by the next committee was relevant to the work of Eisenhower's committee.

This committee evaluated "G-4 Contributions to War Plans" and "Study of Status of Supply and Equipment." First, the committee studied current war plans, mobilization timeline requirements, and capabilities. Next, they analyzed the current capability of the existing regular Army and National Guard units to meet requirements of immediate war plan execution and the need for expansion. Based on real world war plan information and current unit capabilities, the

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<sup>50</sup> Brown, "Contents," 1-5.

<sup>51</sup> Lytle Brown, "Outline of the Course," USAHEC, AWC Curricular Archives, G-4 Course, vol. 4, 1927-1928, 3.

<sup>52</sup> William. H. Wilson, "Report of Committee No. Nine, Memorandum for the Director, G-4 Division, Subject: General Review G-4 Course," December 7, 1927, USAHEC, AWC Curricular Archives, G-4 Course, 1927-1928, 7.

committee recommended providing essential logistics units necessary to support National Guard units immediately upon deployment. Next, the committee recommended local procurement of supplies for animals and motor equipment before departing home station to reduce the burden on the supply system during the deployment process. Lastly, the committee recommended an increase to supply and maintenance units within the task organization to more effectively support combat units initially and support the continuous effective operation of the expanding forces.<sup>53</sup>

The committee studying “G-4 Features in Joint Army and Navy” concluded, “Preparation of plans for a joint overseas expedition involving opposed landings will require much more detail than appears on the surface.” The committee added, “Perhaps in no other situation will the personalities of the two service commanders be of such importance, and great care must be exercised to insure the selection of commanders who can best play the game.”<sup>54</sup> Additionally, the committee recommended standardization of supplies and equipment common to both services. Lastly, the committee identified the Army and Navy Munitions Board as a great resource for information or resolution of joint interests to obtain the facts upon which commanders could base informed decisions.<sup>55</sup>

A lecture titled “From Shore to Ship” by Colonel Paul. L. Gerhardt detailed how the port served as an integral part of the transportation system and how it fits into the overall system of warehouses, interior railways and roadways, ship tonnage capacity, prioritization, and port

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<sup>53</sup> David McCoach, “Report of Committee No. Seven, Subject: G-4 Contributions to War Plans: Study of Status of Supply and Equipment,” December 7, 1927, USAHEC, AWC Curricular Archives, G-4 Course, 1927-1928, 5.

<sup>54</sup> William S. McClintic, “Report of Committee No. Eight, Memorandum for the Director, G-4 Division, Subject: Relations of the G-4 with Navy in Joint Operations and the Coordination of Logistic Problems Between the Army and Navy,” December 8, 1927, USAHEC, AWC Curricular Archives, G-4 Course, 1927-1928, 13.

<sup>55</sup> *Ibid.*, 13.

capacity and capabilities for throughput based on wartime conditions.<sup>56</sup> Gerhardt stressed that a port is an instrumentality of movement, a bridge of transfer between the railroads and the steamship. He stressed that the port could not control movement, but that movement must be controlled prior to reaching the port. During WWI, the AEF experienced significant frustration at ports of embarkation and debarkation due to insufficient logistics capabilities and overwhelming port capacity.<sup>57</sup>

In March 1920, the chief of staff of the army recommended to the Joint Army and Navy Board that the AWC and NWC use the same strategic problems. As a result, the courses of study at the colleges had many common characteristics, including a joint map maneuver.<sup>58</sup> The AWC and NWC exchanged faculty and students. In fact, Army officers serving as faculty assisted in establishing the Navy's logistics course.<sup>59</sup> The similarities in the curriculum, joint exercises, and the student and faculty exchanges at the war colleges extended in improved synchronization of the War Department and Navy Department staffs.<sup>60</sup>

Army Chief of Staff Major General Charles P. Summerall spoke to the 1926 AWC class during the Coordination Course on "The Duties of the Chief of Staff of the Army." Summerall discussed the joint coordination between the Army and Navy through the Joint Army and Navy Board and explained that the Joint Army and Navy Planning Committee examined any matter of major importance. This included consideration of disagreements between the services and

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<sup>56</sup> Paul L. Gerhardt, "From Shore to Ship," lecture, AWC, November 22, 1927, USAHEC, AWC Curricular Archives, G-4 Course, 1927-1928, 13.

<sup>57</sup> *Ibid.*, 13.

<sup>58</sup> Pappas, 102.

<sup>59</sup> Matheny, 63.

<sup>60</sup> Pappas, 102.

deciding corrective actions they should undertake.<sup>61</sup> Summerall further explained that the major responsibility of the Joint Army and Navy Board was joint war planning. He stated, “Practically every war plan we have is a joint plan. The Army and Navy must develop their service specific functions in these war plans; neither can act independently of the other; each one finds its activities or limitations depends very much on what the other branch can do.”<sup>62</sup>

The 1926 AWC Course consisted of approximately 120 lectures. Table 1 provides a breakdown of the lectures by course.

Table 1. 1926 Army War College Course Lectures

Course	Approximate Lectures
Command	20
War Plans Division	10
Mobilization	5
Assistant Secretary of War	10
G-1	10
G-2	30
G-3	10
G-4	10
General Subjects	15
Approximate Total	120

*Source:* Lytle Brown, “General Outline of the Course,” Carlisle Barracks, PA, US Army Heritage and Education Center, Army War College Curricular Archives, Coordination Course, Miscellaneous, vol. 8, doc. no. 1, 1926-1927, 1.

Although table 1 presents a snapshot of AWC course lectures, it does not fully account for the increase of logistics and Army and Navy coordination integrated throughout the curriculum. First, the War Plans Division (WPD) Course included war plans, defense projects, naval plans, and

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<sup>61</sup> Charles P. Summerall, “The Duties of the Chief of Staff of the Army,” lecture, AWC, June 17, 1927, USAHEC, AWC Curricular Archives, Coordination, doc. no. 7, 1926-1927, 3-4.

<sup>62</sup> *Ibid.*, 3-4.

joint Army and Navy plans. Second, the Mobilization Course integrated G-1 and G-4 basic plan appendices, supply branch annexes, procurement plans of the Assistant Secretary of War (ASW) Course, and supply rates as indicated in the War Department General Mobilization Plan. Third, the G-3 Course, while receiving the same twenty-four days as the G-4 Course, also incorporated the principles underlying the preparation of basic mobilization plans heavily based on industry and logistics. Additionally, the G-3 Course continued to build on the increased coordination with the Navy by integrating the readiness of the Navy for fleet action in a major emergency.<sup>63</sup>

The G-4 Course, focused at the operational level, covered mobilization plans, campaign supply adapted to present Army requirements, control of transportation, and relations of supply and strategy. The G-4 Course was followed by the ASW Course for a total of forty-four days of logistics focused instruction. The ASW Course focused students at the strategic level and addressed industrial mobilization, procurement functions of all supply branches, Navy procurement and coordination with the Army, strategic raw materials, and an economic survey of the United States.<sup>64</sup>

Lastly, the thirty-nine day long Command Course integrated a considerable degree of emphasis on logistics and joint operations. Topics studied included logistics of large forces, analytical logistics studies, cooperation with the Navy in joint operations, and preparation and execution of a joint Army and Navy map and chart maneuver with the NWC.<sup>65</sup> Following the Command Course, the WPD Course included the actual preparation of joint Army-Navy plans,

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<sup>63</sup> Brown, "Contents of the Course," 1-4.

<sup>64</sup> Ibid., 5.

<sup>65</sup> Ibid.

and the plans to include field operations, mobilization, industrial mobilization, and concentration plans essential to providing the necessary means for field operations at the right place and time.<sup>66</sup>

The analysis of joint Army-Navy plans constituted the bulk of the WPD Course.<sup>67</sup> Throughout this Course, students formed joint committees for each of the War Department's colored war plans. In preparation for planning, the students received detailed lectures on the Army and Navy Joint Board and Joint Planning Committee, and methods of the WPD and War Department general staff. In addition to furthering an understanding of the Navy, students received lectures on the Navy war plans.<sup>68</sup> The student committees reviewed and then briefed the outline of each plan, the structures used by the Army and Navy in the plans, and a comparison of the plans to determine recommended changes for submission to the War Department. Lastly, students received briefings on planning for war so that the Army may draw a greater understanding of the planning process from the Navy, and vice-versa.<sup>69</sup>

Following the WPD Course informative phase, the class entered the WPD war plans phase to study War Plans such as Red, Orange, and Green. The students received lectures further developing their understanding of war plans and joint operations between the Army and Navy. During the 1926 AWC, the President of the NWC, Rear Admiral William V. Pratt lectured on "The Preparation of the United States Fleet for Battle and its Conduct Therein: The Exercise of High Naval Command." Pratt opened his lecture by thanking the AWC for their assistance in

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<sup>66</sup> Brown, "Contents of the Course," 6.

<sup>67</sup> Cooling, 3.

<sup>68</sup> Lytle Brown, "Outline of the Course and Committee Assignment," USAHEC, AWC Curricular Archives, War Plans Division Course, vol. 7, part 1, doc. no. 1, 1926-1927, 1.

<sup>69</sup> *Ibid.*, 3.

establishing the NWC logistics course.<sup>70</sup> Pratt captured the emphasis on joint coordination between the AWC and NWC as well as demonstrating the level of detailed planning they were exploring and the differences in logistics planning between the two services. The details expressed in Pratt's lecture to the AWC would continue throughout joint planning during the WPD Course and the majority of the AWC curriculum until 1940. In a memorandum to the director of the WPD, a student committee concluded the following after their preparation of *color plans*, joint plans via coordination between the WPD and Navy, "The assignment of naval officers to the AWC has proven beneficial to both the army and navy." The committee added, "it is desirable that the same form be used for the Army and Naval Estimate of the Situation and that in so far as practicable that the same terms should be used therein."<sup>71</sup>

On September 3, 1936, Colonel Neb B. Rehkoph explained the purpose of the AWC to ninety officers including eleven sister service, eight non-combat arms, and fifty-six general officers.<sup>72</sup> Focusing on joint and logistics inclusion in the course, four were graduates of the NWC, and seven were graduates of the Army Industrial College. The ever-increasing class diversity suited the AWC mission as prescribed by the War Department.<sup>73</sup> Without the diversity

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<sup>70</sup> William V. Pratt, "The Preparation of the US. Fleet for Battle and its Conduct Therein. The Exercise of High Naval Command," USAHEC, AWC Curricular Archives, War Plans Division Course, vol. 7, part 2, doc. no. 15, 1926-1927, 7.

<sup>71</sup> Roscoe F. Dillen, "Memorandum for the Director, War Plans Division, The Army War College, Subject: War Plans, Rainbow," May 14, 1927, USAHEC, AWC Curricular Archives, War Plans Division Course, vol. 7, part 2, doc. no. 16, 1926-1927, 1-2.

<sup>72</sup> Neb B. Rehkoph, "General Orientation Lecture," September 4, 1936, USAHEC, AWC Curricular Archives, Miscellaneous, doc. nos. 1-8, vol. 8, doc. no. 1. 1936-1937, 1; US AWC Alumni Association, *Directory of US Army War College Graduates* (Carlisle Barracks, PA: US AWC Alumni Association, February 29, 2000), 115-116.

<sup>73</sup> *Ibid.*, 1. 1936 AWC Mission: 1. To train officers for 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. 2. To instruct officers in the duties of the War Department General Staff and of the office of the Assistant Secretary of War. 3. To train officers for joint operations of the Army and Navy. 4. To instruct officers in strategy, tactics and logistics of large operations in the past.

in the AWC to include logistics and other services the logistics and joint emphasis in the curriculum would have suffered.

Within the general orientation, the 1936 AWC class received detailed real world operational materials on G-1, G-4, and US Navy reference data. For example, the G-4 reference data was thirty pages and covered the critical logistics factors needed to produce war plans. The requirements were explained using real operational logistics data from the AEF in WWI to include information needed to plan anything from ammunition requirements, port operations, and transportation by road and rail, to medical treatment and evacuation.<sup>74</sup> These materials would have been very useful in future courses when planning joint operations with the Army and Navy. The reference material was quite lengthy and provided a high level of detailed planning factors for a course that was to instruct officers in the strategy, tactics, and logistics of the Army and higher echelons.

Many of the frustrations in WWI revolved around a shortage of ships and ineffective management of port activities. The planning references provided detailed data to effectively manage tonnage of ships, load and unload times based on the availability of ship berths, wharf storage, warehouse storage, and cranes. These operational logistics references provided students the level of detail needed to gain a better understanding of the logistics and transportation systems and the means required to move supplies, equipment, and personnel.<sup>75</sup>

Specific unit capabilities and numbers of units in the US Army inventory were also provided to students in order to properly plan for theater logistics. Understanding habitual relationships was important. For example, an ammunition company's ability to unload a

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<sup>74</sup> G-4 Course, "G-4 Reference Data," USAHEC, AWC Curricular Archives, G-4 Course, Miscellaneous, doc. no. 1-8, vol. 8, doc. no. 7, 1936-1937, II - 2.

<sup>75</sup> Ibid., 1-9.

thousand-ton train in four hours required the help of one quartermaster battalion and one hundred trucks.<sup>76</sup> This level of detail for every logistics unit's capabilities, combined with theater requirements, enabled students to integrate logistics capabilities into war plans.

The 1935 AWC Conduct of War Analytical Studies Course followed the General Staff Courses where, according to AWC Assistant Commandant Colonel William S. Grant, "where we gained a keener insight into how to obtain, how to classify, how to organize, how to train, how to equip, how to transport, how to supply, how to inspire, the means—human or material as the case may be—with which we would carry on a war."<sup>77</sup> Throughout the month-long course, the students formed nine committees and assigned topics per committee to include: "Organization of Nations for National Defense," "Plans for Wars and for the Initial Operations of Wars," "High Command in the Execution of Operations," "Means for Combat," and "Plans and Execution of Plans in Joint Operations." Additionally, subject matter experts lectured on several topics of relevance to this monograph to include "Joint Operations in the American Civil War," "Maritime Strategy of the World War," "Strategic Waterways," and "Suggestions for the Reorganization of Signal Communications for the Theater of Operations."<sup>78</sup> Committees were employed throughout each course of the AWC by grouping officers to study various subjects and report their findings in both written form and oral presentations. Committees were employed from year to year at the AWC; some subjects varied yearly while other committees built upon previous committee research. Committees highlighted in this monograph were highlighted due to their relevance to logistics or joint coordination between the Army and Navy.

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<sup>76</sup> G-4 Course, 22.

<sup>77</sup> William S. Grant, "Orientation Analytical Studies Lecture," January 2, 1936, USAHEC, AWC Curricular Archives, Conduct of War Course, doc. nos. 1-19, vol. 5, Analytical Studies, 1935-1936, 1.

<sup>78</sup> *Ibid.*, 7-8.

During the War Plans Course, US Navy Captain Donald C. Bingham lectured on “Strategic Waterways.” He focused on the idea that regarding strategy, the Army and Navy were largely the same. However, he highlighted a few differences in the Army and Navy structure: “When you are asked the size of the army, the answer is, 140,000 . . . but when asked the size of the navy the answer was given as fifteen battleships, fifty cruisers, six aircraft carriers and so forth. In other words, an army is organized on the basis of personnel whereas the navy afloat is organized on the basis of material.”<sup>79</sup> Bingham stressed the importance of combined operations between the Army and Navy as the major point to final decisions in war.<sup>80</sup> This example highlights cultural differences that existed in the Army and Navy, and a need for a common vocabulary and mutual operational understanding with regard to structure and procedures.

Staying with the joint operations theme, committee seven studied several joint operations throughout history to determine principles useful in planning and conducting similar operations in future war, including “Plans and Execution of Plans in Joint Operations.” Over two weeks, the committee determined factors of special importance in planning for joint Army-Navy operations.<sup>81</sup> Factors ranged from “Coordination of Army and Navy Plans” to “Special Ship to Shore Transportation.”<sup>82</sup> The committee concluded that the requirements for the success of future joint operations would rely on the complete cooperation between the Army and Navy, with the determined and aggressive execution of plans. Further, the committee recommended frequent joint training exercises involving the actual participation of major elements of the Army and

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<sup>79</sup> Donald C. Bingham, “Strategic Waterways Lecture,” January 2, 1936, USAHEC, AWC Curricular Archives, Conduct of War Course, doc. nos. 1-19, vol. 5, Analytical Studies 1935-1936, 1.

<sup>80</sup> *Ibid.*, 6.

<sup>81</sup> Rodney M. Hinckley, “Synopsis of Report, Committee No. 7. Subject: Plans and Execution of Plans in Joint Operations,” January 31, 1936, USAHEC, AWC Curricular Archives, Conduct of War Course, doc. nos. 1-19, vol. 5, part 1, Analytical Studies, 1935-1936, 1-2.

<sup>82</sup> *Ibid.*

Navy.<sup>83</sup> Surprisingly, none of the recommended principles or conclusions specified logistics coordination between the two services, considering the AWC mission specifically highlighted logistics.

Committee three studied “Plans for Wars and the Initial Operations of Wars.” They concluded that initial operations must be conducted with the resources immediately available and plans should reflect only the amount of material immediately available. Additionally, the committee concluded that a land, sea, and air force must be available immediately upon declaration of war. Lastly, they recommended that advance preparation of mobilization plans and unit deployments be successive rather than simultaneous.<sup>84</sup> Although the recommendations from committee three were highly restrictive and operated in a seemingly perfect scenario, the inclusion of balancing material on hand to requirements, readiness of forces, and synchronization of unit mobilization demonstrated the degree of logistics integration in committee work.

As part of the informative period of the War Plans Course, two sub-courses occurred prior to the committees developing war plans: the “Directive and Organization for Organization of a Theater of Operations Study,” and “Situation and Requirements of Theater Studies.” The courses allowed students to study war planning in general, strategy, organization of a theater of operations, and the functions of the various divisions of the staff and services prior to undertaking war plans.<sup>85</sup> This familiarized the officers with the many factors for consideration in preparing a

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<sup>83</sup> Hinckley, 2.

<sup>84</sup> Ernest A. Rudelius, “Synopsis of Report, Committee No. 3. Subject: Plans for Wars and for the Initial Operations of Wars,” January 27, 1936, USAHEC, AWC Curricular Archives, Conduct of War Course, doc. nos. 1-19, vol. 5, part 1, Analytical Studies, 1935-1936, 1-2.

<sup>85</sup> Rehkoph, 3.

theater of operations plan. Students received lectures on the different general staff functions and requirements of the theater of operations plan throughout these courses.<sup>86</sup>

Theater study number four, the Western Pacific, required the committee to conduct a theater of operations plan based on the assumption that war between Blue (United States) and Orange (Japan) might take place in the Western Pacific. In thirteen days, they determined suitable Pacific islands for Army and Navy bases and the location of sea and air routes across the Pacific.<sup>87</sup> Additionally, the committee prepared a joint estimate for War Plan Orange under the assumption that Blue would have no allies and Orange would have none except Manchukuo.<sup>88</sup>

The 1936 student plan for War Plan Orange consisted of twelve volumes and included a joint estimate, Army strategic plan, Navy basic plan, Western Pacific Theater joint plan, Army and Navy operations plans, and joint estimate plan.<sup>89</sup> Of specific importance was the Western Pacific Theater joint plan that called for unity of command in which the commander would control and coordinate the operations and logistics for both the Army and Navy.<sup>90</sup> With regard to all color plans to include the War Department Mobilization Plan, the 1935 G-4 Course instructed that the supply features of the logistics plans must agree with the respective Army strategic plan and joint Army and Navy plans.<sup>91</sup>

The 1935 G-4 Course continued to provide a wide range of logistics topics from strategic to tactical in the form of lectures and committee work. Lectures included “Operations of the

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<sup>86</sup> Rehkoph, 3.

<sup>87</sup> John W. Thomason, “Situation and Requirements, Theater Study, No. 4, Western Pacific,” March 29, 1936, USAHEC, AWC Curricular Archives, Preparation for War Course, 1936-1937, 1.

<sup>88</sup> *Ibid.*

<sup>89</sup> Matheny, 84-85.

<sup>90</sup> *Ibid.*, 85.

<sup>91</sup> William T. Carpenter, “Supply Division War Department General Staff (G-4),” lecture AWC, October 25, 1935, USAHEC, AWC Curricular Archives, G-4 Course, doc. nos. 1-15, vol. 4, 1935-1936, 7.

Quartermaster Corps and Ordnance Department,” “Supply Division of the War Department Staff,” “Organization and Functions of the Officer of the Assistant Secretary of War,” and “Medical Services of the Army.” The class formed committees to study current logistics issues utilizing real world and historical war data concerning topics such as: “Computation of Requirements for Supplies,” “War Reserves and Procurement,” “Industrial Mobilization,” “Supply, Evacuation, Hospitalization, Transportation for Mobilization,” “Organization and Control of the Complete System of Supply,” and “Evacuation and Transportation.”<sup>92</sup>

Some of the important points brought to the students by lecturers such as the Quartermaster General are still valid today. Quartermaster General William R. Gibson stated, “The success or failure of the supply system in the next war will depend upon the success or failure of our procurement plans since practically all articles of the Quartermaster supplies will be required on M-day.”<sup>93</sup> He explained that the highest risk for supply failure occurs during the transition from peace to war, requiring a transition plan to allow supply to meet the increasing demand curve. While discussing transportation and overseas movement, he explained, “There is considerable controversy as to whether this service (Army Transport Service) will continue to be operated in war by the Quartermaster Corps or will be taken over by the Navy.”<sup>94</sup> He explained the Army’s important role in the ports of embarkation and debarkation. While the Navy controlled the ships at sea, the Army authorities controlled port facilities, repair and maintenance of vessels, and decided what troops and cargo to transport.<sup>95</sup> Perhaps in discussing joint war plans

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<sup>92</sup> G-4 Course, “Contents G-4 Course,” October 24, 1935, USAHEC, AWC Curricular Archives, G-4 Course, doc. nos. 1-15, vol. 4, 1935-1936, 1.

<sup>93</sup> William R. Gibson, “Operations of the Quartermaster Corps,” lecture, AWC, October 29, 1935, USAHEC, AWC Curricular Archives, G-4 Course, doc. nos. 1-15, vol. 4, 1935-1936, 6.

<sup>94</sup> *Ibid.*, 12.

<sup>95</sup> *Ibid.*

in the War Plans Course, these points highlighted the necessary coordination between the Army and Navy that the students had to address.

The first eighteen days of the 1931 G-3 Course were filled with orientation and lectures concerning “G-3 Division of the War Department General Staff,” “Officer of the Chief of Naval Operations,” “Notes on War Planning,” and “AEF Organization and Functioning of the G-3.” to name a few. The second half of the G-3 Course was dedicated to committee work. Committee three was assigned “Joint Army and Navy Action.”<sup>96</sup> The committee was required to critically study the *Joint Action of the Army and Navy* (JAAN) manual and recommend changes as necessary. The committee concluded that existing Army and Navy plans provided for cooperation between the services, but unity of command did not govern such cooperation. Another concern was that the pamphlet featured a provision for two systems, which was contrary to the principle of unity of command. Overall, the committee recommended that the provisions for coordination of combined operations be discontinued and the system of unity of command be used in the coordination of all combined operations and that the pamphlet be revised accordingly.<sup>97</sup>

### Pacific Theater of Operations Case Study

During a February 23, 1942 fireside chat, President Franklin D. Roosevelt (FDR) described the path to victory in terms of “the destruction of the militarism of Japan and Germany.” He characterized the ongoing war as a “new kind” of global conflict, “not only in its methods and weapons but also in its geography.”<sup>98</sup> FDR asked listeners to have a map on hand

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<sup>96</sup> Robert Beck, “Orientation, Lectures, Committee Directives and Organization,” September 1, 1931,” USAHEC, AWC Curricular Archives, G-3 Course, 1931-1932, 1-2.

<sup>97</sup> John T. Kennedy, “Synopsis of Report, Committee No. 3, Subject: Joint Army and Navy Action,” September 24, 1931, USAHEC, AWC Curricular Archives, G-3 Course, 1931-1932, 1-3.

<sup>98</sup> Bruce A. Elleman and Sarah C. Paine, *Naval Power and Expeditionary Wars: Peripheral Campaigns and New Theatres of Naval Warfare* (New York: Routledge, 2010), 84.

for the broadcast as he explained how important it was to defend sea lines of communication (SLOC) to distant allies (see figure 1).<sup>99</sup> He explained (in the terminology of his time) basing, operational reach, the US transition to the offensive, and the need to control “many strategic bases along those routes” to maintain a strategic defense.<sup>100</sup> He described how these bases enabled sustained operations over long distances (operational reach) because aircraft and ground troops operating out of these bases allowed the United States to “keep on striking our enemies whenever and wherever we can meet them, even if, for a while, we have to yield the ground.”<sup>101</sup> FDR continued, “a process of attrition against the Japan,” and a build-up of American power would produce a “turn of the tide . . . soon, we, and not our enemies, will have the offensive, we not they, will win the final battles; and we, not they, will make final peace.”<sup>102</sup>

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<sup>99</sup> Elleman and Paine, 84.

<sup>100</sup> Ibid.

<sup>101</sup> Ibid.

<sup>102</sup> Ibid.

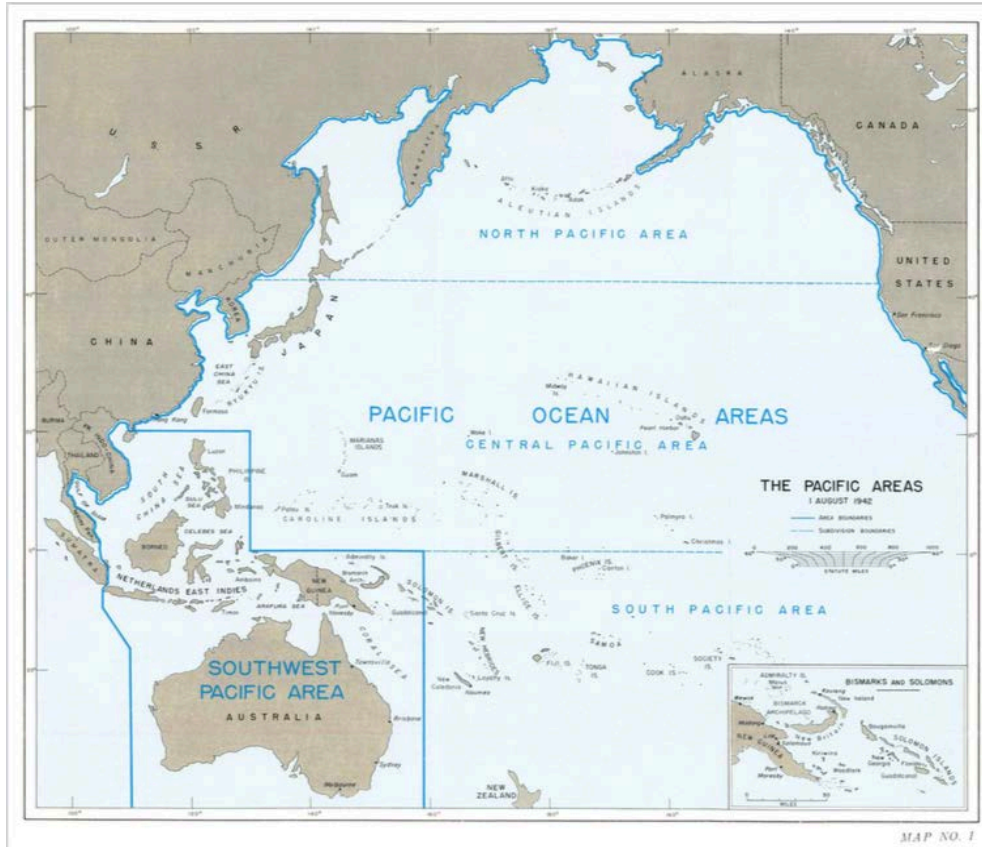


Figure 1. The Pacific Areas, 1 August 1942. John Miller, Jr., *Guadalcanal: The First Offensive* (1949; repr., Washington, DC: Government Printing Office, 2006), map 1.

## The Debate Over Command in the Pacific

A significant challenge within the PTO was a lack of unity of command. There was no single commander to resolve conflicts for resources, prioritization of support, or make the decision to combine resources of the commands on a single strategic objective. The command was divided to satisfy interservice rivalries, personal egos, and prevent an Army officer from commanding the Pacific Fleet. Admiral Chester W. Nimitz was appointed Commander in Chief of the Pacific Ocean Area, and General Douglas MacArthur was appointed the Supreme

Commander of Southwest Pacific Area.<sup>103</sup> MacArthur believed one of the most inexplicable decisions of the war in the Pacific was violating unity of command. Napoleon said, “Nothing is more important than unity of command,” and “One bad general is better than two good ones.”<sup>104</sup>

*The Joint Action of the Army and the Navy* (JAAN) manual was published by the Joint Board on April 23, 1927 with the goal of the Army and Navy coordinating their actions to produce the most effective mutual support through effective coordination.<sup>105</sup> The 1927 JAAN defined unity of command as the responsibility for, and the power to direct, operations of forces of the Army and Navy having a common mission. Exercising unity of command required joint approval by the War and Navy Departments of the missions assigned to the Army and the Navy in the independent war plans of the respective departments.<sup>106</sup> Historian Thomas A. Cardwell III explained that at the time the United States entered WWII there was no single command structure, rather in 1940 there was one command structure for naval forces and one for land.<sup>107</sup> While unity of command existed as an option in joint doctrine since 1927, *mutual cooperation* was the rule.<sup>108</sup> Doctrine dictated that, “no single commander would be in charge of the service forces; the services were expected to cooperate in a joint effort.” However, if mutual cooperation appeared inadequate as it was for joint operations in the Pacific, a single commander could be

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<sup>103</sup> Milan N. Vego, *Joint Operational Warfare: Theory and Practice* (Washington, DC: Government Printing Office, 2009), VIII-14-15.

<sup>104</sup> John A. Adams, *If Mahan Ran the Great Pacific War: An Analysis of World War II Naval Strategy* (Bloomington: Indiana University Press, 2008), 39.

<sup>105</sup> Joint Board, *Joint Action of The Army and Navy* (Washington, DC: Government Printing Office, 1927), iv.

<sup>106</sup> *Ibid.*, 4.

<sup>107</sup> Thomas A. Cardwell III, *Command Structure for Theater Warfare: The Quest for Unity of Command* (Maxwell Air Force Base, AL: Air University Press, 1984), 7

<sup>108</sup> *Ibid.*

designated under the doctrine of unity of command as prescribed in the JAAN manual.<sup>109</sup> While interest in improving cooperation and economy and efficiency among the services increased during the Interwar Period, the 1935 JAAN manual still called for the services to be organized and equipped independently. As late as 1938, the JAAN manual directed that, “operations of the Army and Navy forces will normally be conducted by mutual cooperation.”<sup>110</sup> Without unity of command, the Joint Chiefs of Staff (JCS) would referee decisions regarding command and employment of forces when disagreements of mutual cooperation occurred due to a lack of unity of command in the PTO.<sup>111</sup>

A lack of unity of command divided administrative responsibilities. While intertwined operationally, the services maintained separate supply lines, duplicating effort, doubling ordering, and wasting resources in a resource constrained environment.<sup>112</sup> Overcoming the great distances from ports in the United States, insufficient shipping and support personnel, and the “Germany First” policy would require that services coordinate requirements and capabilities to increase efficiencies. The Germany First policy was the “American strategy that the main effort of the United States in a war with the Axis Powers of Europe and Asia should be made in the European theater and that Germany must be defeated first.”<sup>113</sup> Already facing shortage in the ETO and PTO the German First policy of being first priority of support for the same requirements as the PTO resulted in additional stress on already limited shipping and supplies. Without shifting of

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<sup>109</sup> Cardwell., 8-9.

<sup>110</sup> Charles J. Hitch, *Decision-making for Defense* (Berkeley: University of California Press, 1970), 11-13.

<sup>111</sup> Miller, 8.

<sup>112</sup> Richard M. Leighton and Robert W. Coakley, *Global Logistics and Strategy, 1940-1943* (1955; repr., Washington, DC: Government Printing Office 1995), 391.

<sup>113</sup> Louis Morton, *Germany First: The Basic Concept of Allied Strategy in World War II*, ed. Kent Roberts Greenfield (1960; repr., Washington, DC: US Army Center of Military History, 2000), 12.

resources and prioritizing support to the PTO, planners worried the shift to offensive would be delayed and create additional risk to the SLOC between the United States and Australia.<sup>114</sup> The Germany First policy resulted in considerable competition for resources and conflicts between ETO and PTO commanders.<sup>115</sup>

Unfortunately, command in the PTO suffered for several other reasons, such as a battle of service egos, different organizational cultures, incompatible systems, and competition for the same resources. Although commanders in the Pacific denied it when pressed by General Marshall, their lack of cooperation placed a heavy strain on command relationships and thus, operations and logistics. Strong personalities, tension over who should command, and service differences from a career spent learning how to be a soldier, airman, or sailor made it difficult for senior leaders from the Army and Navy to overcome differences.<sup>116</sup>

According to historian Duncan S. Ballantine, at the beginning of the war the Navy Department and War Department had little in common in their logistics systems. Neither the Army nor the Navy had a procedure in place to implement the logistics aspects of standing war plans in the event of war.<sup>117</sup> Each service had a unique system of procurement and supply including separate ports of embarkation for overseas movements.<sup>118</sup> In general, there was no attempt by the services to coordinate logistics endeavors and eliminate waste and duplication of effort. Admiral Richard Kelly Turner explained the problem caused by a lack of unity: “Eighty

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<sup>114</sup> Stephen J. Lofgren, *Northern Solomons* (Washington, DC: Government Printing Office, 1993), 4-5.

<sup>115</sup> Alan Gropman, *The Big ‘L’: American Logistics in World War II* (Washington, DC: National Defense University Press, 1997), 304.

<sup>116</sup> Louis Morton, *Pacific Command: A Study in Interservice Relations* (Colorado Springs, CO: US Air Force Academy, 1961), 12-4.

<sup>117</sup> Duncan S. Ballantine, *US Naval Logistics in the Second World War* (Princeton, NJ: Princeton University Press, 1947), 80.

<sup>118</sup> Gropman, 308.

percent of my time was given to logistics during the first four months of Watchtower operations (because) we were living from one logistics crisis to another.”<sup>119</sup> In late October of 1942, FDR asked the JCS to commit all available weapons and resources to support the Guadalcanal fight. In response, General Marshall highlighted the theater distribution management problem by pointing out that there were already sufficient forces in the area and the main problem was to “distribute and maintain them by transport in critical combat areas.”<sup>120</sup>

The differences in the Navy and Army supply systems also made coordination of joint logistics difficult. The Navy system was decentralized and mainly involved support of mobile fleet units that operated in task forces of fluctuating sizes, moving rapidly over immense distances. Supply requirements for such operations were almost impossible to calculate in advance. On the other hand, the Army supply system was more centralized, massive, and relatively inflexible.<sup>121</sup> The challenge was to integrate all of the incompatible parts of the supply chain into a single, coherent system.<sup>122</sup> Building a joint theater logistics plan from scratch during combat operations would take significant time even if unity of command existed. For example, the services lacked instructions regarding the responsibility for logistics support. The natural implication was that logistics support in an operational area fell within the duties of the command. However, the logistics activities of the services would still operate independently of each other. Without unity of command, coordinating logistics support would be very challenging.<sup>123</sup> Logistics coordination was more difficult because the Pacific strategy often

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<sup>119</sup> Gropman, 313.

<sup>120</sup> Leighton and Coakley, 395.

<sup>121</sup> *Ibid.*, 656.

<sup>122</sup> Ballentine, 93-94.

<sup>123</sup> *Ibid.*, 95.

required that different commands move against Japan's advances in several places at the same time while separated by vast distances.<sup>124</sup>

Shipping was the biggest indicator of a lack of theater logistics coordination. Even with a critical shortage of ships, the services continued to operate independently. Historian Richard B. Frank wrote in his definitive account of the Guadalcanal campaign, "No coordination of supply activities existed, and soon both services were requisitioning separate shipping for the long Pacific hauls to the same destinations."<sup>125</sup> One can imagine the positive impact on shipping and port efficiency if the services coordinated requirements and capabilities. After all, the ships were going to the same ports. The resolution most readily available and obvious to the Army's principal logistician, General Brehon B. Somervell, was to make more efficient use of available shipping.<sup>126</sup> Another factor exacerbating the logistics inefficiencies in the Pacific was that it took more than twice as much shipping to support operations in the Pacific as it did for the same requirements in Europe.<sup>127</sup> The greater distance required larger quantities of supply on hand in the PTO which required more shipping. In turn, inadequate port capabilities of support personnel and infrastructure required longer retention of ships in theater, which stressed the supply system even further. It is astounding that the services failed to combine shipping efforts considering ship turnaround times from San Francisco to South and Southwest Pacific Theaters ranged from 69 to 133 days for cargo and transport ships.<sup>128</sup>

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<sup>124</sup> Gropman, 323.

<sup>125</sup> Richard B. Frank, *Guadalcanal: The Definitive Account of the Landmark Battle* (New York: Penguin Group, 1992), 136.

<sup>126</sup> John Kennedy Oehl, *Supplying the Troops: General Somervell and American Logistics in WWII* (DeKalb: Northern Illinois University Press, 1994), 3, 98.

<sup>127</sup> Frank, 11.

<sup>128</sup> Leighton and Coakley, 74, 725.

Because of inefficient practices and lack of unity, in September of 1942, over eighty-six ships languished in the Noumea harbor awaiting discharge. By the end of November, the count was up to ninety-one cargo vessels in port, eighty-three of them loaded with supplies and equipment requiring ship transport farther north.<sup>129</sup> The problem was so bad that Washington DC threatened to “reduce shipping from the United States to any theater which is failing to turn vessels around promptly.”<sup>130</sup> While no evidence exists that the War Department followed through on this threat, shipping inefficiencies did receive Presidential-level attention. It was not rare for ships to remain in port from two weeks to two months.<sup>131</sup> Reducing the problem of inadequate ports and bases required improvement of theater Services of Supply (SOS) organization, increasing logistics units, and better interservice coordination of port activities.<sup>132</sup> Shipping challenges were much greater in the PTO than ETO because of the lack of developed ports and land based distribution capabilities.

Personnel at Noumea did eventually develop joint coordination procedures and a system of port management. Motivation to improve the situation increased after Admiral William F. Halsey asked the Army SOS to resolve port activities at Noumea.<sup>133</sup> A newly energetic Army and Navy contingent strove for cooperation and a unified logistics effort to clear up the congestion in Noumea. Joint coordination, prioritization, and proper SOS organization of labor capabilities cleared sixty ships in the first month, leaving only twenty-nine backlogged. In another step in the right direction, the War Department established a board composed of Army, Navy, and Marine

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<sup>129</sup> Charles H. Owens, “Logistical Support of the Army in the Central Pacific, 1941-1944” (PhD dissertation, Washington, DC: Georgetown University, 1954), 128.

<sup>130</sup> Ballantine, 241.

<sup>131</sup> Owens, 175.

<sup>132</sup> Leighton and Coakley, 403.

<sup>133</sup> *Ibid.*, 402.

Corps representatives to coordinate priorities for forward movement of supplies to Guadalcanal.<sup>134</sup> Although unity of command was not the reason for success at Noumea, the services successfully coordinated and improved out of necessity. Receiving additional SOS personnel was paramount to providing the capabilities needed to develop and maintain a system. On March 8, 1943, Admiral King and General Marshall published the *Basic Logistical Plan* that required the services to establishing unified supply systems, determine joint requirements, and consolidate shipping priority lists.<sup>135</sup>

## The Pacific and the Tyranny of Distance

The most pressing need in the Pacific was for bases that could be defended and eventually used to mount counteroffensives. Some of the bases were already in construction before war began in the Pacific, such as Midway and Bora Bora. However, other bases were developed to meet critical operational requirements to forward-position supplies.<sup>136</sup> Initially, advance joint Army-Navy bases such as Midway and Bora Bora played key roles as refueling, supply, refit, rest, and staging areas for subsequent operations. Historian Alan Gropman, in *The BIG L: American Logistics in World War II*, wrote the following about advanced bases: “they gave us strategic reach and enabled the US military to penetrate and destroy Japan’s interior lines of communication.”<sup>137</sup> If the Japanese had been able to deny the United States the use of ports and airfields of advanced basing, it is possible that the vast distances of the Pacific would have

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<sup>134</sup> Leighton and Coakley, 402.

<sup>135</sup> Gropman, 321-322.

<sup>136</sup> Leighton and Coakley, 167.

<sup>137</sup> Gropman, 306-307.

changed the outcome or the duration of the Pacific war.<sup>138</sup> Admiral King described advanced bases as “spring boards for the next advance” across the Pacific. He also explained the importance of the bases for all logistics functions to include staging, anchoring, refueling, maintenance, and replenishment of ships and aircraft.<sup>139</sup>

The construction activities on islands such as Midway and Bora Bora prior to the Pearl Harbor attack took place to set the conditions for execution of War Plan Orange, which seemed increasingly likely in the late 1930s.<sup>140</sup> Further development of existing bases and establishment of new bases throughout the Pacific campaigns would further stress already strained shipping by requiring construction materials and support personnel such as Army logisticians and Navy Seabees who were already in short supply. Service troops could only be obtained immediately by redeploying them from Europe.<sup>141</sup> The Navy’s strategic plans relied heavily on support from Army troops, air units, and shipping.<sup>142</sup> Thus, shortages of personnel, supply, shipping and the Germany First policy, created logjams for the Navy. For instance, it took over a year to stockpile the supplies needed to support offensive operations in the South Pacific Theater.<sup>143</sup>

Midway received special emphasis. By August 18, 1941, the base consisted of three runways, a naval air station, a seaplane base, an advanced submarine base, and was capable of

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<sup>138</sup> Thomas M. Kane, *Military Logistics and Strategic Performance* (Portland, OR: Frank Cass Publishers, 2001), 37.

<sup>139</sup> Gropman, 307-308.

<sup>140</sup> Gordon L. Rottman, *World War II Pacific Island Guide: A Geo-Military Study* (Westport, CT: Greenwood Press, 2001), 35. Most of the islands in the Pacific all required significant preparation to include piers to land supplies, dredged channels and turning basins within the lagoons to support small ships and sea plane landings, defense troop quarters, hospitals, support facilities and shops, fuel storage tanks, and anti-aircraft and seacoast defense gun positions.

<sup>141</sup> Shrader, 497.

<sup>142</sup> John B. Lundstrom, *The First South Pacific Campaign: Pacific Fleet Strategy, December 1941-June 1942* (Annapolis, MD: Naval Institute Press, 1976), 21.

<sup>143</sup> Shrader, 495.

refueling and repairing ships. Without the strategic importance and preparation given to this outlying base, the Americans could have lost the Battle of Midway. After the victory, it instead served as an important base supporting Central Pacific operations over the coming years of war in the Pacific. It extended operational reach for submarines, ships, and aircraft because they used Midway to resupply, refit, and rest without having to travel the additional 1,225 miles to Pearl Harbor. This significantly reduced patrol turnaround time for submarines, aircraft, and some surface vessels.<sup>144</sup>

Still, geography presented the Americans with significant challenges in the Pacific. No islands existed between Pearl Harbor and the Gilbert, Marshall, and Caroline Islands in the Central Pacific to provide intermediate basing. Where distances of 1,000 to 2,100 miles existed between bases, a mobile logistics base or floating base would serve as an alternative to conduct underway replenishment in preparation for assault operations.<sup>145</sup> The floating base did not eliminate the need for harbors, but it did carry fuel, munitions, and other supplies, extending the operational reach of the fleet in otherwise inaccessible parts of the Pacific.<sup>146</sup>

In the South Pacific, Bora Bora Island lies 2,000 miles from Pearl Harbor, 1,420 miles east of American Samoa; 2,500 miles from New Zealand, and 5,000 miles from Australia. Bora Bora had a sparse supply of fresh water, which reduced the base's value to visiting ships. However, it was valuable for its refueling facilities, fuel storage tanks, piers, and support facilities, and 6,000-foot army airfield in support of the southern lifeline to Australia. Serving as a

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<sup>144</sup> Rottman, 41, 44.

<sup>145</sup> Gropman, 324.

<sup>146</sup> Kane, 40-41.

basing midway point, it significantly extended the operational reach of landing ships and large landing craft convoying to the South and Southwest Pacific areas.<sup>147</sup>

Bora Bora also experienced shipping troubles due to the port of embarkation failing to combat load or simply load the ships with common sense to make unloading at the port of debarkation more efficient. For example, the Army and Navy neglected to label crates for transportation to Bora Bora, to ensure ships had necessary slings and cargo nests for discharge, and to load the floating equipment first.<sup>148</sup> The admiral in charge of the naval escort to Bora-Bora discovered the ships could not be unloaded without the floating equipment, and the floating equipment could not be assembled without unloading.<sup>149</sup> Commander Carl H. Sanders succinctly stated the effect of bad loading on the progress of the base itself: “I believe that we could have saved three to four weeks . . . if the ships had been properly loaded.”<sup>150</sup>

Despite the problems at Bora Bora, supply ship loading issues continued at Guadalcanal, although the ships were already embarked for the Southwest Pacific when the orders for Operation Watchtower became official, resulting in inadequate planning time. This created an exceedingly short planning horizon which gave the supply officers less than five weeks to plan logistics for the campaign. Since the quartermasters had not expected the troops to go straight into battle, they had not combat-loaded all of the transports. This required twelve ships to stop at Wellington in New Zealand to be unloaded and repacked, further delaying the convoy by seven days and resulting in 75 percent of First Marine Division’s vehicles, a third of its rations and half

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<sup>147</sup> Rottman, 63-64.

<sup>148</sup> Leighton and Coakley, 181-182.

<sup>149</sup> Ibid., 182.

<sup>150</sup> Ballantine, 69.

of its ammunition being left behind.<sup>151</sup> The shortages in vehicles, fuel, and ammo—a direct result of limited operational reach—led to additional challenges during the already ambitious and hard-fought Operation Watchtower (the Guadalcanal campaign).

Even with supply ships loaded in a configuration that facilitated offloading in theater, which was rarely the case, the problem of sufficient logistics personnel ashore to manage discharge, arrangement and storage, and distribution of the cargo remained a significant shortfall throughout the Guadalcanal campaign. Sailors delivered material to the shore faster than ground troops could unload it. By the evening of August 7, 1942, one hundred boats on the beach and another fifty in the water awaited processing, a significant backlog caused by a lack of support personnel to discharge the vessels and clear the beach. On the afternoon of August 9, 1942, the logistics ships departed with 75 percent of their cargo still in their holds. Admiral Turner had decided he could no longer risk keeping undefended transport ships in the area.<sup>152</sup> The early departure of the logistics ships significantly limited the options available to the troops on the ground. Ground troops had almost no supplies to fortify positions, while the Marines had no land mines, very few entrenching tools, and almost no barbed wire. The troops had enough ammunition to support only four days of heavy fighting, lacked approximately half of their food supplies, and had almost none of their artillery, radios, radar gear, heavy weapons, or heavy equipment. The Marines were lucky to land on Guadalcanal with little opposition. However, they quickly lost the early initiative they gained during the landings upon the departure of the supply ships, which left with much of their combat power still aboard.<sup>153</sup>

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<sup>151</sup> Kane, 52.

<sup>152</sup> *Ibid.*, 54-55.

<sup>153</sup> *Ibid.*, 55.

## Progress of the Campaign

American operations in the PTO following the Japanese attack at Pearl Harbor took place in two broad phases: a strategic defense followed by a limited offense or defensive-offensive phase. The defensive phase began with the Pearl Harbor and continued through February 1942; during this phase the Americans focused on the defense of Hawaii, Midway, and Samoa, with one offensive intended to retake Wake Island.<sup>154</sup> Simultaneously, preparatory actions for the defensive-offensive phase began in earnest. These actions required training, rebuilding the fleet, and time for the industrial base to manufacture supplies and equipment. Setting the theater for offensive operations required securing additional basing and moving troops to Australia, New Zealand, New Caledonia, and the New Hebrides.<sup>155</sup> The Japanese disrupted these activities by building an airbase less than one thousand miles from Australia, which threatened the SLOC between the United States and Australia and made an immediate offensive necessary.<sup>156</sup> Admiral King initiated the defensive-offensive phase by ordering forces into the South Pacific to defend the SLOC to Australia and establish new bases.<sup>157</sup>

King did not achieve a shift from the defense without resistance. The Americans planned to remain in the defense for a fairly lengthy initial phase for a number of reasons: the American fleet in the Pacific was inferior to the Japanese fleet, and because Admiral Nimitz had only three to four carriers, versus six Japanese carriers.<sup>158</sup> Further, due to the Germany First policy, the

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<sup>154</sup> Lundstrom, 201. Admiral King described the US strategy the first six months of the Pacific with the following phases, the “defensive” and the “defensive-offensive.”

<sup>155</sup> Shrader, 494.

<sup>156</sup> Sharon T. Lacey, *Pacific Blitzkrieg: World War II in the Central Pacific* (Denton: University of North Texas Press, 2013), 1-3.

<sup>157</sup> Lundstrom, 201.

<sup>158</sup> Alan J. Levine, *The Pacific War: Japan Versus the Allies* (Westport, CT: Praeger Publishers, 1995), 33.

Pacific Fleet had detached four carriers to serve with the Atlantic Fleet at the time of the Pearl Harbor attack.<sup>159</sup> General Marshall also stressed that the American strategy in the Pacific must remain in a strategic defensive posture because of the more important opportunities in the European Theater. Still, Admiral King was not content with an idle defense. He fought to convince the War Department that an offensive was the best way to cover the string of bases in the south.<sup>160</sup> The balance of carrier strength, the Germany First policy, and limited resources would keep Admiral Nimitz on the defensive until after the Battle of Midway. Thus, King accepted that he would have to conduct phased operations in the Pacific to cope with insufficient resources caused by the competition for priority between the ETO and the PTO. Phasing helped planners prevent PTO operations from reaching a culminating point—whether due to logistics shortfalls or carrier strength only half that of the enemy.<sup>161</sup>

The Battles of the Coral Sea and Midway reset the carrier balance in the US Navy's favor. The loss of four Japanese carriers and the denial of the Japanese Navy's advance set the conditions for the US Navy to transition to limited offensive operations. This phase and the remainder of the Pacific campaign consisted of a series of operations to seize and develop additional basing for air operations and logistics support for follow-on advances.<sup>162</sup> The Midway victory opened the way for a limited offensive to counter the Japanese threat to Australia's SLOC.<sup>163</sup> However, the advance was still limited by ongoing shipping shortages, the time required to build basing capacity, and logistics inefficiencies resulting from a lack of unity of

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<sup>159</sup> Lundstrom, 15.

<sup>160</sup> Ibid., 50-51.

<sup>161</sup> JP 5-0, III-39-40.

<sup>162</sup> Shrader, 494.

<sup>163</sup> Leighton and Coakley, 389.

command. For example, the Americans lacked the material, shipping, and manpower required to build basing at the same time in both the Central and the South Pacific. The defense of Hawaii tied up valuable resources, as did development of bases to protect the SLOC from Australia north to New Hebrides.<sup>164</sup> Given these restrictions and the wide expanse of the Pacific, a step-by-step advance utilizing island bases was the only way to manage the logistics and gain points of vantage while extending combat power into areas held by the Japanese.<sup>165</sup>

Admiral Turner's biographer, Admiral George Dyer indicated that had anyone understood the logistics shortcomings, "Watchtower" would never have been attempted.<sup>166</sup> Phasing was necessary for synchronization of logistics, limited air, land, and sea-based operations, and several transitions of command.<sup>167</sup> Admiral Nimitz's command first undertook the first offensive task of seizing and occupying the Santa Cruz Islands, Tulagi, and nearby positions.<sup>168</sup> General MacArthur attached naval reinforcements and land-based aircraft to the South Pacific forces, and used his remaining troops to focus on interdiction of enemy air and naval activity west of the target area.<sup>169</sup> During planning at the end of June, tempers flared with regard to resources and who was best to command or coordinate the operation. As historian Richard Frank wrote, MacArthur stated he would take, "no steps of action with reference to any component of my command except under orders from Marshall."<sup>170</sup> Marshall and King routinely

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<sup>164</sup> Lundstrom, 52.

<sup>165</sup> Ibid., 19, 49.

<sup>166</sup> Frank, 601.

<sup>167</sup> Ibid., 34-35.

<sup>168</sup> John Miller, Jr., *Guadalcanal: The First Offensive* (1949; repr., Washington, DC: Government Printing Office, 2006), 20.

<sup>169</sup> Ibid.

<sup>170</sup> Frank, 34.

worked to sort out various command issues that flared up before any Pacific Operation.<sup>171</sup>

General MacArthur's command had the lead for the second task of the limited offensive phase, the seizure and occupation of the remainder of the Solomons, Lae, Salamaua, and the northwest coast of New Guinea, and the third task, the seizure and occupation of Rabaul and adjacent positions in the New Britain-New Ireland area.<sup>172</sup>

The Americans could not execute these three tasks simultaneously due to a lack of resources, including ships and planes. They also faced factors of time and distance that could support the first task, but not the second or third. For example, the ships of the South Pacific Amphibious Force would have to remain for perhaps two days in the Guadalcanal-Tulagi area, beyond the range of Allied land-based aircraft and exposed to attacks by Japanese warships.<sup>173</sup> Additionally, Southwest Pacific aircraft were too few in number to prevent enemy air and surface forces from attacking the invasion force, and the aircraft carriers would be exposed to attacks by land-based aircraft.<sup>174</sup> In a unified move, MacArthur and Admiral Robert L. Ghormley recommended that the JCS postpone the first task until the South and Southwest Pacific forces were strengthened to the point that all three tasks could be executed in one continuous movement. The JCS denied the request as the Japanese progress in the Solomons and threat to Australian SLOC needed to be stopped immediately.<sup>175</sup>

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<sup>171</sup> Frank, 34.

<sup>172</sup> *Ibid.*, 20.

<sup>173</sup> Miller, 20.

<sup>174</sup> *Ibid.*

<sup>175</sup> *Ibid.*, 20-21.

## Analysis

The PTO provided the US Army and Navy an opportunity to test the lessons they had learned during the Interwar Period. The following quotes from Sir Julian S. Corbett and Admiral William F. Halsey, Jr. highlight the importance of the joint team. Sir Julian S. Corbett wrote, “Since men live upon the land and not upon the sea, great issues between nations at war have always been decided . . . either by what your army can do against your enemy’s territory and national life, or else by the fear of what the fleet makes it possible for your army to do.”<sup>176</sup> “The successes of the South Pacific force,” wrote Admiral Halsey in 1944, “were not the achievements of separate services or individuals but the result of whole-hearted subordination of self-interest by all in order that one successful ‘fighting team’ could be created.”<sup>177</sup> Corbett and Halsey highlight the complimentary US capabilities from air, land, and sea to defeat the Japanese. Unfortunately, the Army and Navy did not always cooperate, synchronize, or integrate joint capabilities or logistics without challenges.

The lack of unity of command had the biggest impact on operations in the Pacific. Had the leaders from the JCS in Washington to the generals and admirals in the Pacific adopted unity of command, many of the logistics challenges such as those experienced at Noumea could have been resolved more quickly. Although unity of command alone does not guarantee unified logistics, it increases enforcement of unity of logistics.<sup>178</sup> This would have better matched capabilities to requirements, improving logistics efficiency and effectiveness both in the PTO and the ETO.

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<sup>176</sup> Julian S. Corbett, *Some Principles of Maritime Strategy - The Original Classic Edition* (Dayboro, Australia: Emereo Publishing, 2012), 14.

<sup>177</sup> Miller, ix.

<sup>178</sup> Ballantine, 95.

Regardless of the logistics and operations difficulties caused by a lack of unity of command, the Japanese threat to cut the line of communications to Australia was promptly answered.<sup>179</sup> Of all the elements of operational art and design, this threat resulted in the US military recognizing the need to extend operational reach through strategic basing to enable projection of combat power. The extension of the joint forces operational reach was critical to the success of operations in the Pacific.<sup>180</sup> The ability of the joint force to extend operational reach by securing and operating bases in the area of responsibility was key to the success of the US operational design.<sup>181</sup> As seen in the PTO, logistics challenges were eventually overcome by the necessity required to improve cooperation and establish systems in support of combat operations, allowing American forces to seize and maintain the initiative throughout war.<sup>182</sup>

In *The Art of War*, Antoine-Henri Jomini wrote, “Strategy is the art of making war upon the map, and comprehends the whole theater of operations.”<sup>183</sup> The strategic plan to counter Japan’s attack on Pearl Harbor relied heavily on the map—specifically, on key geographical factors. FDR and military planners concerned themselves with sea and air lines of communication, basing, transportation, and supply to support their strategy, considerations that today make up the concept the US Army calls operational art. The importance of logistics in the PTO resonates in the following Jomini quote, “Logistics comprises the means and arrangements which work out the plans of strategy and tactics; strategy decides where to act; logistics brings the

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<sup>179</sup> Miller, 8.

<sup>180</sup> Headquarters, Department of the Army, Army Doctrine Reference Publication (ADRP) 4-0 *Sustainment* (Washington, DC: Government Printing Office, 2012.), 3-4.

<sup>181</sup> ADRP 4-1, 3-5.

<sup>182</sup> Kane, 36-37.

<sup>183</sup> *Ibid.*, 68.

troops to this point.”<sup>184</sup> Without the foresight to integrate basing into war plans for the PTO, operational reach would have been much more limited and the war in the Pacific would have certainly lasted much longer. The development of basing close to the operational area could provide responsive sustainment support to operations, as well as provide airfields for aircraft to be as far forward as possible, extending their operational reach further than sea or land based assets during operations. Operational reach would have been significantly impacted without a network of basing in the PTO. This would result in the forces reaching their culmination point frequently throughout operations. Since basing was a key element for the execution of the strategy across the Pacific, joint coordination and unified logistics needed to be executed without fail.<sup>185</sup> Transitioning to a limited offensive when resources and basing were not fully developed, seized the initiative and allowed the United States to secure advanced basing necessary to support the Pacific strategy.<sup>186</sup>

Lastly, the lessons learned at the AWC, while prevalent in the curriculum, showed progress in logistics and joint coordination between the Army and Navy were not as prevalent in execution in the PTO. Certainly, learning more about each other’s service helped at lower levels. However, with no unified command in place to establish and enforce policy, ideas learned in the schoolhouse, while possibly leading to greater familiarity and coordination among the force, can suffer neglect as battlefield leaders lack the power to enforce them, thereby ensuring the desired results in theater. A lack of unity of command leads to overreliance on informal coordination, which is an operational risk most commanders and staff are not willing to accept. The Noumea port shipping struggles, for example, required threats from FDR to get commanders to come

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<sup>184</sup> Kane, 68.

<sup>185</sup> Gropman, 321-322.

<sup>186</sup> Kane, 37.

together and clear up a problem that was negatively affecting both the PTO and ETO. In the end, it took nearly the entire Pacific war for the services to begin working together effectively. Unity of command was never achieved, which continued to hold back unity of logistics efforts. Joint logistics never achieved the level of cooperation agreed upon by Marshall and King in the 1943 *Basic Logistics Plan for Command Areas Involving Joint Army and Navy Operations*.<sup>187</sup>

## Recommendations

The analysis of the US AWC Interwar Period curriculum changes and the PTO case study have highlighted challenges relevant to the US Army today. First, the importance of unity of command, and understanding command and support relationships, is paramount to success in all areas of combat operations. A greater understanding of these relationships and their operational impact in military education and operational planning can enable a military to achieve optimal operational outcomes.

In WWI and WWII, shipping shortages were a significant issue and frequently limited commander's actions. In an article titled "A US-Based Army Can't Get to the Fight Fast Enough," recently retired General Carter Hamm wrote, "If the U.S. doesn't have sufficient forward-deployed land forces—and for many scenarios, it doesn't—it needs to be able to get them there, and quickly. But it can't, at least not in large numbers, because the military lacks the strategic airlift and sealift that would carry Army forces from their stateside bases to the world's hot spots."<sup>188</sup> This begs the question, is it advisable to take a close look at current power projection platforms to determine if there is enough to move the US military's personnel and

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<sup>187</sup> Gropman, 319, 335.

<sup>188</sup> Carter Hamm, "A US-Based Army Can't Get to the Fight Fast Enough," March 3, 2017, accessed March 7, 2017, <http://www.defenseone.com/ideas/2017/03/us-based-army-cant-get-fight-fast-enough/135872/print/>.

equipment anywhere in the world as rapidly as needed? In order to mitigate strategic lift shortfalls, the number of prepositioned brigades afloat and ashore needs to be reassessed. Recent relocations of armored platforms to Europe have demonstrated how long it takes the US military and strategic partners to relocate combat power around the world. It appears the conventional skills have atrophied in the past decade of conducting COIN. Recently, Army Material Command Commander, General Gustave F. Perna said, “I personally believe we are not ready to execute a decisive action fight against a near-peer competitor.”<sup>189</sup> This begs the question, what must the US Army do now to get ready for that fight?

Today’s sustainment challenges are not so different from those experienced in WWI and WWII. In fact, many of the challenges are still alive and well in today’s Army. Applying the right systemic changes to force structure, training, and equipping will hopefully ensure the same challenges are not present in the next war. Determining the right number of depots around the world to support operations is critical to mitigating transportation challenges. Further research is needed on increasing power projection platforms combined with prepositioned stock afloat and ashore, and the right number and type of brigades. Additionally, sustainment force structure should be reviewed to ensure that the right balance of readiness between the active and RC sustainment forces is maintained to respond to immediate requirements.

## Conclusion

This monograph addressed the increased emphasis on logistics and joint coordination at the US AWC during the Interwar Period. Although the monograph focused primarily on military education, it is important to recognize where the classroom ends and operational reality begins. It

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<sup>189</sup> Matthew Cox, “Army Leaders Search for Answers to Multi-Domain Battle,” March 13, 2017, accessed March 16, 2017, <http://www.military.com/daily-news/2017/03/13/army-leaders-search-answers-multi-domain-battle.html>.

would be wishful thinking to assume the same level of cooperation and mutual understanding that occurs in academic settings will occur in time of war. The PTO case study demonstrated the importance of unity of command during joint operations and the criticality of basing, operational reach, and phasing being properly planned during operational campaigns. Regardless of whether the Army is in an interwar period or period of transformation, leaders must make decisions based on uncertainty that will determine success or failure in the next war.

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