

# Operational Art: The Framework for Successful Transitions in the US Army and Its Importance in Officer Education

A Monograph

by

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## Abstract

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The US Army is currently experiencing a change in the operational environment. After decades of counterinsurgency focused fighting, near peer threats now require a transition to conducting large-scale combat operations. Transitioning from small scale to large scale operations is not without precedent in the US Army. The purpose of this study is to determine what factors allowed the US Army to transition in the early 20<sup>th</sup>-century. This paper asks the question, what evidence exists that the application of current operational art as defined by Joint Publication (JP) 3-0, facilitated the successful transition of the US Army from small-scale to large-scale wars in the period of 1909 to 1919? To answer the research question, the author conducts qualitative research, based on primary and secondary sources, determining the presence of operational art-like efforts in the Moro War, Punitive Expedition and WWI, and their effects on transitioning an army to a large-scale fight. The findings determine evidence exists that the application of operational art facilitated the successful transition of the US Army from small-scale to large-scale wars in the early twentieth century. Of more importance is the determination that the underlying facilitator that allowed the successful transition of the US Army was the professional military education of General John Pershing. The findings of this paper matter to the reader because the changing operational environment may require a rapid transition of focus. The paper describes to the reader that through education and application of operational art, transition and victory is possible.

# Contents

Abstract.....	iii
Acknowledgement.....	v
Acronyms.....	vi
Illustrations.....	vii
Introduction.....	1
John Pershing.....	5
Operational Art.....	12
Moro War.....	19
Punitive Expedition.....	26
An Evolution in Officer Education.....	34
Meuse Argonne.....	38
Conclusion.....	44
Recommendations.....	47

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I'd like to thank Hank for offering to show me his firearms collection containing a rifle and pistol used in the hunt for Pancho Villa, which sparked the idea behind this monograph. Finally, I would like to thank my instructors who have taught me throughout this journey. Dr. Peter Schifferle was particularly helpful in guiding me toward the use of case studies from the Philippines and World War I in addition to the Punitive Expedition. His mentorship of how to associate the operational art framework through the case studies to depict its usefulness in transitioning the army into large scale wars and the importance of officer education was paramount.

Overall this project has been very value added. In addition to determining and answering a research question, I gained a wealth of information about a portion of US military history that I had no prior knowledge. I have found my course work throughout SAMS to be stimulating and thought provoking, providing me the tools to effectively protect the nation against future threats.

## Acronyms

ADP	Army Doctrine Publication
ADRP	Army Doctrine Reference Publication
AEF	American Expeditionary Forces
CGSC	Command and General Staff College
COIN	Counterinsurgency
DA	Direct Action
FM	Field Manual
FSR	Field Service Regulations
GWOT	Global War on Terrorism
LOO	Line of Operation
PMS	Professor of Military Science
SAMS	School of Advanced Military Science
JP	Joint Publication
USMA	United States Military Academy
WWI	World War One

## Illustrations

Figure 1. Map of the Battle of Bud Bagsak .....	20
Figure 2. Map of the Punitive Expedition .....	29
Figure 3. Map of the Meuse Argonne Offensive .....	41
Figure 4. Map depicting how the AEF was arrayed from September 26 through November 11, 1918 .....	44



## Introduction

The US Army at the beginning of the 20<sup>th</sup>-century consisted of a relatively small force focused on small-scale wars. During this time the US Army conducted operations in the Philippines to protect the interest of the United States and also deployed to defend the US southern border against the bandit raids of Poncho Villa. These operations concluded with mixed success. In 1917, the United States could no longer adequately defend its interest through the army it possessed. The start of World War I (WWI) forced the US Army to expand its force and transition its army from a small-scale fighting force to one capable of fighting in the largest conventional battle the world had ever seen.

Transitioning from small to large-scale wars is once again becoming an issue for the US Army. Since the terrorist attacks on September 11, 2001, the US Army has become immersed in counterinsurgency (COIN) operations.<sup>1</sup> To fight the terrorist threat throughout the world, the US Army has focused intently on constant deployments to support the Global War on Terror (GWOT). The GWOT consisted of multiple theaters, but all were small-scale wars with a large emphasis on lower echelons to gain tactical victory. Today, the US Army Chief of Staff, General Mark A. Milley is directing the army to prepare for war against adversaries in Eastern Europe and East Asia who are modernizing their area denial capabilities. This future war prediction will require the US Army to transition into a fighting force capable of battling a near-peer adversary through multiple domains in decisive action.<sup>2</sup> The transition from COIN to decisive action is similar to the transition of the US Army in the early 20<sup>th</sup>-century because the early 20<sup>th</sup>-century

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<sup>1</sup> US Department of Defense, Joint Staff, Joint Publication (JP) 3-24, *Counterinsurgency* (Washington, DC: Government Printing Office, 2013), ix. Counterinsurgency is a comprehensive civilian and military effort designed to simultaneously defeat and contain insurgency and address its root cause.

<sup>2</sup> Todd Lopez, "Milley: Army on cusp of profound, fundamental change," *Army.mil* (October 2016): 1, accessed November 28, 2017, [https://www.army.mil/article/176231/milley\\_army\\_on\\_cusp\\_of\\_profound\\_fundamental\\_change](https://www.army.mil/article/176231/milley_army_on_cusp_of_profound_fundamental_change).

US Army predominately focused on small insurgency type conflicts. When WWI began the US Army of the early 20<sup>th</sup>-century had to shift its focus to fight an adversary in decisive action, just as the current US Army has been focused on a COIN-centric fight for over sixteen years and now finds itself shifting focus to prepare for a decisive action fight.

This study determines what factors allowed the US Army to transition in the early 20<sup>th</sup>-century. In a time of rapid force restructure, the US Army can benefit from an understanding of the efforts that facilitated a similar transition in the past. Evidence exists that the use of operational art-type efforts facilitated the campaigns of the US Army in the Philippines Punitive Expedition, and WWI. For General John J. Pershing, operational art meant mastering a mechanical set of competencies. The essence of military skill was the methodical application of military force to win.<sup>3</sup> Although operational art is only recently a doctrinal term used in the United States Army, the concept of military professional skill as an art form is not new.<sup>4</sup>

The research question presented is, what evidence exists that the application of current operational art as defined by Joint Publication (JP) 3-0, facilitated the successful transition of the US Army from small-scale to large-scale wars in the period of 1909 to 1919? The thesis is that the presence of lines of operation, culmination, and basing in campaigns from 1909 to 1919, enabled the integration of operational art into the AEF campaigns of WWI, successfully facilitating the transition from small-scale to large-scale wars. The theory suggest that no matter what the scale of the conflict, the use of operational art by commanders and staffs will provide a framework for transition and victory.

JP 3-0 is utilized to define operational art and its elements within this paper because of its validity to the problem driving the research. Until recently, joint doctrine and US Army doctrine

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<sup>3</sup> Peter J. Schifferle, *America's School for War: Fort Leavenworth, Officer Education, and Victory in World War II* (Lawrence, KS: University Press of Kansas, 2010), 63.

<sup>4</sup> Ibid.

used different definitions to define operational art. With the introduction of the 2017 version of Field Manual 3-0 *Operations*, the definition of operational art within joint and army doctrine are the same. Joint doctrine is chosen as the base for this work due to the joint nature of the case studies used.<sup>5</sup> The Field Service Regulation's (FSR) in use during the cases studied for this research are not used to define anything because they are extremely tactical in nature. Many references are made to the use of the bayonet and other small unit level tactics. The word Operations does not appear in an FSR until 1923.<sup>6</sup> This paper uses current doctrine to decipher historical case studies in an attempt to show the validity of operational art and its use in future wars. Operational art proves its validity to the force through the application of its efforts to gain victory and successfully transition the Army in the period between 1909 and 1919.

The theoretical framework used in this research is operational art. Operational art is the cognitive approach by commanders and staffs— supported by their skill, knowledge, experience, creativity, and judgment— to develop strategies, campaigns, and operations to organize and employ military forces by integrating ends, ways, and means.<sup>7</sup> The ten elements that make up today's operational art framework are end state and conditions, center of gravity, decisive points, lines of operation and lines of effort, operational reach, basing, tempo, phasing and transitions, culmination, and risk.<sup>8</sup> To develop the argument, the presence of these efforts in the Philippines,

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<sup>5</sup> General Pershing had use of the US Army Air Corps, which later became the US Air Force, in the Punitive Expedition and WWI. During the Meuse Argonne campaign Pershing also commanded elements of the French Army and elements of the United States Marine Corps.

<sup>6</sup> Current doctrine is used in this research because of its focus on the operational level of war. Doctrinal terms from the Field Service Regulations (FSR) of 1905, 1910, 1913, and 1914 are not used because of their tactical nature and the author needs the reader to view the paper from an operational view point.

<sup>7</sup> US Department of Defense, Joint Staff, Joint Publication (JP) 3-0, *Joint Operations* (Washington, DC: Government Printing Office, 2006), GL-13, and US Department of the Army, Field Manual (FM) 3-0, *Operations* (Washington DC: Government Printing Office, 2017), 1-20.

<sup>8</sup> US Department of the Army, Field Manual (FM) 3-0, *Operations* (Washington, DC: Government Printing Office, 2017), 1-20.

Mexico and WWI, are used to describe the role operational art played in transitioning the US Army from small to large-scale wars. The case studies of the Philippines through the Punitive Expedition, and into the Meuse Argonne offensive are covered from page eighteen to thirty-nine. The presence of efforts that resemble current operational art are identified, along with their role in achieving victory. The paper shows that an education in the theory's that developed operational art facilitated the successful transition of the US Army. The author furthermore suggests that a more robust officer professional education in operational art will help transition the current US Army from a COIN mentality to a focus of large scale decisive action fighting.

To answer the research question, the author conducts qualitative research, based on primary and secondary sources, determining the presence of operational art-like efforts in the Moro War, Punitive Expedition and WWI, and their effects on transitioning an army to a large-scale fight. A qualitative research approach uses exploratory means to gain an understanding of the underlying issues within a problem. The use of qualitative research allows for the use of critical analysis, applying theoretical truths to actual events. Through the use of critical analysis based off of qualitative research, the paper assesses theoretical truths in the light of actual events with the goal of connecting effect to cause.<sup>9</sup> In addition, the author analyzes operational art and determines what major military theorist contributed to the design of the operational art framework. These areas of focus set the foundation for the five sections of the paper, which are General John Pershing, Operational Art, the Philippines, Punitive Expedition, and WWI specifically oriented on the Meuse Argonne Offensive. Through these sections, the author clarifies how operational art helps transition in the army so the reader will develop an understanding of operational art, its application before becoming doctrine, and how following the current doctrine will allow successful transition and achieve victory on future battlefields.

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<sup>9</sup> Carl von Clausewitz, *On War*, Indexed Edition (Princeton, NJ: Princeton University Press, 1989), 156-169. In Book Two, Chapter Five, Clausewitz covers critical analysis and its importance in tracing effects back to their causes determining the incontrovertible truth.

The scope of this paper is limited to that of General John J. Pershing. General Pershing, a senior military leader during the selected period, ties all sections of the research together, provides historical context, as well as providing a lens with which to view the research. John Pershing represents the Army Officer Corps of his time, having experience, but not a lot of practice. In addition to providing sufficient evidence through the identification of operational art efforts in the early 20<sup>th</sup> century, the education of General Pershing at the US Military Academy (USMA), through correspondence courses, and the Army War College is assessed, providing a forecast of how education effects the proficiency of operational art in military officers today.

Using case studies from the Philippines, Punitive Expedition, and Meuse Argonne, the author identifies practices that correlate with the definition of efforts within operational art as defined in Joint Publication 3-0. Through this process the author identifies examples of line of effort, basing, operational reach, culmination, line of operation and phasing. Identifying the existence of these efforts, in connection with the success of the given operation will answer what evidence exists to prove that the use of operational art will facilitate the transition from small-scale to large-scale operations.

### John J. Pershing

June 15, 1913, Brigadier General John J. Pershing was involved in the fiercest fighting he would ever personally encounter.<sup>10</sup> Not the first combat Pershing had ever seen, nor would it be the last, but in the five-day period of 1913, John Pershing solidified his position as a general who led from the front. At the battle of Bud Bagsak, Pershing maneuvered forces to seize key terrain held by Moro tribesmen. Although sniper fire was persistently harassing Pershing and his men, they continued toward the summit. Two-thirds of the way up the volcanic mountain, Pershing himself started to believe the task might not be possible. Facing an armed force holding a position

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<sup>10</sup> Frank E. Vandiver, *Black Jack: The Life and Times of John J. Pershing* (College Station, TX: Texas A&M University Press, 1977), 567.

of tactical advantage, General Pershing pushed forward to the front lines of the fighting. At the age of fifty-three, General Pershing ordered and charged with the final assault up the last one hundred yards of the mountain. In the final moments of the battle, Pershing's men fought in hand to hand combat against Moro warriors wielding their barong knives winning the decisive battle of the Moro War. For his actions, General Pershing was a nominee for the Medal of Honor. The award was not submitted because General Pershing himself asked for removal from consideration.<sup>11</sup>

John Joseph Pershing was born on a small Missouri farm in 1860. The oldest of six children that survived early childhood, John grew up in a period of post-civil war. At the age of five, John Pershing witnessed Soldiers coming home from the battle of Appomattox who had served on both sides of the war. Young Pershing grew up working in the fields of his family farm. At a very young age, John Pershing had an understanding of war and of the hard work required to survive.<sup>12</sup>

Pershing aspired to become a lawyer in his youth, with ambitions of attending the University of Missouri. Unfortunately, the effects of the financial panic of 1873 disrupted his plans and forged a situation that required him to run his family farm. Pershing understood hard work and possessed the grit required to raise a harvest but the financial situation of the time was heavily against him, and his family farm became foreclosed. To earn a living, Pershing became a teacher at a local grade school, but the work was unfulfilling, and he wanted something more.<sup>13</sup>

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<sup>11</sup> James R. Arnold, *The Moro War: How America Battled a Muslim Insurgency in the Philippine Jungle, 1902-1913* (New York: Bloomsbury Press, 2011), 241. Soldiers who served under Pershing swore affidavits describing Pershing's conduct. Even General Bell who was openly skeptical of Pershing agreed that General Pershing deserved the award.

<sup>12</sup> Vandiver, *Black Jack Pershing*, 5. As a child, John Pershing witnessed the effects of the civil war on the US and was subjected to a robbery where two people were killed and his father fended off raiders.

<sup>13</sup> Frederick Palmer, *John J. Pershing* (Harrisburg, PA: The Military Service Publishing Company, 1948), 12-13. Palmer provides context to the early life of Pershing by focusing on his brief stint as a teacher in Kirksville Missouri. His contributions highlight the fact that Pershing had not always wanted to be a Soldier.

While teaching, Pershing learned about an exam that would gain him entrance into the USMA at West Point. He never had ambitions of becoming a Soldier, but West Point offered him an education and advancement in the world.<sup>14</sup> He took the exam, passed, and entered the academy in 1882. Pershing found his niche at West Point. A combination of his hard work ethic and detail-oriented personality, Cadet Pershing became a favorite among his peers. Known to inspire confidence in those around him, Pershing served as class president all four years of his time at the US Military Academy, and as the First Captain of the Corps of Cadets his senior year.<sup>15</sup>

Though he may not have known it at the time, John Pershing's education at West Point played a large part in his future use of what became known as elements of operational art. In the 1830's, prior to Pershing's attendance, Dennis Hart Mahan institutionalized the French method of warfare in American military officer education. Mahan had just returned from receiving a military education in France, when he accepted the job at West Point, and began restructuring the curriculum. While Mahan's teaching was focused on engineering, his new curriculum was heavily influenced by the French Regulations of 1792 and included larger strategic concepts from European theories.<sup>16</sup>

Since no books existed to facilitate the learning that Mahan envisioned, he produced his own, writing *Composition of Armies*, and *Strategy*. The lessons from *Composition of Armies*, taught the importance of combined arms battle, emphasizing the Infantry as a critical arm to achieve battle, but also the requirement for Cavalry and Artillery to be used in conjunction with the Infantry. However, Dennis Mahan and his book *Strategy* had the greatest impact in sowing the seeds of operational art in the mind of a young John Pershing. *Strategy* contained many

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<sup>14</sup> Ibid.

<sup>15</sup> Palmer, *John J. Pershing*, 22-23.

<sup>16</sup> Michael A. Bonura, *Under the Shadow of Napoleon* (New York: New York University Press, 2012), 81.

concepts that would go on to become elements of operational art, such as lines of operation and basing.<sup>17</sup> Through the efforts of Dennis Mahan and the West Point officer education system, future cadets such as John Pershing were indoctrinated to an intellectual framework of the battlefield that contained specific instruction in principles of warfare and concepts that became elements of operational art.<sup>18</sup>

After leaving West Point, Pershing began developing the battlefield experience that shaped his career. From 1886 to 1898, Pershing was assigned to the 6<sup>th</sup> and 10<sup>th</sup> Cavalry Regiments where he pursued Indians across the western plains, participating in the Southwest, Northern Plains and Wounded Knee campaigns.<sup>19</sup> Pershing first held an administrative position from 1891 to 1895 as the Professor of Military Science (PMS) at the University of Nebraska. While serving as the PMS, Pershing finally achieved his lifelong goal of obtaining a law degree.<sup>20</sup> The research found no evidence that John Pershing ever practiced law, but it speaks volumes toward his focus and drive to achieve a goal once he put his mind to it. In between cavalry assignments he also served as a Tactical Officer at West Point. During this assignment, Pershing enforced strict regulations on the cadets and did not gain their favor. Due to his previous service in the 10<sup>th</sup> Cavalry Regiment, an all-Black formation, the Corps of Cadets coined his unofficial

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<sup>17</sup>Bonura, *Under the Shadow of Napoleon*, 152-156. While Dennis Mahan's *Strategy* was not the exact text John Pershing would have read, it is the foundational text that was used to make what Pershing did read. In 1873 Mahan's text was replaced by Henri Dufour's *Strategy and Tactics*. Dufour's writing was an updated curriculum built on similar topics as Mahan. Dufour's text was in service until 1888, after Pershing's graduation, and the beginning of German warfare influence.

<sup>18</sup> Ibid, 82-83.

<sup>19</sup> "General John J. Pershing: Contributions and Commemoration at UNL 1891-1895," Nebraska U a Collaborative History, accessed on March 24, 2018, <http://unlhistory.unl.edu/exhibits/show/generalpershing/pershingteaching/pershingmilitarydepartment>.

<sup>20</sup> Donald Smythe, *Guerrilla Warrior: The Early Life of John J. Pershing* (New York: Charles Scribner's Sons, 1973), 1-27. Smythe provides a brief overview of John Pershing's service in the wars against the plains Indians and continues into his time as a PMS.



nick name.<sup>21</sup> Later in his career, newspaper writers changed the nickname to "Black Jack," because the name appeared more presentable.

In 1898, with the outbreak of the Spanish American War, Pershing was happy to leave West Point and return to his preferred location among the men of the 10<sup>th</sup> Cavalry. As fate would have it, Pershing was not given a command but instead assigned as the Regimental Quartermaster. In this assignment, though he may not have known it, First Lieutenant John Pershing began to understand the aspects of operational art. While deployed to Cuba, Pershing witnessed how not to run a campaign. Sustainment efforts during the fight were chaotic and disorganized.<sup>22</sup> Soldiers serving in Cuba were ill-equipped for the region, many wearing wool clothing in a tropical environment. Sufficient ports to dock transport ships were nonexistent. The lack of ports severely disrupted the ability to establish effective sustainment lines of communication. Much of the sustainment provided to the troopers of the 10<sup>th</sup> Cavalry was supplied by Pershing himself leading pack mules through a series of trails. 1LT Pershing also determined that the generals in charge of the war were too old and out of shape. On many accounts, Pershing overheard troopers of the regiment referring to General Shafter as "that fat old slob."<sup>23</sup>

Although he was the Regimental Quartermaster, Pershing did not allow his assignment to keep him away from the fight. When the 10<sup>th</sup> Cavalry began taking casualties and were pinned down by superior Spanish firepower, the commander of the 10<sup>th</sup> Cavalry, Lieutenant Colonel

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<sup>21</sup> "John J. Pershing," A+E Networks, last modified 2009, accessed November 28, 2017, <http://www.history.com/topics/world-war-i/john-j-pershing>.

<sup>22</sup> David F. Trask, *The War with Spain in 1898* (New York: Macmillan Publishing Company, 1981), 178-193. Trask provides a strategic level overview of the war in Cuba. While specific reference to Pershing is not made, other readings allow the author to tie him to the sustainment issues covered in chapter eight.

<sup>23</sup> Kevin Hymel, "Black Jack in Cuba: General John J. Pershing's Service in the Spanish-American War," *On Point* (Winter 1998): 1, accessed November 28, 2017, <http://www.army.mil/cmh-pg/documents/spanam/WS-Prshg.htm>.

Theodore Baldwin, ordered Pershing to guide the regiment towards its objectives. The opportunity for Pershing to see combat presented itself and Pershing did not disappoint. Leading his unit to its designated objective required Pershing to conduct a river crossing multiple times while under fire. In the end, all units were crossed over and stormed both Kettle and San Juan Hill. One officer who observed Pershing's actions described him as "cool as a bowl of cracked ice."<sup>24</sup> The lessons that Pershing learned about the ability to sustain forces and the need to maintain a rapid tempo in the face of the enemy would serve him well throughout his military career.

As a result of the Spanish defeat in Cuba and the signing of the December 10, 1898 Treaty of Paris, the US took possession of the Philippine Islands in the Pacific. Conflict occurred between the established government and the Moro Warriors of the islands. In 1899, John Pershing requested an assignment to fight the Moro in hopes of obtaining a promotion. This initial service in the Philippines marks the decisive point that launches his career. First Lieutenant Pershing approached the fight against the Moro differently than many other military professionals of his time. Pershing believed that he had to interact with the populace of the area to win them over and convince them to lay down their arms. Instead of conventional warfare, John Pershing believed pacification was preferable to alienating an entire population. The focus of US operations in the Philippines at this time was contained to the island of Mindanao. In 1901, Pershing was promoted to Captain and given command of the entire Southern portion of Mindanao instead of Colonel Frank D. Baldwin. General George W. Davis, the commander of the Department of Mindanao-Jolo, preferred Pershing's diplomatic approach over the violent approach of Baldwin.<sup>25</sup>

For a captain to be chosen over a colonel and put in charge of such a vast area, normally reserved for a general, denotes that his superiors had a great amount of faith in Pershing. For his

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<sup>24</sup> Vandiver, *Black Jack Pershing*, 203.

<sup>25</sup> Smythe, *Guerrilla Warrior*, 64-65; see also Arnold, *The Moro War*, 40-41.

efforts, Pershing became seen as a Datu or Warrior by the Moro. As a white man, being referred to as a Datu was a great honor. Even though Pershing pursued a plan of pacification, at times, he had to apply force to defeat his enemies. By May of 1903, Pershing had conquered Mindanao. More importantly, he did so losing fewer than twenty US Soldiers. Upon completion of the campaign General Davis praised Pershing, saying “He has displayed rare good judgment, infinite patience in dealing with these suspicious people, wise foresight in preparing for every emergency and contingency, and, finally when nothing remained but to crush the resistance, to so dispose his force as to accomplish the result with the least possible loss.”<sup>26</sup>

Pershing became a popular hero in the United States due to his success and even captured the attention of many in Washington DC. Of significance, Pershing was noticed by a former Soldier who served in Cuba and President of the United States, Theodore Roosevelt.<sup>27</sup> President Roosevelt commended Pershing for a job well done and openly expressed his opinions to the US Army that Pershing should be a Colonel. Legal statute that directed the US Army personnel management system of the time required someone of higher rank to retire or die for someone of lower rank to be promoted.<sup>28</sup> For years President Roosevelt admonished Congress for the antiquated system. Three years after Pershing’s victory in the Philippines, it appeared the system would not be changed. President Roosevelt exercised his executive privilege and promoted John Pershing to the rank of Brigadier General, a move that allowed him to jump over 862 senior officers in the order of merit.<sup>29</sup>

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<sup>26</sup> Arnold, *The Moro War*, 75.

<sup>27</sup> Smythe, *Guerrilla Warrior*, 56. John Pershing and Teddy Roosevelt met briefly while serving in Cuba. Roosevelt was cussing a team of mules that were stuck in the mud. The two later recalled the event at a luncheon when Roosevelt was the President of the United States.

<sup>28</sup> Many sources reference that it was the US Army’s policy that delayed Pershing’s promotion. However the Army does not control these issue, legal statute does. At that time the antiquated personnel system was still under the influence of the Militia Act of 1792. In 1903 efforts were made to remedy the issue within the Dick Act. After 1956, US Code Title 10 directs the promotion of military officers.

<sup>29</sup> Arnold, *The Moro War*, 75.

John J. Pershing began his military career out of an aspiration for education, but his experiences in battle molded him to understand the art and science of war. Pershing learned invaluable lessons in the battlegrounds of Cuba and Philippines, contributing to a wealth of experience that many of his peers did not possess. Pershing began to understand the importance of lines of operation, operational reach, tempo, and phasing.<sup>30</sup> Because of these lessons, a mixture of education and battlefield experience, General John J. Pershing became the operational artist that led US forces from the counterinsurgency conflicts of the Philippines through Mexico and effectively transitioned the US Army into a force capable of fighting a full-scale, decisive action war in Europe.

## Operational Art

The framework chosen for the conduct of this research is that of operational art as provided in Field Manual (FM) 3-0, *Operations* 2017.<sup>31</sup> This framework lends itself to the research because it allows bringing together a wide range of sources into the research topic while providing a way to hang the information so the reader can observe their impacts. The operational art framework provides focus on discovering the actions that govern the deployment of forces and the arrangement of operations to achieve operational objectives. Currently, in 2017, operational art consists of ten elements with definitions that identify events where operational art-like actions occurred in the Philippines, Mexico, and WWI.<sup>32</sup> The ten elements of operational art that provide a framework are: end state, center of gravity, decisive points, lines of operations and effort, operational reach, basing, tempo, phasing, culmination, and risk.<sup>33</sup>

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<sup>30</sup> As a Quartermaster in Cuba, going through extraordinary efforts to get supplies to the front, the need for lines of operation to facilitate operational reach became very evident to a young Lieutenant Pershing. The advantages of tempo were learned while chasing Indians on the western plains. See pages 6-7.

<sup>31</sup> US Army, FM 3-0, *Operations* (2017), 1-20.

<sup>32</sup> See pages 17 through 35.

<sup>33</sup> US Army, FM 3-0, *Operations* (2017), 1-20.

The foundation of operational art encompasses broad vision; the ability to anticipate; and the skill to plan, prepare, execute, and assess. It helps commanders and their staffs organize their thoughts and envision the conditions necessary to accomplish the mission and reach the desired military end state in support of national objectives.<sup>34</sup> The framework is applied to individual campaigns and determines not only if elements of operational art are present but also the impact they may have had on the outcome of the campaign. This section on operational art contends that through historical and theoretical teachings received while at West Point, John Pershing understood the elements of current operational art as they are known in 2017. During his education Pershing was taught the relevant points of Napoleon, Clausewitz, Jomini, and the American Civil War.

When discussing operational art in the context of General John Pershing, it is important to understand that knowledge of the individual elements and thoughts of how to use them existed in his time, but the term operational art and the operational level of war did not exist in US doctrine.<sup>35</sup> Understanding that the author is comparing the actions of John Pershing to a framework that did not doctrinally exist is important but more critical is acknowledging the existence of operational art efforts being utilized by John Pershing. Identifying the use of operational art efforts in the period of 1909 to 1919 allows the author to show that through the use of operational art, victory is achievable on future battlefields. The case studies used show that this is true even if a shift from COIN to decisive action occurs, similar to how operational art affected the outcome of US campaigns in the early 20<sup>th</sup> Century.

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<sup>34</sup> US Joint Staff, JP 3-0, *Joint Operations* 2006, xii.

<sup>35</sup> Schifferle, *America's School for War*, 63. Dr. Schifferle's book demonstrates the importance of what would come to be known as operational art in the interwar period. Although it was not doctrinally referred to as operational art at that time, Schifferle states that the concept of military professional skill as an art form is not new.

John Pershing was aware of the elements of operational art even though they were not distilled into US doctrine during his time as a general officer.<sup>36</sup> The operational level of war and the elements therein began to evolve during the Napoleonic era as a result of the French Regulations of 1791.<sup>37</sup> John Pershing would have been aware of Napoleon and the lessons derived from his actions because of the emphasis put on the French way of war at West Point where Pershing received his initial training.<sup>38</sup> Though operational art was not a concept during Pershing's time, the elements began with Napoleonic warfare, were expanded upon by military theorists Carl von Clausewitz and Henri Jomini, and were present in the US civil war.<sup>39</sup>

The presence of the elements that would become the operational art framework before 1909, and the emphasis at West Point on warfare containing the elements, provides evidence to the thesis that elements of operational art were present in the thoughts of John Pershing. This knowledge facilitated the transition from small scale to large scale wars in the early 20<sup>th</sup>-century.

Robert M. Epstein provided evidence in favor of the assumption that General Pershing maintained awareness of operational art because of his training in French warfare. As a former instructor at the US Army School of Advanced Military Studies, Robert Epstein was an expert on the matter of the operational level of war. Epstein contended that the operational level of war and the art to conduct it began with Napoleon in Hapsburg Austria in 1809. He made this claim based

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<sup>36</sup> Walter E. Kretchik, *US Army Doctrine: From the American Revolution to the War on Terror* (Lawrence, KS: University Press of Kansas, 2011), 107-128. Field Service Regulations (FSR) 1905 through 1914 remained very tactical in nature. FSR 1914 does refer to Operations in section two but does not outline elements of Operational art.

<sup>37</sup> Bonura, *Under the Shadow of Napoleon*, 20. Bonura covers the vast influence that French warfare had on the American way of war, and demonstrates that West Point Cadets were heavily instructed in the campaigns of Napoleon.

<sup>38</sup> *Ibid.*, 93-132. Chapter 3: American Adaption of French Warfare 1848-1865, discusses how the American military intellectual framework became based on the fundamental elements of the French combat method.

<sup>39</sup> James J. Schneider, *Vulcan's Anvil: the American Civil War and the Foundations of Operational Art* (Fort Leavenworth, KS: School of Advanced Military Studies, 1992), 16-17.

on his idea that operations consist of links between campaigns and battles.<sup>40</sup> The space in between campaigns and battles are operations that Napoleon used to force enemies into battle.

Napoleon demonstrates the operational level of war through the formation of the corps and its maneuver. In his book, Epstein wrote,

Those operational campaigns are characterized by symmetrical armies organized into corps, maneuvered in a distributed fashion so that tactical engagements are sequenced and often simultaneous, command is decentralized, yet the commanders have a common understanding of operational methods.<sup>41</sup>

Napoleon's operational concept consisted of the use of autonomous corps-sized elements moving decentralized, but converging on a single point. The Battle of Jena best depicts Napoleon's concept in practice. In the Battle of Jena against the Prussian Army, Napoleon executed operational art by deploying multiple corps against the defending Prussians, through the use of his orders process. Like a body of weaving tentacles, Napoleon's forces were able to envelop the Prussian forces on both flanks. After his forces had configured themselves in what looked like a modern cordon around the Prussians, Napoleon ordered the corps to attack both flanks simultaneously. The pressure on both Prussian flanks was too much to defend, resulting in a Prussian withdrawal to Auerstedt and a victory for Napoleon. The battle of Jena demonstrates the presence of Operational Art in 1806. Due to his education at West Point, John Pershing was well aware of the lessons learned from the Battle of Jena.<sup>42</sup>

Napoleonic Warfare introduces two prevalent military theorists who have contributed to the modern concept of operational art. Carl von Clausewitz and Henri Jomini derive many of their

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<sup>40</sup> Robert M. Epstein, *Napoleon's Last Victory: 1809 and the Emergence of Modern War* (Lawrence, KS: University Press of Kansas, 1994), 31. Epstein provides a theory that depicts Napoleonic warfare as the beginning of the operational level of war. Epstein's opinion relates to Pershing because of the French influence on Pershing's military education. The time period after 1809 was used by Mahan to create the curriculum that influenced Pershing's knowledge of operational art.

<sup>41</sup> Ibid., 11.

<sup>42</sup> Based on the popularity of studying Napoleonic warfare during his period and the heavy influence of the French military thought on Pershing's education. (See page 8 and footnote 17)

theories from observations of the Napoleonic battlefield. Through their theories, Clausewitz and Jomini provide the operational art elements of lines of operation, basing, and culmination. Identifying the presence of theory, depicting what are now elements of operational art, makes another step towards establishing that John Pershing was knowledgeable of the operational level of war and understood the art required to gain victory within it.<sup>43</sup>

The theories of Jomini contribute to operational art through the line of operation and basing elements. Jomini believed that a system of rapid and continuous marches would multiply the effects of an army, neutralize an enemy and ultimately lead to victory.<sup>44</sup> Lines of operations and basing elements facilitate the ability to march rapidly. Bases are an evolving military facility that supports the military operations of a deployed unit and provides the necessary support and services for sustained operations.<sup>45</sup> In Jomini's *The Art of War*, he determines that basing is a fundamental necessity for establishing a theater of operations. Furthermore, basing is a necessity for reinforcements of men and resources, and provides a location to begin a march from and retreat back to.<sup>46</sup>

Jomini continues to contribute to operational art through lines of operation. The line of operation effort is how Jomini's theory guides the movement of units throughout the theater of warfare. A line of operation defines the directional orientation of a force in time and space in relation to the enemy and links the force with its base of operations and objectives.<sup>47</sup> Through the

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<sup>43</sup> Christopher Bassford, *Clausewitz in English: The Reception of Clausewitz in Britain and America 1815-1945* (New York: Oxford University Press, 1994), 51. Although no explicit evidence of Clausewitz's influence on John Pershing exist, the author draws from Bassford's writings to determine that Pershing was influenced by Clausewitz's theories through their inclusion in the 1864 *Elements of Military Art and Science* by Halleck.

<sup>44</sup> Antoine Henry Jomini, *The Art of War*, trans. G.H. Mendell and W.P. Craighill (Philadelphia, PA: J.B. Lippincott & Co., 1862), 175-177.

<sup>45</sup> US Department of the Army, Army Doctrine Reference Publication (ADRP) 3-0, *Operations* (Washington, DC: Government Printing Office, 2016), 2-6.

<sup>46</sup> *Ibid.*, 74-78.

<sup>47</sup> US Army, ADRP 3-0 (2016), 2-6.



use of lines of operation, operational art is capable of depicting the manner in which the principal enterprise will move. Although Jomini presents ten separate forms of lines, the most prevalent are the interior and exterior lines. Jomini explains that interior lines allow a force to move with all its mass rapidly, concentrating its strength. Exterior lines, on the other hand, dictate the movement of an army to both flanks of its enemy, leading to multiple engagements at one time.

The second lead contributing theorist to operational art was Carl von Clausewitz. Clausewitz produced *On War*, originally published in 1832.<sup>48</sup> Clausewitz defines war as, "an act of force to compel our enemy to do our will." In an attempt to describe how a fighting force can provide continuous force upon its enemy, Clausewitz introduces what will become known as the culmination effort. Culmination is a point in time and space at which a force no longer possesses the capability to continue its current form of operations.<sup>49</sup> Clausewitz's theory on culmination is limited because it is based on the assumption that the object of the attack is the possession of the enemy's territory. Notwithstanding, Clausewitz describes the relationship between the offense and the defense and the importance of anticipating an enemy's culmination point while ensuring that your fighting strength does not diminish.<sup>50</sup> Due to his education of military art and science through the military theories of Jomini and Clausewitz in the 19<sup>th</sup>-century and the Battle of Jena, General John Pershing had both a theoretical and historical knowledge of operational art.

The final evidence of the presence of operational art before the period of John Pershing is found in the Civil War. As stated previously, a young John Pershing watched men walking home from the war after its conclusion at Appomattox. Undoubtedly, men spoke of the war as he grew

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<sup>48</sup> Clausewitz, *On War*.

<sup>49</sup> US Department of Defense, Joint Staff, Joint Publication (JP) 5-0, *Joint Operation Planning* (Washington, DC: Government Printing Office, 2011), xxii.

<sup>50</sup> Clausewitz, *On War*, 528. Clausewitz dedicated a specific chapter to the culminating point of the attack. This depicts the in depth thought Clausewitz gave to the subject of culmination and provides the basis for culmination as an element of operational art.

up and its battles would have been common knowledge. Arthur Grant provides evidence towards the existence of the operational level of war in the US Civil War through the Battle of Gettysburg. The Confederate General Lee's use of deception to pull the Union Army away from Fredericksburg demonstrated a mindset focused on the Operational level of war and the art required to move his army unnoticed for an attack into the northern states. In comparison, at the Battle of Gettysburg, the Union General Meade maneuvered well-orchestrated corps while maintaining mutual support.<sup>51</sup> In this battle, both commanders linked strategic political goals with tactical actions, maintained an operational reserve, and determined decisive points. General Lee and Meade displayed conduct in accordance with modern operational art by becoming the central figure in the operational planning, not only due to education and experience, but also because their judgment and decisions guided the staff throughout planning and execution.

In summation, operational art is used as a framework, shaping the remainder of this research as it examines the Philippines, Mexico, and WWI campaigns. Operational art as a cognitive approach by commanders and staffs supported by their skill, knowledge, experience, creativity, and judgment to develop operations, organizing and employ military forces existed long before the period of John J. Pershing, even though it was not in doctrine. The historical examples of the battles at Jena and Gettysburg, combined with the theories of Clausewitz and Jomini provide sufficient evidence to believe that through his education and battlefield experience, General Pershing had a cognitive understanding of the operational level of war and understood how the operational artist works within it.<sup>52</sup>

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<sup>51</sup> Arthur V. Grant, *Operational Art, and the Gettysburg Campaign* (Washington, DC: Center of Military History, 2005), 350-387. Grant outlines an overview of the battle at Gettysburg focusing on the two prominent commanders. The use of operational art long before it becomes US doctrine is highlighted.

<sup>52</sup> The use of Jena is validated by its use in Pershing's military education (see footnote 40). Gettysburg is applicable due to the direct impact the civil war had on Pershing's life. Pictures in the Library of Congress show a young Theodore Roosevelt observing the Grand Review of the Union Army from his home. Based on their similar ages and interest, it is fair to assume that Pershing also watched men coming home from the civil war. Seeing these events and hearing the stories of the day would have had an effect on how Pershing saw warfare.

## Moro War

The Moro Campaign in the Philippines provides the first instance of General Pershing using elements of operational art to accomplish his mission. From 1909 to 1913, Pershing used the line of effort and basing elements to achieve victory over the native Moro Warrior.

Establishing multiple lines of effort in conjunction with a focus on projecting US bases into the heart of the enemy's territory allowed Pershing to combat his enemy from multiple angles simultaneously. General John J. Pershing was the final of three military governors over the Moro Province.

The Moro Insurrection in the Philippines occurred between 1902 and 1913. American sovereignty extended to Moro land as a result of the 1898 Treaty of Paris, ending the war between the United States and Spain. As a progressive nation, the United States set out to improve the primitive Moro society. The Moro people saw these actions as an attempt to circumvent Moro tradition and enslave them. Moro warriors practiced the Islamic faith and were concerned about being ruled over by a predominately Christian nation. The presence of US soldiers in the Philippines and a strong will to resist on the part of the Moro handed the United States the unprecedented challenge of defeating an Islamic insurgency.<sup>53</sup>

Throughout this period, three general officers were in command of the fight against the Moro's. General Lenard Wood began the campaign with a focus on forming a structured government. Wood was replaced by General Tasker H. Bliss who focused on the economic development of the province. When General Bliss failed to achieve the desired outcome of quelling the Moro uprising, newly promoted General John J. Pershing became the commander.<sup>54</sup>

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<sup>53</sup> Arnold, *Moro War*, 14. Arnold goes to exhausting lengths to depict how the US came to be in the Philippines, and the unique fight it found itself. The Moro Wars are an early example of counterinsurgency fighting for the United States.

<sup>54</sup> Daniel G. Miller, "American Military Strategy During the Moro Insurrection in the Philippines" (MMAS Thesis, US Army Command and General Staff College, 2009), 4-5. Miller's thesis on the entirety of the Moro campaign provides the necessary context to understand that previous plans by competent commanders had not been working.

As previously discussed, John Pershing spent time in the Philippines as a Captain, and his contributions are what gained him a presidential promotion to General. Pershing's experience with the Moro people played a considerable role in his selection for the job by President Taft.<sup>55</sup> In contrast to his predecessors, General Pershing understood that he would have to facilitate a modern structure of government in the Philippines, while also actively combating an enemy force. Governance nor direct action alone had proven adequate in the Moro fight, and as the operational artist in the period of 1909 to 1913, General Pershing had a plan. The island of Jolo in the Philippines provides a measurable data point to the amount of area Pershing was made responsible for (see figure 1).

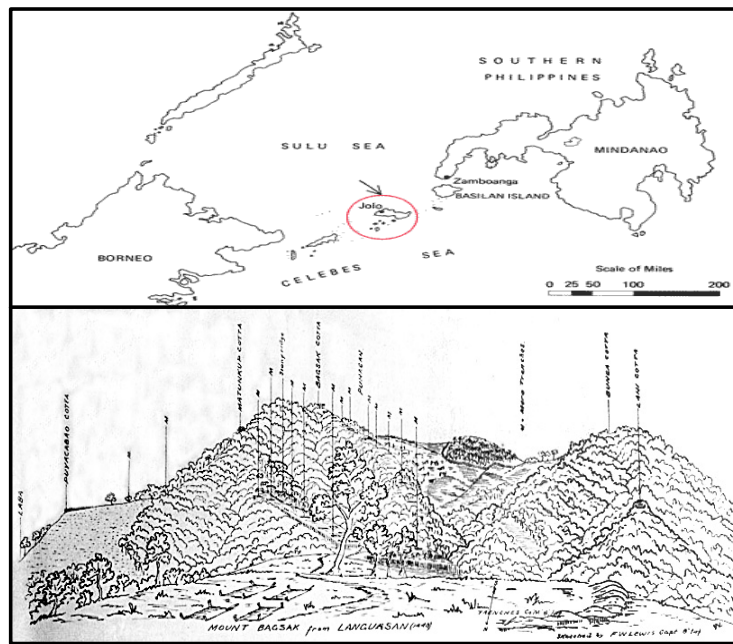


Figure 1. Maps depicting the area of operations that Brigadier General Pershing was responsible for and the immediate Bud Bagsak region. James R. Arnold, *Moro War: How America Battled a Muslim Insurgency in the Philippine Jungle, 1902-1913*, (New York: Bloomsbury Press, 2011), 235. The scaled out map (on top) shows the small island of Jolo where Pershing was the operational artist from 1909 to 1913. The island of Jolo is a small 335 square miles, roughly a quarter the size of Rhode Island. The zoomed in map (on bottom) depicts the rugged terrain encountered while operating in the Bud Bagsak area.

<sup>55</sup> Vandiver, *Black Jack*, 463.

The first part of General Pershing's plan was to establish lines of effort. While not a doctrinal term in Pershing's era, a line of effort links multiple tasks and missions using the logic of purpose, cause, and effect to focus efforts toward establishing operational and strategic conditions. Lines of effort are essential to operational design when positional references to an enemy or adversary have little relevance, such as in counterinsurgency or stability operations.<sup>56</sup> Pershing's use of lines of effort fit the situation he was in perfectly. Knowing that taking a physical objective through the use of military force would not accomplish his objectives, Pershing instead chose to focus on intangible goals.

Faced with the first US counterinsurgency fight outside of US borders, General Pershing developed a twofold strategy. Acknowledging, that to defeat the Moro threat, the Philippines needed economic prosperity, Pershing continued the economic prosperity planning of Tusker Bliss. In conjunction with the building of an economy, Pershing directed a population-centric focus for soldiers, which would require more interaction between US forces and the local inhabitants. While not initially what he wanted to focus on, Pershing determined that establishing security was of the utmost importance.<sup>57</sup> Security operations primarily focused on the disarmament of the local population. To provide clarity of how Pershing envisioned accomplishing the mission, he directed five lines of effort, focused on education, economy, infrastructure, governance, and security. Due to the vast amount of information on these five lines and the restricted length of this project, the author focuses on the economic and security lines, which provide the best evidence towards the research question.

The economic line of effort predominately focused on agriculture. Pershing believed if he could stimulate the production of food that native Moro's would make more money and be less apt to disrupt US operations in the region. The vast majority of cultivated land in the region

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<sup>56</sup> US Joint Staff, JP 5-0, *Joint Operation Planning* 2011, III-28.

<sup>57</sup> Miller, *American Military Strategy*, 147.

belonged to white landowners. Within the economic line of effort, Pershing endeavored to build a cooperating bond between the white landowners and native Moro people. In the end, Pershing hoped to create enough agricultural expansion to make harvest exportable.<sup>58</sup>

With the export of crops resulting in the making of money, the next step of the economic line was to ensure the Moro people could save money. To facilitate saving, a nationwide savings bank was established in conjunction with the postal service.<sup>59</sup> To deposit money into the Postal Savings Bank, all people had to do was place a deposit at their nearest post office. While the saving of money occurred within the economic line of effort, it also nested with the security line of effort. The Postal Savings Bank made it easy for locals to deposit money, but that still left banks with large sums of money to protect and move. Without adequate security, the economic line would fail. As household income began to rise, the economic situation of the Moro people became more on par with those in the rest of the Philippines.

Export crops and banks led to the ability to loan money.<sup>60</sup> By the end of Pershing's term as governor, the Moro people had a real future in agriculture. As an alternative to resisting US forces, the Moro could farm, sell excess crops as export, and save the money made in a bank. In addition to these positive attributes of a growing economy, the bank could now lend money to the natives. With the lending of money, the natives could acquire more land. With more land, more crops grow. The native Moro now had plenty of food for subsistence, could sell excess harvests, save money, and acquire true wealth. By gaining wealth and taking advantage of the trading

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<sup>58</sup> Vandiver, *Black Jack*, 516-517.

<sup>59</sup> War Department, *War Department Annual Reports, 1910 (Four Volumes)*, vol. 4 (Washington, DC: Government Printing Office, 1911), 29-36, see also Miller, *American Military Strategy*, 116.

<sup>60</sup> War Department, *War Department Annual Reports*, 32 and 116. The ability loan money was authorized in the same act allowing the Postal saving banks.

station exchange system that Pershing emplaced, many Moro Warriors saw no reason to fight against US forces.<sup>61</sup>

The next line of effort addressed by General Pershing was security. The ability to transport money was a good indicator of stability but security in the region still required attention in 1911. Within the security line of effort General Pershing ordered a disarmament policy. Carrying a weapon was a source of pride for the Moro. Pershing's orders made it illegal to carry any weapons other than working tools with blades less than fifteen inches.<sup>62</sup> Pershing saw disarmament as his only choice to gain security in the region. Often, with the arrest of a criminal in the region, Moro warriors bearing weapons would resist. The resistance led to the use of military force to conduct the arrest, which was contrary to the stability Pershing was trying to achieve.

To further security in the region, General Pershing utilized the basing element of operational art. General Pershing believed that the military forces available to him should be spread throughout the region. By dispersing his forces, they would be living amongst the population.<sup>63</sup> Pershing felt that the population would feel that the government was supporting and protecting them if they had consistent contact with soldiers. By creating many small bases throughout the area, Pershing forces were staged to allow a quick response anywhere in the Moro Province. Basing contributed greatly to the security line of effort by providing rapid reaction to violent uprising, gaining the trust of the local population, and establishing small areas of security. These areas of security facilitated the economic line of effort because farmers congregated in the safe areas to grow their crops, forming prosperous enclaves.<sup>64</sup>

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<sup>61</sup> Donald Smythe, *Guerrilla Warrior: The Early Life of John J. Pershing* (New York: Charles Scribner's Sons, 1973), 152.

<sup>62</sup> Arnold, *Moro War*, 224.

<sup>63</sup> Arnold, *Moro War*, 221.

<sup>64</sup> *Ibid.*, 221.

The disarmament policy was successful in obtaining security, but a few hundred Moro warriors refused to give up their arms.<sup>65</sup> At this point, General Pershing had conducted attrition warfare upon his enemy defeating them in detail through a population-centric approach and surging the economy. By June 1913, Pershing's actions had molded the battlefield to present a decisive point. Pershing's forces converged on the Bud Bagsak region to attack the remaining core group of Moro.<sup>66</sup> Between three and five hundred Moro were killed in the battle.<sup>67</sup> Small skirmishes occurred afterward, but the battle at Bud Bagsak was the decisive victory over the Moro.

Simultaneously, while directing the economic and security lines of effort, Pershing was also focused on the governance line of effort. Successful completion of the governance line would ultimately allow for Philippine forces to take the lead in all security operations in the area. Governance for the purposes of this research refers to the manner in which a person chooses to rule over an area. A thorough analysis of the memoirs of John Pershing and many other military officers present during this period does not specifically mention a focus on governance other than the disarmament efforts, which this research associates with security. While Pershing's afterthoughts on the Moro campaign may not have presented a focus on the governance line of effort, his actions most certainly did.

Reports to the Secretary of War in 1911, make specific mention to the efforts General Pershing made with regards to governance. In 1911, General Pershing expanded upon the five existing districts in Moro land, establishing twelve districts within the region.<sup>68</sup> Within each of these districts, General Pershing established a subordinate governor. The additional districts were

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<sup>65</sup> Smythe, *Guerrilla Warrior*, 186.

<sup>66</sup> Bud Bagsak is a dormant volcanic mountain on the Philippine island of Jolo.

<sup>67</sup> Smythe, *Guerrilla Warrior*, 200.

<sup>68</sup> War Department, *Report of the Philippine Commission to the Secretary of War 1911* (Washington, DC: Government Printing Office, 1912), 23.



established to gain better control of the area through a more thorough representation of the people. Some of the larger districts became subdivided into sub-districts. Many of the natives in the Moro Province were nomadic and did not adhere to the previously dictated district boundaries. By establishing more districts and even sub-districts, General Pershing gained more leaders who could be held accountable for understanding what was going on in their small area and ensured meeting Pershing's intent.

The second aspect within the governance line of effort identified by the research was tax collection. After the expansion of districts and sub-districts, General Pershing could enforce tax collection. Taxes were collected for many purposes, but one in particular was referred to as the road tax.<sup>69</sup> The building of roads throughout the region was important to multiple aspects of Pershing's operational plan, but funding from the US government was not enough to build the necessary roads at the desired pace. Through the road tax, Pershing was able to supplement US government funding, resulting in a rapidly built road system.<sup>70</sup> The building of a reliable road network nested with the basing efforts seen in Pershing's operational art. With a reliable road system, US forces could be decentralized throughout the region while still maintaining sufficient lines of communication.

Through a thorough analysis of General John J. Pershing's actions in the Moro campaign, the reader can identify the use of operational art efforts. Through lines of effort and basing, General Pershing was able to apply the military force at his disposal to gain victory. Of importance is that not only were lines of effort and basing utilized, but that each effort nested and supported the others going on at the same time. The nesting of multiple efforts to accomplish strategic goals through tactical actions depicts General Pershing as a true operational artist in the Moro Campaign.

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<sup>69</sup> War Department, *Report of the Philippine Commission*, 23; see also Peter Gowing, *Muslim-American Relations in the Philippines, 1899-1920* (Diliman: University of the Philippines, 1968), 377.

<sup>70</sup> War Department, *Report of the Philippine Commission*, 23.

After assessing the problem in the Philippines, General Pershing determined that his forces would have to engage with the populace and that seizing physical objectives would not result in victory alone. Although not specifically mentioned as such, General Pershing established the economy, security, and governance lines of effort. His lines of effort in conjunction with the basing of his soldiers throughout the region to interact with the populace and promote security, allowed John Pershing to claim victory over the Moro, leaving the Philippines as the third and last military governor of the province.

## Punitive Expedition

In the years shortly following General Pershing's time in the Philippines, the United States fell under a more imminent threat from a menace closer to home. As a result of civil unrest in Mexico, conflicts with bandits along the border became an issue. The United States was formally drawn into the engagement as a result of a bandit raid, led by the rebel leader Francisco "Poncho" Villa, at Columbus New Mexico on 9 March 1916. The US government ordered a punitive expedition to quell the violence directed at American citizens, with the desired end state to capture Poncho Villa.<sup>71</sup> Similarly to his efforts in the Philippines, elements of operational art align themselves with the campaign.

The Mexican Campaign is commonly referred to as the Punitive Expedition due to the nature of the conflict applying strong pressure through military force without a formal declaration of war. Throughout the Punitive Expedition, two elements of operational art present themselves. The elements of operational reach and culmination are most apparent throughout the campaign. In contrast to earlier efforts, failure to properly plan for these elements lead to failure of the mission. Although many sources refer to the Punitive Expedition as a success, the author analyzes the situation through operational art and determines otherwise. Due to sustainment issues, the

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<sup>71</sup> John J Pershing, Punitive Expedition Report, October 10, 1916, 1.

elements of operational reach and culmination were not properly accounted for, resulting in failure to reach the desired end state.

The primary belligerent in the Punitive Expedition was Poncho Villa. Poncho Villa was not always an enemy of the US. In fact, Villa had commanded an army of thirty to fifty thousand men in a fight against the Victoriano Huerta, a Mexican General, and leader of a coup to overthrow the President.<sup>72</sup> Before 1916, the United States unofficially aligned with Villa and his cause. The US public even romanticized Poncho Villa, seeing him as a revolutionary. On at least one occasion in 1914, General John Pershing met with Villa where the two discussed the art of war and Pershing gifted Villa books that provided guidance on military matters.<sup>73</sup> Between 1914 and 1916, Poncho Villa changed alliances, at one time fighting alongside the Constitutionalist Venustiano Carranza, and then switching to a position of opposition towards Carranza.

In 1915, Villa aligned with Emiliano Zapata in an attempt to overthrow Carranza and take Mexico City. His attempt failed and left him with only five hundred to one thousand ill-equipped men. His men were ill-equipped due in part to US weapons sanctions. Villa began to despise the US, but it was the US official recognition of Venustiano Carranza as the Mexican President that drove him to attack the US directly. Poncho Villa and his bandits began attacking US private interest in Mexico such as coal and oil industries by capturing American workers and executing them. These exploits led to the 9 March raid on Columbus, New Mexico resulting in the theft of property, eighteen US deaths, and five wounded.<sup>74</sup>

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<sup>72</sup> Julie Irene Prieto, *The Mexican Expedition 1916-1917* (Washington, DC: Center of Military History, 2016), 10-11.

<sup>73</sup> An email conversation with Julie Prieto revealed that the titles of the books shared with Villa are unknown. Mrs. Prieto also revealed that there is no evidence that Villa ever actually read any of the books he was given. She continued on to say that Villa was notorious for not studying war manuals and for rejecting accepted military practice and tactics.

<sup>74</sup> Prieto, *The Mexican Expedition*, 10-11.

Under immense pressure from the American people in response to the Columbus raid, President Wilson ordered military action taken against Poncho Villa and his forces. While still recovering from the loss of his wife and daughters in a San Francisco house fire, General Pershing was designated to lead the expedition into Mexico on 11 March 1916.<sup>75</sup> Pershing was chosen based on his demonstrated ability to command and move large formations in the Philippines, an act that not many other general officers in the US Army had conducted. Unlike the Moro Campaign, however, Pershing's ability to exercise operational art was hindered immediately. Pershing received orders to execute the mission of capturing Villa and his bandits but unlike the Philippines, he was directed on exactly how he would approach the issue. Specified orders from General Frederick Funston, Commander of the Southern Department, dictated that the movement into Mexico would be conducted in two columns beginning in Columbus, and Culberson's Ranch, New Mexico.<sup>76</sup>

The vague, yet restricting guidance and orders Pershing received, drastically affected his operational reach. Without any set boundaries or limits of advance, the Pershing's forces traveled 599 kilometers South of the US border in the Punitive Expedition (see figure 2). Operational reach is the distance and duration across which a joint force can successfully employ military capabilities.<sup>77</sup> Without any specific knowledge of Villa's whereabouts, Pershing could not properly control the operational reach of his forces. Operational reach is a tether consisting of intelligence, protection, sustainment, endurance, and relative combat power. The evidence suggest that a lack of intelligence and sustainment provided the greatest constraints on

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<sup>75</sup> Robert S. Thomas and Inez V. Allen, *The Mexican Punitive Expedition under Brigadier General John J. Pershing*, Chapters I through V (Washington, DC: Office of Chief of Military History, 1954), II-9.

<sup>76</sup> Pershing, Punitive Expedition Report, 6.

<sup>77</sup> US Joint Staff, JP 3-0, *Joint Operations* 2006, III-33.

operational reach. Like links in a chain, any weak links in the tether results in a breaking of the tether and significant difficulties for the fighting forces beyond the break.

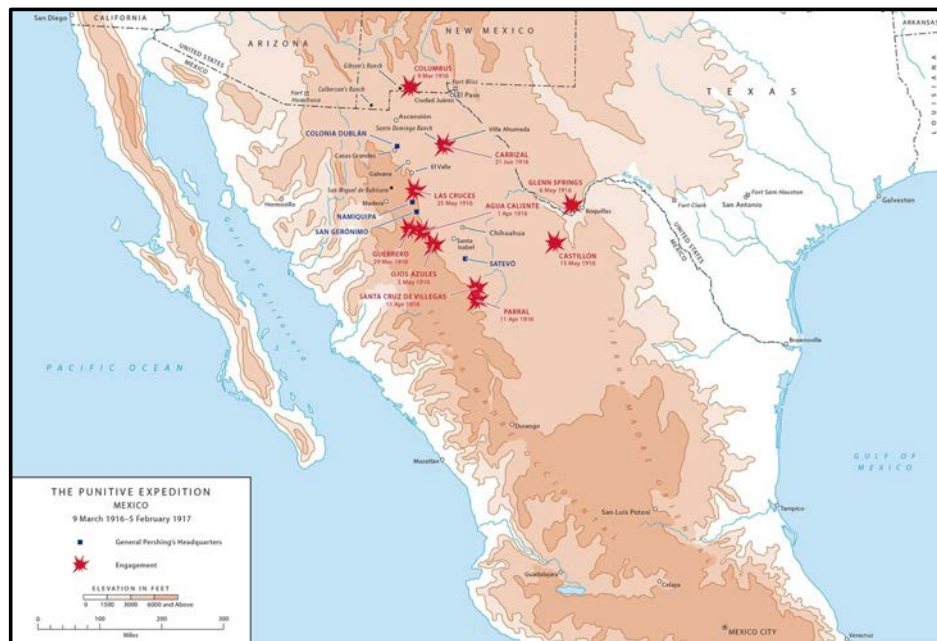


Figure 2. Map of the Punitive Expedition. *Julie Irene Prieto, The Mexican Expedition 1916-1917*. CMH Pub 77-1 (Washington DC: Center of Military History, 2016), 15. This map depicts the 247,460 square kilometer area of the Chihuahua region that General Pershing’s forces operated in. Command over the Chihuahua region marked a significant increase in responsibility from the island of Jolo.

Lack of intelligence or incorrect intelligence plagued the Punitive Expedition and directly affected operational reach.<sup>78</sup> Intelligence driving the operation in the search for Poncho Villa consisted entirely of human intelligence sources. Human intelligence is the collection of foreign information from people and multimedia to identify elements, intentions, composition, strength, dispositions, tactics, equipment, and capabilities.<sup>79</sup> General Pershing depended on the local populace to inform his operation of Villa’s location. Pershing failed to understand that even citizens who refused to support Villa would not necessarily support the United States in its efforts

<sup>78</sup> Prieto, *The Mexican Expedition*, 66.

<sup>79</sup> US Department of the Army, Army Doctrine Reference Publication (ADRP) 2-0, *Intelligence* (Washington, DC: Government Printing Office, 2012), 4-4.

to find the rebel general.<sup>80</sup> Local inhabitants saw US forces operating in the Chihuahua region of Mexico as invaders. Multiple times throughout the Punitive Expedition, Pershing directed movements based on inaccurate human intelligence that did not result in finding Villa's forces. Early in the campaign, Pershing received intelligence that placed Villa at the town of Babicora. Pershing developed an intricate plan consisting of three maneuvering formations, conducting a double envelopment and establishing a blocking position via railroad transportation. After an exhausting execution of the plan, Pershing's forces discovered that not only was Villa not there; he had never been. The intelligence received only served to drag Pershing's forces deeper into Mexican territory.<sup>81</sup>

The second contributing factor to a lack of operational reach during the Punitive Expedition was sustainment. Sustainment determines the depth to which a force can conduct decisive operations, allowing the commander to seize, retain, and exploit the initiative.<sup>82</sup> To maintain continuous operations in the search for Poncho Villa, General Pershing had to ensure the sustainment of over ten thousand personnel in a combined arms task force, consisting of infantry, cavalry, engineers, trucks, artillery, signal equipment, and even eight airplanes.<sup>83</sup> The use of motorized equipment in the harsh climate and terrain of the Chihuahua desert produced many sustainment issues not previously encountered by US forces. In previous campaigns, operational reach was maintained by horse-drawn supply trains and foraging. With the addition of motor vehicles, operational reach depended on fuel and supply parts as well as other standard necessities, and foraging from the land was difficult. Sustainment to provide operational reach in

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<sup>80</sup> Prieto, *The Mexican Expedition*, 66.

<sup>81</sup> John S. Eisenhower, *Intervention! The United States and the Mexican Revolution, 1913-1917* (New York: WW Norton & Company, 1993), 241-246.

<sup>82</sup> US Joint Staff, JP 3-0, *Joint Operations* 2006, xiv.

<sup>83</sup> Eisenhower, *Intervention!*, 236-239.

the Punitive Expedition became severely hindered by the Mexican road network and a lack of vehicle part standardization.

Roads capable of withstanding motorized traffic became a prevalent sustainment issue in Mexico. Originally the use of rail lines had been intended to provide logistics routes, but the Mexican Government did not authorize the use of Mexican trains, and the trains were in such disrepair that they could not carry soldiers with their horses and equipment.<sup>84</sup> When Pershing's forces attempted to use their motorized fleet to carry supplies, the vehicles easily became stuck. The alkali soil of the area resulted in heavily laden trucks sunken up to their axels.<sup>85</sup> To remedy the situation Pershing allocated money to roads and bridges with orders to his Engineers to construct them. The engineer battalion on hand for the expedition did not know about road construction and therefore had to learn through experience.<sup>86</sup> Road and bridge construction cost over three hundred and thirty thousand dollars. The roads and bridges were built, but not fast enough to impact the expedition. To overcome logistical faults, Pershing's forces began using mules to carry supplies and purchased food from the local economy. Many soldiers did not receive supply rations for the first twenty-eight days of the campaign and instead were purchasing goods from the local economy out of their own pockets. Supply officers had established an invoice and receipt system, but it was cumbersome and resulted in untimely pay to the vendor.<sup>87</sup>

The second prevalent sustainment issue that affected operational reach was part standardization. During the expedition, the Army issued thirteen types of trucks made by eight different manufacturers.<sup>88</sup> The lack of uniformity resulted in serious maintenance issues

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<sup>84</sup> Prieto, *The Mexican Expedition*, 28.

<sup>85</sup> Pershing, Punitive Expedition Report, 40.

<sup>86</sup> Ibid.

<sup>87</sup> Jeff Jore, "Pershing's Mission in Mexico: Logistics and Preparation for War in Europe," *Military Affairs* 52, no. 3 (1988): 118.

<sup>88</sup> Ibid., 119.

throughout the fleet. Trained mechanics were on hand during the expedition, but on hand repair parts were unreliable. With many different variants of vehicles came many different kinds of repair parts and the supply system wasn't always capable of sending the needed repair part for the correct vehicle model.<sup>89</sup> The many different variants of vehicle type also hindered a mechanic's platform-specific knowledge. The need to learn to work on a vast fleet consisting of many different models effects how quickly a vehicle can be repaired and returned to duty.

An unsustainable operational reach, plagued by intelligence and sustainment issues resulted in culmination for Pershing's forces. Culmination is a point in time and space at which a force no longer possesses the capability to continue its current form of operations. For General Pershing, the Punitive Expedition reached its culminating point, and the hunt for Pancho Villa ceased five-hundred and ninety-nine kilometers south of the US Mexico border near Parral.<sup>90</sup> Pershing's forces were in contact with not only bandits but also Mexican soldiers dispatched by Mexican President Venustiano Carranza. The assumption of the US government that Carranza would not interfere with US operations proved to be incorrect.<sup>91</sup> At Parral, Pershing's forces continued to have little idea of Villa's whereabouts, were in a sustained firefight, and at a point far beyond logistical resupply capability. The operation began to assume too much risk both tactically and strategically. Against the wishes of his superiors, Pershing ordered the withdrawal of forces from Parral, beginning a movement North, marking the end of the expedition.<sup>92</sup> Though Pershing's forces remained in Mexico for another seven months, attempts to reach the original desired end state were over.

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<sup>89</sup> Prieto, *The Mexican Expedition*, 49.

<sup>90</sup> Eisenhower, *Intervention!*, 275.

<sup>91</sup> Prieto, *The Mexican Expedition*, 67. Both Pershing and President Wilson erred in their belief that the Constitutionalist government of Mexico would support the presence of US troops simply because they had a common enemy.

<sup>92</sup> *Ibid.*, 276-287.



The Punitive Expedition resulted in a mission failure. When US forces withdrew from Mexican territory, Poncho Villa and the bandit issues along the US Southern border remained. Overall minor tactical successes occurred that disrupted bandit raids, but strategically the governments of the United States and Mexico were on the verge of war.<sup>93</sup> A lack of operational reach due to intelligence and sustainment issues resulted in culmination for Pershing's forces. From the perspective of operational art, the Punitive Expedition displays a lack of consideration of the difficulty to move large formations of soldiers over a long duration in a vast area. In contrast to the Moro Campaign, however, during the Punitive Expedition, Pershing was very constrained as the operational artist, being told almost exactly how he would execute the operation.<sup>94</sup>

The Punitive Expedition provides many lessons learned that prove to be beneficial on the eve of WWI. Aside from the mobilization of the National Guard, the US military learned many lessons in standardization.<sup>95</sup> To enhance operational reach in future conflicts and prevent culmination the US military created a system of standardized parts and vehicle types. The military directed the acquisition of three specific trucks to alleviate supply part and maintenance crew issues exacerbated by the many different vehicle types utilized in the Punitive Expedition. A ¾, 1 ½, and 3-ton truck were all built and ready for use before the US entering WWI.<sup>96</sup> The failures in Mexico highlighted the importance of sustainment. With standardized vehicles, the US

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<sup>93</sup> Prieto, *The Mexican Expedition*, 302-303. Not only did the Punitive Expedition become a fight against the quasi-legitimate Carrancistas, but President Wilson was also dealing with German hostilities over the Sussex issue, and the US presidential election was drawing near.

<sup>94</sup> Pershing, Punitive Expedition Report, 6. Pershing makes no direct allegation towards being constricted by his higher headquarters, but as Thomas and Allen point out, Pershing was chosen because of his experience and that he was best suited for the task. General Funston directing in detail how to conduct the expedition was unnecessary and showed his jealousy of not being chosen for the command.

<sup>95</sup> Jore, "Logistics and Preparation for War in Europe," 119. In June 1916, the total force army mobilized for the first time. 112,000 National Guard soldiers deployed to the US Southern border. Many lessons were learned from the mobilization that led to a better-executed deployment to WWI.

<sup>96</sup> Ibid.

military could traverse more restrictive terrain carrying supplies, train mechanics on specific vehicle models, and distribute standardized parts for repair. These actions increase the rate and duration of sustainment, increasing operational reach.

## An Evolution in Officer Education

From 1881 to 1918 an evolution in the professional education of US Army officers occurred. This period is important because it encompasses John Pershing's entire career from graduation at West Point to victory in WWI, and every case study presented in this paper. While John Pershing was fighting Indians on the plains, the US Army recognized that to cope with the technological, organizational, and tactical changes occurring in warfare, the organization needed well trained, professional officers.<sup>97</sup> Accomplishing this feat took thirty-seven years and the attention of influential men like Arthur L. Wagner, Eben Swift, Elihu Root, General J. Franklin Bell, and John F. Morrison. The efforts taken by these individuals resulted in a better-educated officer corps that successfully transitioned the US Army from small-scale fighting to victory in the Meuse Argonne.

Between 1881 and WWI, the School of the Line and the Army Staff College at Fort Leavenworth began teaching what today has become established army doctrine and began the professionalization of the officer corps.<sup>98</sup> From 1881 to 1887 the course curriculum at Leavenworth focused on preparing young officers for the duties they would face as company grade officers. During this time the need for a postgraduate military education became clear to leaders in the army and so began hiring full-time instructors for the school. Graduates of this period were qualified to survey and map any region; to make a reconnaissance either mounted or on foot, render a good field map, construct field fortifications, or command outpost and guard

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<sup>97</sup> Timothy Nenninger, *The Leavenworth Schools and the Old Army: Education, Professionalism, and the Officer Corps of the United States Army, 1881-1918* (London: Greenwood Press, 1978), 3.

<sup>98</sup> *Ibid.*, 5.

positions.<sup>99</sup> The army of the period consisted of only thirty-five regiments and no general staff. With no general staff, there was no desire to train officers to work on a staff. Regardless, the instructors at Leavenworth strived to broaden the outlook of their students and prepare them for an expanding army in the years leading up to the Spanish-American War.

From 1886 to 1904, Arthur L. Wagner and Eben Swift made significant contributions to the professionalization of the army officer corps at Fort Leavenworth. As a result of the Franco Prussian War, German warfare began to influence the school. Arthur Wagner wrote books comparing the American Civil War with the German wars of unification.<sup>100</sup> In an attempt to make the study of tactics more interesting, Wagner introduced an analytical approach to in studying tactics and the applicatory method of instruction, as designed by the Germans. General J. Franklin Bell said that Wagner more than any other officer encouraged the “acquirement of military knowledge.”<sup>101</sup> Wagner provided many benefits to the students at Leavenworth, but his books that contained citations to foreign sources, and his belief that outside of experience in war, a critical analysis of recent military history, offered the best way to gain knowledge of organization and tactics, were the most impactful.

Wagner’s assistant instructor, Eben Swift, continued to develop tactical instruction via the applicatory method after Wagner's death in 1905. Again using German methods, Swift adapted the methods to fit American needs. The result was map problems, war games, tactical rides, and the five paragraph order.<sup>102</sup> The efforts of Eben Swift began to break the stigma that Leavenworth was a Kindergarten for officers, and eventually grew the curriculum to include six lectures and eighty exercises.<sup>103</sup> Eben Swift went on to command a provisional Cavalry Division

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<sup>99</sup> Nenninger, *The Leavenworth Schools*, 30.

<sup>100</sup> *Ibid.*, 15.

<sup>101</sup> *Ibid.*, 39.

<sup>102</sup> *Ibid.*, 46.

<sup>103</sup> *Ibid.*, 48.

during the Punitive Expedition and the Commanding General of a training division in WWI.

Arthur Wagner and Eben Swift made a significant impact in forcing the realization that the US Army needed a system of postgraduate schools to instruct all aspects of military art, tactics, and strategy.<sup>104</sup>

The Spanish American War provided evidence that organizational problems and lack of strategic planning agency hindered the army during the war. Appointed Secretary of War in 1899, Elihu Root set out to correct these deficiencies. To accomplish this, Root created the Chief of Staff position and the General Staff, while also advocating for the systematic education of all officers.<sup>105</sup> With the assistance of the first President of the Army War College, Brigadier General Tasker Bliss, the two began a concerted effort to ensure that officers became trained in more than just drill regulations and articles of war. Root and Bliss believed that the rapid advance of military science at the time required a thorough and broad education for military officers, and that the education should meet the "requirements of college."<sup>106</sup> During this period, lectures and practical exercises focused on the strategy of the Napoleonic Wars, the American Civil War, and the Franco Prussian War. Also of importance during this period is the beginning of the Army War College in 1904 and the fact that Brigadier General John J. Pershing was a student in the very first class.<sup>107</sup>

In the decade before WWI, Major John F. Morrison played a significant role in the sophistication of military art instruction at Leavenworth. An instructor from 1906 to 1912, Morrison used practical problems in his curriculum that focused on the art of maneuvering troops

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<sup>104</sup> Nenninger, *The Leavenworth Schools*, 50.

<sup>105</sup> *Ibid.*, 54.

<sup>106</sup> *Ibid.*, 63.

<sup>107</sup> George Pappas, *Prudens Futuri: The US Army War College 1901-1967* (Carlisle Barracks, PA: The Alumni Association of the US Army War College, 1967), 40.

on the battlefield, and the handling of armies in battle, otherwise known as tactics and grand tactics.<sup>108</sup> In 1906 Morrison expanded the curriculum from six to fifteen war games. One of the wargames focused on the area of Metz France. The Metz wargame is vital because Metz is in proximity to the line of departure area used in the Meuse Argonne Offensive.<sup>109</sup> To expand the curriculum, in 1909 Morrison instituted the study of divisional tactical and strategic problems. The army did not yet have any formal division structures, but the intent was to broaden the imagination and anticipate the future. In 1907, Morrison enacted what the author sees as his most significant contribution to the professionalism of the army officer corps. Morrison had the Army Service School Press print copies of lectures, problems, maps, and other instructional material made available to all requesting them. This order created a correspondence type course for all army officers to follow and enhance their professional education, not just those selected to attend Leavenworth. One of the first to join the mailing list was Brigadier General John J. Pershing. Pershing used the documents received from the correspondence course for the basis of the tactical instruction of troops he commanded.<sup>110</sup> In 1907 when the mailing list began, it was sent to five hundred followers. By 1915 the mailing list had achieved over four thousand followers.

The evolution of professional education that occurred from 1881 to 1918 demonstrated implications on the AEF that entered WWI, and truly put Leavenworth on the map. To meet the needs of WWI the US Army was going to grow immensely, and this time the organization had the Leavenworth Men to coordinate the effort. The Leavenworth Men were looked up to within the organization, and because of their professional education, they all now spoke the same language. Of the three corps size elements operating in the Meuse Argonne Offensive, all three had Chiefs

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<sup>108</sup> Nenninger, *The Leavenworth Schools*, 85.

<sup>109</sup> Metz France is less than 100km from Verdun, the area where the AEF assembled to attack into the Meuse Argonne. By conducting wargames on Metz, graduates of Leavenworth were planning operations on familiar terrain during WWI.

<sup>110</sup> Nenninger, *The Leavenworth Schools*, 121.

of Staff that had graduated from the schools at Leavenworth. Of the twenty-six divisions that saw action in France, only three did not have a Leavenworth grad as the Chief of Staff.<sup>111</sup> The AEF experience in WWI reflects the strengths and limitations of officer education and demonstrates the effects of officer education on the transition of the army.

## Meuse Argonne

Building upon the evidence of operational art and its use to transition the US Army from small scale to large scale wars, the author assesses the Meuse Argonne Offensive of 1918. The Meuse Argonne Offensive is the largest, longest, and bloodiest battle in the history of the US Army, and consists of efforts from allied nations to defeat Germany. This portion of the study focuses on the American Expeditionary Forces (AEF), during the period of 26 September to 11 November 1918. Again, the operational artist was General John J. Pershing. General Pershing was not the first choice to command the AEF in Europe but due to the sudden death of General Frederick Funston, and General Leonard Wood's lack of obedience, Pershing was an obvious replacement.<sup>112</sup> The Meuse Argonne Offensive provides the final piece of the puzzle to the reader depicting the transition of the US Army from fighting small-scale battles, to entering the largest decisive action campaign the US Army had ever seen.

The Meuse Argonne Offensive portrays how through the use of elements of operational art, the US Army was capable of adapting to the situation at hand and achieving victory. Many elements of operational art align with the Meuse Argonne Offensive, but this section highlights the use of interior lines of operation and phasing. Through lines of operation and phasing,

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<sup>111</sup> Nenninger, *The Leavenworth Schools*, 150.

<sup>112</sup> Palmer, *John J. Pershing*, 74; see also Donald Smythe, *Pershing: General of the Armies* (Bloomington: Indiana University Press, 1986), 120-124. With the failing health of General Funston, it was decided that he would not survive the trip to Europe, let alone lead forces once there. General Leonard Wood had publically criticized President Wilson and was not physically fit. Pershing was chosen because he was physically fit enough for the task. General Wood could have deployed as a subordinate, but Pershing specifically requested that he not.

Pershing as the operational artist orchestrated the largest battle in US Army history and achieved victory.

By the time the AEF entered the fight, WWI had been ongoing for nearly four years. In that time the fight had reached a stalemate, resulting in a stabilized front until the spring of 1918. When Pershing entered the Meuse Argonne offensive, his forces faced a different German force than the Europeans had been fighting since 1914. Despite many constraints, the German Army implemented a new defensive doctrine in only six months. Outlined in *The Principles of Command in the Defensive Battle in Position Warfare*, the Germans integrated what became known as an elastic defense.<sup>113</sup> The defense was referred to as elastic because it was meant to resist, bend, and then rapidly snap back. The defense's implementation was meant to counter the AEF's movement by taking advantage of the AEF after it had moved beyond the range of its artillery. The elastic defense consisted of three zones: the outpost zone, battle zone, and rearward zone.<sup>114</sup> Ideally, for the German's plan to work, the elastic defense would exhaust the AEF in the outpost zone, drawing it into the battle zone beyond the range of AEF indirect fires. With conditions met, and the AEF was in the battle zone, German indirect fires were directed behind the AEF, cutting them off from reinforcements and retreat. Once the AEF is in the battle zone and at its most exposed, German storm troopers would attack, destroying the AEF forces in sector and regaining the main line of resistance.<sup>115</sup> To counter the German elastic defense, the AEF used

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<sup>113</sup> Chief of the General Staff of the Field Army, *The Principles of Command in the Defensive Battle in Position Warfare* (Berlin, 1917), 4. This document describes the massive doctrinal change undertaken by the German Army during WWI. The original German document was marked "Not to be taken to the front line."-Secret.

<sup>114</sup> Timothy Lupfer, "The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War," *The Leavenworth Papers*, no.4 (Ft Leavenworth, KS: Combat Studies Institute, US Army Command and General Staff College, 1981), 11-21.

<sup>115</sup> *Ibid.*, 13. The main line of resistance (MLR) is a German doctrinal term utilized in *The Principles of Command in the Defensive Battle in Position Warfare*. The MLR is similar to the US doctrinal term Forward Edge of the Battle Area (FEBA).

interior lines of operation to move its artillery and all other forces and sustainment rapidly, overwhelming the German's ability to snap back and regain its main line of resistance.

The AEF First Army moved through the Meuse Argonne offensive along three primary lines of operation. The lines of operation aligned with the I, V, and III AEF Corps. A line of Operation is a line that defines the directional orientation of a force in time and space in relation to the enemy and that links the force with its base of operations and objectives.<sup>116</sup> The lines of operation provided coordination and synchronization of the First Army units as they attacked North, through what was referred to as the Verdun sector, towards Sedan.<sup>117</sup> General Pershing determined the ultimate objective for the First Army was the rail line section between Carignan and Sedan.<sup>118</sup> The three lines of operation depicted in Pershing's plan facilitated the movement of three corps, consisting of three divisions each, north towards the objective area of Sedan. Each corps line of operation included four to six population centers that helped guide unit movement (see figure 3).<sup>119</sup> The I Corps line directed the corps through Varennes, Apremont, Chatel-Chehery, Grandpre, Boulton-aux-Bois, and Verrieres. III Corps moved through Forges, Cunel,

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<sup>116</sup> US Joint Staff, JP 5-0, *Joint Operation Planning* 2006, xxii. The JP 5-0 definition is used in this paper to relate the lessons to current military officers. The FSR's of 1905 through 1914 make no mention to lines of operation. Page 164 of FSR 1910 uses the term direction of attack which enabled a commander of each section to take full advantage of the terrain. This term is similar but very tactical in nature, discussing the use of individual rifles, and not entirely within the spirit of lines of operation. However, Antoine Jomini on page 102 of *The Art of War* defined lines of operation very similar to JP 5-0 in that the lines facilitate directing and concentrating the masses to maneuver. Jomini even discussed the use of roads as lines of operation, stating that LOO's did not have to be roads. Jomini's description of LOO's shows the importance of John Pershing's education as it allowed him to use efforts that did not exist with the doctrine of his time.

<sup>117</sup> As depicted in figure 3 the Meuse Argonne Offensive consisted of three lines of operation. Each line of operation linked a corps with its end state objective through the use of geographic locations that served as intermediate objectives. These intermediate objectives allowed the operational artist to control the directional orientation of the force.

<sup>118</sup> Nick Lloyd, *Hundred Days: The Campaign that Ended World War I* (New York: Basic Books, 2014), 152.

<sup>119</sup> Smythe, *Pershing: General of the Armies*, 190-224. Comprised from the maps of movement and orders given to corps. Pershing does not refer to these as lines of operation, however by contemporary definition they are.



Aincreville, and Stenay, while V Corps used Montfaucon, Romagne, Barricourt, and Beaumont. The use of these lines of operation facilitated the coordinated movement of AEF forces, while also providing mutual support between the corps.

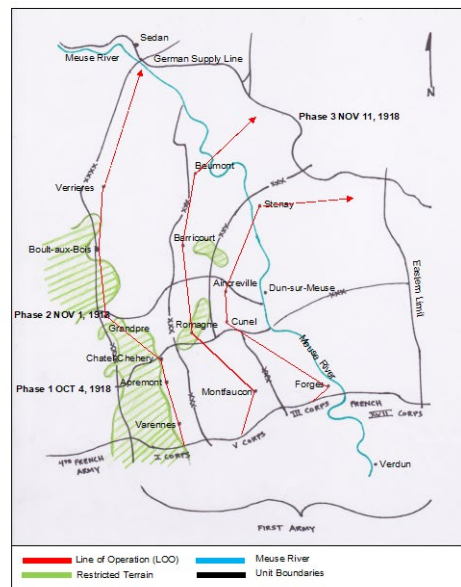


Figure 3. Map depicting the three Phases and LOO's of the Meuse Argonne Offensive. The map is an original drawing by the author, based on a compilation of maps found in Smythe's *Pershing: General of the Armies*. The reader can see the likeness to John Nimmons' description, detailing slow movement in the first two phases, followed by rapid advancement in the third.<sup>120</sup>

Keeping with the definition of line of operation, the lines in the Meuse Argonne Offensive provided more than just a directional orientation; the lines facilitated a link between the rear area and designated objectives for logistics to move.<sup>121</sup> Throughout the Meuse Argonne Offensive, a young George C. Marshal orchestrated and executed the movement of three army

<sup>120</sup> John M. Nimmons, "Venturing into No-Man's-Land: How Adaptation Led to V Corps' Success in the Meuse-Argonne" (SAMS Monograph, US Army Command and General Staff College, 2018), 6-7.

<sup>121</sup> As the AEF corps moved along their lines of operation and German forces were repelled, the routes behind the AEF advance became usable to some extent for the movement of supplies.

corps down three dirt roads and three light railways.<sup>122</sup> The lines of operation in the Meuse supported the movement of over six hundred thousand men, four thousand guns, ninety thousand horses, and almost a million tons of supply.<sup>123</sup> Although the sustainment efforts were not without issues, many lessons learned from the Punitive Expedition were implemented allowing for the mass movement of motorized logistics trains. Due to the limited routes moving through the area and the constant German shelling of roads, traffic jams often occurred, slowing the distribution of supplies. Although the journals of many US service members present at the Meuse Argonne Offensive discuss a lack of supplies, in the end, three US corps crossed difficult terrain, defended by a formidable enemy, and reached their objectives.

The second element of operational art identified in the Meuse Argonne Offensive is phasing. A phase is a planning and execution tool used to divide an operation in duration or activity. General Pershing's plan for the Meuse Argonne Offensive contained four phases.<sup>124</sup> Each phase of the operation was geographically based, moving the First Army roughly ten miles per phase. Each phase was synchronized with the seizure of a major population center, aligning with the objectives along the lines of operation. Each phase provided mutual support, provided security to the formation, and facilitated executing the next phase of the operation.

The first phase of the offensive began with three corps abreast along a twenty-mile front, North of Verdun. Phase one was a rapid thrust to reach Grandpre at the Northern edge of the Argonne Forest. Phase one provided a coordination line with the French Fourth Army and isolated German positions in the Argonne Forest. Phase two consisted of another ten-mile push, reaching Stenay. Phase two provided mutual support to the French Fourth Army by enveloping

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<sup>122</sup> Edward G. Lengel, "Marshal Mitchell, and Meuse-Argonne," *The History Reader*, last modified October 18, 2011, accessed November 2, 2017, [www.thehistoryreader.com/modern-history/marshall-mitchell-meuse-argonne/](http://www.thehistoryreader.com/modern-history/marshall-mitchell-meuse-argonne/).

<sup>123</sup> Ibid.

<sup>124</sup> Smythe, *Pershing: General of the Armies*, 193.

the German forces fighting the Fourth Army, forcing the Germans to withdraw. Phase three moved the First Army to the Meuse River.<sup>125</sup> The right wing of the army, provided by III Corps, crossed the Meuse, driving German artillery from its location in the heights. At the end of phase three, the AEF First Army stood poised to assault the Sedan-Mezieres railroad.<sup>126</sup>

On 11 November 1918, World War I concluded. Many factors led to the defeat of the German Army, but the position of tactical advantage gained by the First Army through General Pershing's operational plan played a critical role. German General Paul Hindenburg stated after the war that Pershing's forces attacked the most sensitive portion of the Germans lines, jeopardizing vital rail communications, resulting in the German withdrawal.<sup>127</sup> Through the use of lines of operations and phasing, General Pershing devised a plan that ended a stalemate, moved hundreds of thousands of soldiers across the battlefield, and contributed to the defeat of the German Army in the largest battle ever.

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<sup>125</sup> Nimmons, "No-Man's-Land", 6-7. In his monograph, Nimmons describes the phases of the Meuse Argonne in a far less favorable, yet accurate light. Many issues were present, such as the inability to innovate as the First Army struggled to synchronize the tempo of infantry division assaults with their utilization of artillery. He describes the second phase of the operation as the point where lessons were learned and shifts in tactics occurred, resulting in a phase three where leadership changes embraced tension and friction within the organization to adapt. Important to note, while the phases of the operation can be observed differently, the successful end state remains the same.

<sup>126</sup> Smythe, *Pershing: General of the Armies*, 193. The fourth phase of Pershing's plan was not operationalized due to the Armistice of Compiegne, ending the war.

<sup>127</sup> Paul von Hindenburg, *Out of My Life* (New York: Cassell and Company, 1920), 270-71.

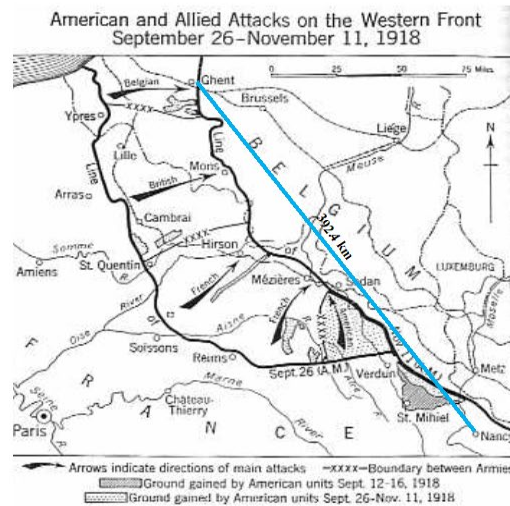


Figure 4. Map depicting how the AEF was arrayed from September 26 through November 11, 1918. Donald Smythe, *Pershing: General of the Armies* (Bloomington: Indiana University Press, 1986), 236. This map depicts the change in the amount of area General Pershing was responsible for in contrast to the small island of Jolo in the Philippines. AEF units were decentralized across a front 392.4 kilometers long. Many of the AEF units outside the Meuse Argonne were task organized under French and British units.

## Conclusion

In summation, evidence exists that the application of operational art facilitated the successful transition of the US Army from small-scale to large-scale wars in the early twentieth century. The monograph has demonstrated that the presence of lines of operation, culmination, and basing in campaigns from 1909 to 1919 enabled the integration of operational art into the AEF campaigns of WWI. Viewed through the lens of General John J. Pershing in the Moro Campaign, the Punitive Expedition, and into the Meuse Argonne Offensive of World War I, the research determined that the line of effort, operational reach, and phasing elements were also present.

Of critical importance is the finding that through the use of operational art, the US Army will be capable of transitioning from a fighting force that has predominately conducted COIN operations for the past sixteen years, to a force capable of fighting a decisive action fight against a

near peer threat.<sup>128</sup> This monograph was based on the future vision of war as depicted by General Mark A. Milley. The author does not suggest that COIN will no longer be of importance in the future. What the monograph shows is that through operational art, the Army will be capable of transitioning to meet any challenge, or even fight both simultaneously. From a problem framing perspective, operational art provides the framing structure needed to observe an unstructured problem, so that planning can be conducted. This finding provides a framework for a solution to the problems presented by the US Army Chief of Staff. The key to transitioning the US Army from small to large scale wars and obtaining victory is through the use of operational art in planning and execution.

Evidence suggesting that the transition of the US Army from a COIN fight to a DA fight can be accomplished through the use of operational art is provided from the case studies of the Moro War, Punitive Expedition, and Meuse Argonne. These three events tied to the lens of General Pershing provide a contextual view on issues the US Army currently faces. The Moro War presents the use of lines of effort and basing to quell violence and bring stability to the region. The Punitive Expedition shows the undesired effects that can accompany the unnecessary restraint of the operational artist. By directing how General Pershing would conduct the expedition the ability to implement efforts of operational art were constrained. These constraints led to the lack of operational reach, resulting in culmination for US forces. Many lessons were learned from these two campaigns and were carried over through General Pershing when he was selected to lead the AEF in WWI. The Meuse Argonne offensive explicitly depicts the transfer of this knowledge and the implementation of lines of operation and phasing to effectively move over one million men and supplies in a rapid fashion sufficient enough to defeat the German elastic defense and bring an end to WWI.

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<sup>128</sup> This is the answer to the problem posed on page one of this paper.

The greatest implication brought forth by this research other than the presence of operational art, is the conditions that were set to facilitate the use of operational art elements. The underlying facilitator that allowed the successful transition of the US Army from fighting small scale wars to large wars is the education of General John Pershing. Pershing received an education from the USMA, Leavenworth, and the Army War College that focused on the historical and theoretical applications of the elements that currently construct the operational art framework. Through an education consisting of Napoleon, Jomini, Clausewitz, and Grant, General Pershing gained an intellectual appreciation for the efforts needed to move large formations and accomplish objectives. Education also played a significant role in the effective transition of the army through officers other than John Pershing. When the AEF entered WWI, the US Army officer corps had greatly evolved from what it was in 1882 when John Pershing commissioned. Entering WWI, the US Army had officers with experience from the Spanish American War to the Punitive Expedition, and education. While operational art was still not captured in doctrine, visionaries like John F. Morrison had begun teaching operational art type efforts, and operations finally made an appearance in the 1923 FSR after WWI.

The author concludes that the military education of General John J. Pershing, as well as an evolution in officer education, with an emphasis on the elements of operational art facilitated the successful transition of the US Army from small scale to large scale wars.<sup>129</sup> The research question is answered with evidence that elements of operational art are present in all three campaigns studied from the early twentieth century. The author extrapolates from this research that the use of operational art in planning and execution is the key to transitioning the US Army and winning future wars. To facilitate the use of operational art in future conflicts, the

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<sup>129</sup> Based on the education Pershing received at West Point as covered on pages 6-7. The cases studied during the research show the US Army of 1909 through 1916, focused on small scale operations but was then able to transition to fight the largest battle in US Army history at Meuse Argonne. These events bare many similarities of the current US Army that has focused on COIN operations for seventeen years but now faces the possibility of fighting a large scale war.

professional military education of US Army officers should include more focus on the use of operational art.

## Recommendation

This monograph described the importance of operational art in the education of a US military officer. The recommendation derived from this monograph is that officer education evolve to include a more predominate focus on operational art. A move to evolve the education of the officer corps is not without precedent and in fact the evolution of education is always ongoing. Beginning with the US Civil War, officer education has made four significant evolutions and must evolve once again to prepare for wars of the future. The evolution of operational art through education consist of three key points; self-development, standardized curriculum, and specialty training. The recommendation of this monograph is that the education of operational art evolve once again to encompass a broader group of field grade officers.

As stated in section two of this monograph, evidence suggest that the use of operational art was present in the civil war. The use of operational art in the Civil War is important because the war occurs during the life of John Pershing.<sup>130</sup> While some officers in the Civil War were trained at West Point, the vast majority of officers were civilian appointees with little to no training. To fill the educational void, many officers bought the book *Elements of Military Art and Science*.<sup>131</sup> When statements are made that the generals of the Civil War were carrying Jomini in

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<sup>130</sup> As discussed in footnote 50. Evidence depicting a young Theodore Roosevelt watching the Union Army march past his home after the Civil War is used to discern that John Pershing being of similar age and interest would also have been intrigued by the soldiers marching home. Interest in the soldiers and evidence of operational art in the US Civil War provided by Schneider and Grant in footnotes 37 and 49 make the US Civil War important in a study including operational art and John Pershing.

<sup>131</sup> Henry Halleck, *Elements of Military Art and Science* (New York: D. Appleton & Company, 1862); see also Edward Hagerman, *The American Civil War and the Origins of Modern Warfare* (Indianapolis: Indiana University Press, 1988), 14. Henry Halleck was a student of Dennis Hart Mahan (see pages 6-7). Halleck's study was, by his own admission, a compendium of contemporary ideas, with no attempt at originality. Though Halleck's book was never a text at West Point, it was probably the most widely read books among Civil War officers.

their pocket, the reference is actually referring to *Elements of Military Art and Science*. The book included elements of Jominian and Clausewitzian theory.<sup>132</sup> The Civil War provides the example of what is considered the first use of operational art by US forces, which occurred during the life of John Pershing, and led by officers taught through self-development.

The second evolution of education in operational art occurred from 1881 to 1918, and is covered on pages thirty-five through thirty-eight of this paper. The third evolution occurred after the conclusion of WWI, during the interwar period of 1918 to 1939. Officers in WWI identified that the officer corps did not possess the ability to effectively handle large formations.<sup>133</sup> The handling of large formations alludes to war planning, logistics, and organization. This concept of professional military skill was the operational art of its day.<sup>134</sup> To correct the ability to handle large formations and exercise operational art, in the Spring of 1919 the US Army conducted a set of boards focused on establishing a comprehensive officer education system.<sup>135</sup> The outcome of the education reform resulted in the establishment of branch-specific basic and advanced courses, as well as two general service schools for field grade officers. The curriculum taught at these schools provide ties to operational art and Jomini. Each of these schools taught the doctrine from Field Service Regulation (FSR) 1923, which was heavily influenced by the Principles of War as prescribed by Jomini.

The fourth evolution of education in operational art is seen in the establishment of the School of Advanced Military Studies (SAMS). The creation of SAMS shows an educational evolution in operational art, from a standardized curriculum taught to all officers, to a specialty school attended by selected individuals. The purpose of SAMS is to go beyond the teaching of

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<sup>132</sup> Bassford, *Clausewitz in English*, 51.

<sup>133</sup> Schifferle, *America's School for War*, 15.

<sup>134</sup> Shimon Naveh, *In Pursuit of Military Excellence: The Evolution of Operational Theory* (London: Cass, 1997), xviii, 1-23.

<sup>135</sup> Schifferle, *America's School for War*, 31.



operational art as received in the schools established by the 1919 reforms, providing a broad and deep graduate-level education in the science and art of war at the operational level. Colonel Huba Wass de Czege played a crucial part in convincing the US Army to allocate field grade officers to a second year of education at Fort Leavenworth. Wass de Czege addressed the need for specially selected individuals, trained in the elements and application of operational art, in response to the rapid changes in warfare from World War II.<sup>136</sup> The issue presented by this evolution is that only a small percentage of US Army field grade officers receive the level of education that this monograph determines is needed to effectively transition the US Army from its current state into an army capable of fighting future wars as depicted by General Milley.<sup>137</sup>

The Command and General Staff College (CGSC) at Fort Leavenworth, a descendant of the second evolution in education, is where the majority of US Army officers currently receive their field grade professional education. The population of officers that graduate from CGSC are the officers upon which a successful transition of the US Army will depend. Currently, CGSC students are taught a broad spectrum of lessons during their one year education at Fort Leavenworth. Unfortunately the teaching of operational art does not take a precedence during this education. Operational art is taught during the C500 block of lessons, with mere forty-four hours of dedicated instruction. Further examination of the rubric shows that only twenty of the forty-four hours are actual instruction, and only four of those hours are specifically dedicated to the relationship of operational art and design and its purpose.<sup>138</sup>

Through this monograph, the author has identified the importance of operational art and the education of its elements to the officer corps. Currently, field grade officers receive as little as

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<sup>136</sup> Kevin C.M. Benson, *School of Advanced Military Studies Commemorative History 1984-2009* (Fort Leavenworth, KS: Command and General Staff College, 2009), 2, accessed October 31, 2017, <http://usacac.army.mil/CAC2/cgsc/Events/SAMS25th/SAMS25YearsHistory.pdf>.

<sup>137</sup> Lopez. "Army on cusp of profound, fundamental change."

<sup>138</sup> US Army Command and General Staff College, "Common Core C500: Operational Art and Planning Block Advanced Sheet" (curriculum provided to students for the 2017-18 academic year).

four hours of instruction on a system that provides the framework for transition and victory in future wars. It is the belief of the author, who is also a graduate of CGSC that more emphasis on the operational art framework is required in the professional education of field grade officers, and should resemble that of which is taught at SAMS. Further research should be conducted to determine if the correct pool of officers are being selected to attend the resident CGSC course, what alterations could be conducted to the syllabus, allowing for more education of operational art, and whether or not the current duration of CGSC is sufficient to properly instruct the necessary coursework. This further research is needed to properly educate field grade officers in operational art, ensuring that the US Army will be capable of transitioning from a COIN fight to the predicted wars of the future, and achieving victory.<sup>139</sup>

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<sup>139</sup> US Army, FM 3-0, *Operations* (2017), Forward. Lieutenant General Michael D. Lundy outlines similar threat issues as those outlined in the problem statement of this paper on page one. LTG Lundy states that FM 3-0 (2017), the new operations manual augmenting the army's capstone doctrine on unified land operations, is only one factor of the solution. He states that of more importance is how we develop our leaders, so they are ready to lead in the tough large scale operations of the future. This statement is in line with the findings and recommendations of this paper. Through a higher focus on the elements of operational art in the education of military officers, they will be capable of transitioning the force from a COIN centric fight, to one focused on large scale operations against a near peer threat.

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