

Enabling Victory: Operational Sustainment and Grant's Vicksburg Campaign

A Monograph

by

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Abstract

Enabling Victory: Operational Sustainment and Grant's Vicksburg Campaign, by MAJ James E. Wheeler, USA, 48 pages.

The Union Army, under the direction of General Ulysses S. Grant, waged a siege on the city of Vicksburg, and the Confederate forces within, from May 18-July 4, 1863. The reduction of Vicksburg solidified Federal control of the Mississippi River, severed the Confederate lines of communication from the Trans-Mississippi to the Western and Eastern Theaters of Operations, and served a precursor to Sherman's infamous "March to the Sea." While the siege was remarkable in its own right, the Union's operational approach was more phenomenal. Grant and the Union Army employed operational sustainment to conduct a six-month campaign to "set the theater" leading to the Confederate surrender on July 4, 1863. This analysis first defines operational sustainment. It then pivots to look at Grant's operational approach from November 1862 to May 1863 to reveal a deeper understanding of operational sustainment and its contribution to enabling victory. In doing so, contemporary practitioners may find a "key" to unlocking answers to the "set the theater" problem-set, as well as a new lens in which to view other past, present, and future operations.

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Acronyms

ABCT	Armored Brigade Combat Team
ADRP	Army Doctrine Reference Publication
AOR	Area of Responsibility
ATP	Army Techniques Publication
OPART	Operational Art

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Section 1: Introduction

As long as I am President, the servicemen and women who defend our Nation will have the equipment, the resources, and the funding they need to secure our homeland, to respond to our enemies quickly and decisively, and, when necessary, to fight, to overpower, and to always, always, always win.

—Donald J. Trump, *National Security Strategy*

Chapter 1: What's the Problem?

An unprecedented operational tempo has marred the United States Army for the last seventeen years. Unfortunately, operational requirements continue to test the vigilance and wherewithal of the armed forces today as well as into the near future. General Mark Milley, Army Chief of Staff, continues to stress that the Army's number one priority must be 'readiness' at all costs.¹ However, readiness is a relative term . . . readiness for what? Adversaries and competitors such as North Korea, Russia, and China have methodically improved their prominence on both the global and regional stages. These emergent near-peer threats necessitate an adaptive force that stands ready to deploy and 'fight tonight' across the entire range of military operations. While the operating force focuses on readiness, there is an impetus behind the force that may prove more important than the level of achieved readiness itself.

Concurrently, "Set the Theater, Sustain Operations, and Maintain Freedom of Movement" presents the US Army with a problem-set that remains on the list of Army Warfighting Challenges.² The fact that the overseas presence of the US Army is at its lowest level since 1957 exacerbates this challenge.³ Although the Sustainment Center of Excellence is the

¹ Mark Milley, "Readiness for Combat No Matter What" (Speech presented at the AUSA Eisenhower Luncheon Keynote Address, Washington, DC, October 13, 2015), accessed October 29, 2017, <https://www.army.mil/e2c/downloads/412559.pdf>.

² Army Capabilities Integration Center, "Warfighting Challenge #16: Set the Theater, Sustain Operations and Maintain Freedom of Movement," Army Warfighting Challenges, last modified October 24, 2017, accessed October 30, 2017, <http://www.arcic.army.mil/initiatives/armywarfightingchallenges>.

³ Kristen Bialik, "U.S. Active-Duty Military Presence Overseas Is at Its Smallest in Decades," Fact Tank: News in the Numbers, last modified August 22, 2017, accessed November 1, 2017,

proponent for this dilemma, the Theater Sustainment Command aligned to each Geographic Combatant Command and Army Service Component Command are the operational-level links that champion solution sets based on their geographically-assigned operational environments. The Theater Sustainment Command arranges the operational sustainment which enables various operations, actions and activities throughout the area of responsibility through continuous activity and a distributed support network. Operational-level sustainment presents commanders with flexible options that when acted on may lead to increased readiness and a set theater.

The renewed focus on decisive action against a near-peer adversary demands the US States military maintain a globally-distributed force. The global dispersion of forces presents adversaries of the United States with multiple dilemmas, enables force projection and allows for the acceptance of prudent risk in order to exploit opportunities as they present themselves. The Pacific Area of Responsibility (AOR), for example, is a non-contiguous operational environment haunted by the ‘tyranny of distance’ whose number two priority is “Be Ready to Fight Tonight.”⁴ Preparedness in the Pacific AOR would be impossible if not for the opportunities empowered by operational sustainment that extend operational reach and prevent culmination throughout the operational environment.

This precarious situation makes one wonder ‘can operational sustainment provide a maneuver commander with flexibility in options and freedom of maneuver?’ The answer to this question does not lie in generalities. Commanders and staffs must consider the answer in the context of preparing for, and in engaging, a near-peer adversary. Recent US history does not provide a comparative opportunity as the force has relied on offset strategies, primarily driven by

<http://www.pewresearch.org/fact-tank/2017/08/22/u-s-active-duty-military-presence-overseas-is-at-its-smallest-in-decades/>.

⁴ Edward Dorman, “Sustainment Mission Command in a Globally Distributed Environment,” U.S. Army, last modified July 5, 2016, accessed October 29, 2017, <https://www.army.mil/article/169564/>; Harry Harris, “United Pacific Command (USPACOM) Guidance” (US Pacific Command, August 12, 2016), accessed October 31, 2017, www.pacom.mil/Portals/55/Documents/pdf/guidance_12_august_2016.pdf.

technology, to provide advantages on the battlefield. Therefore, this research requires a deeper search in US history to find two belligerents that possess a commonality in variables. The controlled variable of a near-peer analysis permits the research to determine the independent variable(s) potentially attributed to success or failure.

The search for a true near-peer competition leads this research to the Vicksburg Campaign conducted during the American Civil War. The American Civil War was a near-peer competition in its truest sense. The belligerents had similar equipment, fighting styles, military education and combat experience.⁵ The comparative similarities of the Union and Confederate Armies enable an isolation of the above-mentioned elements, analysis of their application and the drawing of conclusions without falling into the trap of reductionism.

Many historians consider the Vicksburg Campaign to be the turning point of the Civil War. Both Abraham Lincoln and Jefferson Davis viewed Vicksburg as the “key” to success. Union control of Vicksburg would enable brown-water supremacy on the Mississippi River and effectively cut a critical Confederate line of communication from Texas and Louisiana to the Confederate-controlled areas east of the Mississippi River. Confederate control meant brown-water corridor superiority on the Mississippi River; thus, enabling unrestricted flow of critically needed logistics from the Trans-Mississippi Theater of Operations to the various theaters of operation east of the Mississippi River.⁶

Many researchers have dissected the Vicksburg Campaign numerous times since the Confederate surrender on July 4, 1863, arriving at an array of conclusions including the audacity of the Union, the stubbornness of the Confederates, a combination of the two and everything in-between. Ulysses S. Grant’s operational maneuver of the Union Army is often glorified and his

⁵ Michael A. Bonura, *Under the Shadow of Napoleon: French Influence on the American Way of Warfare from the War of 1812 to the Outbreak of WWII*, Warfare and Culture Series (New York: New York University Press, 2012), 93–132.

⁶ Michael Ballard, *Vicksburg: The Campaign That Opened the Mississippi* (Chapel Hill: University of North Carolina Press, 2010), 24-25.

genius heralded, such as his decision to cut loose from his base of supply, while the operational sustainment that enabled his success is granted a mere footnote. This study provides a fresh look at the Vicksburg Campaign, which may provide insights to the correlation between operational sustainment considerations and the attainment of success in modern and future operational environments.

This analysis looks past the maneuver-centric veneer, turning to sustainment actions, to understand the elements that reside below the surface that permit an enhancement of operational maneuver. The research asserts that operational sustainment, and General Grant's understanding thereof, were the critical factors leading to success during the Vicksburg Campaign. The Union Army established multiple bases prior to and during the Vicksburg Campaign. These bases enabled an echelonment and rapidity of operational sustainment, which in turn enabled freedom of action, prolonged endurance and extended operational reach of the Union Army throughout the Vicksburg Campaign. Furthermore, General Grant's understanding of the operational sustainment situation enabled him, not to cut loose from his base of supply, but rather to change his method of supply to conduct the march inland prior to seizing Vicksburg.

The concept of 'operational sustainment' is the foundation of this analysis. However, operational sustainment is an undefined term in current US doctrine. This research further develops the term, operational sustainment, in Chapter 3 in order to provide clarification on its genealogy. An analysis of four of the ten elements of operational art permits an understanding of operational sustainment in both a fragmented and holistic manner.⁷ Those elements being basing, culmination, tempo, and risk. The interplay between those four elements proves crucial in the success or failure in a military campaign or operation. The Vicksburg Campaign assists our understanding of the four elements, their reciprocal nature, and their importance going forward.

⁷ US Department of the Army, Army Doctrine Reference Publication (ADRP) 3-0, *Operations* (Washington, DC: US Government Printing Office, 2017), 2-4.

A comprehensive analysis, broken down into three sections consisting of eight chapters, supports these assertions. The first section contains the first two chapters. Chapter 1 is an introductory chapter, which discusses this research's significance, background, problem set, thesis, methodology, and limiting factors. A literature review conducted in Chapter 2 provides insight to the dominant sources used in the conduct of this research. Section 2 is an evidentiary section inclusive of Chapters 3-6. Chapter 3 develops a framework in which one can view operational sustainment. Chapters 4, 5 and 6 are exploratory chapters that further develop the concept of operational sustainment as established in the preceding chapter by isolating key sustainment-related elements of operational art. This research analyzes Chapters 4-6 against the historical backdrop of Ulysses S. Grant's campaign to seize Vicksburg during the American Civil War in an effort to move from an abstract to a concrete understanding of the proposed concepts. Finally, section three concludes the study with the closing arguments found in Chapter 7. This final chapter presents the findings and applicability by coalescing the independent variables back into the larger concept of operational sustainment.

All analyses possess limitations and this research is no exception to that rule. The wide gamut of professional opinions on Grant's cut loose methodology serves as the primary limitation behind this research. The professional background of the researcher is the primary mitigation to this limitation. The author is a professional logistician who has served in sustainment organizations at the strategic, operational and tactical levels of warfare. While this experience is advantageous in overcoming the above-stated limitation, it also risks an injection of bias in itself to the analysis. A selection of primary and secondary sources reduces this risk by providing a counter-balance that augments the author's perspective.

Finally, the author has imposed two delimitations in an effort to scope this project. The first considers the timeframe for the research. This study covers actions from November 1862

until the Union capture of Haynes' Bluff on May 18, 1863.⁸ This period covers the most prudent operational sustainment objectives in support of the maneuver efforts. All subsequent victories in Vicksburg after the capture of Snyder's Bluff were a mere matter of time...again made possible by operational sustainment. Furthermore, this study will not discuss tactical-level sustainment or the minutiae surrounding quantities of supplies that do not provide value to the larger context of the research.

In summary, this chapter sets the foundation for this research. The US Army faces ever-expanding global requirements and readiness concerns in preparing to fight a near-peer adversary; all while operating with its smallest overseas presence in the last sixty years.⁹ These challenges may seem daunting on the surface but the United States has faced a similar problem-set before. Ulysses S. Grant's campaign to capture the city of Vicksburg in late 1862 through the summer of 1863 presents an enlightening account of operational sustainment's enabling impact on strategy and decision-making. The lessons learned from General Grant and his attention to operational sustainment offer modern commanders and planners a lens through which to view their own operational circumstances. The following chapters seek to understand not only the phenomenon of operational sustainment but also its contextual application as a beacon for readiness in anticipation of future endeavors.

Chapter 2: Literature Review

Much research and conjecture exist on the Vicksburg Campaign. This analysis does not concern itself with affirming or disproving the competing perspectives of the many respected researchers that have come before and offered their own unique perspectives on this topic. This research seeks to provide the reader with an additive viewpoint from a theoretical perspective

⁸ Christopher R. Gabel, *Staff Ride Handbook for The Vicksburg Campaign, December 1862-July 1863* (Washington, DC: US Government Printing Office, 2015), 87-88.

⁹ Bialik, "U.S. Active-Duty Military Presence Overseas Is at Its Smallest in Decades."

bounded by the context of current US military doctrine. This approach enables the visualization of the operational environment while understanding the operational sustainment posture enabling the assessment of risk and subsequent decision-making process.

The literary sources selected to support this analysis enable a triangulation within the framework of theory, history, and doctrine. First, a review of current operations and sustainment doctrine from the United States Army derives a definition for operational sustainment. This definition assists the reader's understanding of the larger context of the analysis. Next, a review of Ulysses S. Grant's background and relationship to the teachings of Antoine-Henri Baron de Jomini, Helmuth von Moltke the Elder, and Winfield Scott presents an opportunity to appreciate his decisions during the Vicksburg Campaign. This is not to imply that General Grant studied any of the aforementioned theorists but understanding elements of their teachings can assist in understanding actions taken by General Grant during the Vicksburg Campaign. Finally, the historical context assists this research through primary sources and a community of authors that have lent their minds to presenting and understanding the Vicksburg Campaign. The author attempts to mitigate presentism; however, an element of presentism is necessary in the application of doctrine in order to glean the lessons learned.

The first vertex of our research triangulation begins with a review of current US Army doctrine. A detailed analysis alludes to a gap in the current lexicon governing and directing critical enablers in the operational environment. This gap results from the terminology 'operational-level of warfare.' Army Technique Publication (ATP) 4-94, *Theater Sustainment Command* states, "Sustainment commands provide mission command and operational-level sustainment support to an Army, joint or multinational force in support of unified land operations."¹⁰ Unfortunately, current doctrine is reluctant in defining operational-level sustainment, or operational sustainment in its shorter form; this research uses the terms

¹⁰ US Department of the Army, Army Techniques Publication (ATP) 4-94, *Theater Sustainment Command* (Washington, DC: Government Printing Office, 2013), 1-1.

synonymously throughout this research. However, Army Doctrine Reference Publications 3-0, *Operations* and 4-0, *Sustainment* provide definitions for the operational-level of warfare and sustainment.¹¹ Amalgamating these two definitions may lead to a better understanding of operational sustainment. Chapter 3 establishes a definition for operational sustainment that serves as a guiding beacon for the remainder of the analysis and potentially filling a glaring gap in current US Army doctrine.

The second vertex in this analytical triad concentrates on the theoretical framework and background of Ulysses S. Grant. A deeper examination garners an appreciation for the character of his mindset as he conducted the Vicksburg Campaign. As Robert Shields surmised, West Point institutionalized a young Ulysses to Jomini's teachings; although he maintained his penchant for claiming, "Many Jominian 'principles' were common-sense ideas hardly original with Jomini."¹² This disdain for admittance does not preclude the fact that Grant's secondary-socialization consisted of four years in a Jominian-clad military institution buttressed by an experiential assignment under the command of General Winfield Scott during the Mexican-American War.¹³ The young Grant witnessed General Scott's awareness of Jomini's principles throughout the Mexican-American War and their violation only when the opportunity presented outweighed the assessed risk.¹⁴ Ulysses Grant's professional military education and operational experiences resulted in an inculcation of a Jominian ideology, of which Grant himself was seemingly unaware.

¹¹ US Department of the Army, Army Doctrine Reference Publication (ADRP) 3-0, *Operations*, 1-1; US Department of the Army, Army Doctrine Reference Publication (ADRP) 4-0, *Sustainment* (Washington, DC: US Government Printing Office, 2012), Glossary-4.

¹² Robert Shields, *Ulysses S. Grant: The Architect of Victory in the U.S. Civil War* (Carlisle Barracks, PA: US Army War College, 1993), 7-8.

¹³ Peter L Berger and Thomas Luckmann, *The Social Construction of Reality: A Treatise in the Sociology of Knowledge* (New York: First Anchor Books, 1966), 138. Secondary-Socialization is the internalization of institutional or institution-based "subworlds."

¹⁴ Timothy D. Johnson, *A Gallant Little Army: The Mexico City Campaign*, Modern war studies (Lawrence: University Press of Kansas, 2007). 96,140,158.

Grant's dismissal of the "common-sense" principles put forward by Jomini and instructed at West Point necessitate the introduction of a subsequent theory of action in order to bracket his frame of thought for the purposes of this study. The teachings of Helmuth von Moltke the Elder assist in rounding-out an understanding of Grant's actions. Moltke believed "the way in which he hopes to attain the objective cannot be laid out long in advance with any degree of certainty" as well as the concept of *getrennte Heeresteile*.¹⁵ This is not to assert Grant studied Moltke, which is a chronological impossibility in the context of the Vicksburg Campaign, but rather a parallel exists between our understanding of Moltke's thinking and Grant's actions throughout this campaign. General Grant exemplified perseverance as he progressed along multiple lines of operation seeking to exploit opportunity throughout the Vicksburg Campaign. All the while, he remained focused on the military objective of capturing Vicksburg and securing the strategic objective of controlling the Mississippi River. Although Ulysses S. Grant's mind-frame is not the crux of this research, it does provide a contextual component to his approach to warfare.

General Winfield Scott serves as the final contributor to Grant's fundamental cognition in relation to warfare. Ulysses S. Grant, as a young cadet, became enamored with General Scott and it was during his subsequent assignment with Scott's Army of Invasion during the Mexican-American War that Grant would learn about the indirect approach, foraging, siege warfare and cutting loose from his supply base.¹⁶ Lieutenant Grant gleaned lessons learned from watching a seasoned officer successfully campaigning through Mexico. An elder General Grant would later apply these lessons during his own campaign as he marched towards Vicksburg.

A review of the historical literature surrounding the Vicksburg Campaign ends the analytical triad of theory, history and doctrine. The historical contribution to this analysis draws

¹⁵ Helmuth Graf von Moltke, *Moltke on the Art of War: Selected Writings* (New York: Ballantine Books, 1996), 11 and 92. *Getrennte Heeresteile*: separated parts of the army.

¹⁶ Ulysses S. Grant, *Memoirs and Selected Letters: Personal Memoirs of U.S. Grant, Selected Letters 1839-1865*, Library of America 50 (New York: Viking Press, 1990), 13 and 57; Johnson, *A Gallant Little Army*, 9-51, 139-140.

from various primary and secondary sources. The primary sources included in this analysis are *Memoirs and Selected Letters: Personal Memoirs of U.S. Grant, Selected Letters 1839-1865* authored by Ulysses S. Grant, and *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies* produced by the United States War Department. History and military professionals provide the chief secondary sources included in this review. *Vicksburg: The Campaign That Opened the Mississippi* by Michael B. Ballard and Warren E. Grabau's *Ninety-Eight Days: A Geographer's View of the Vicksburg Campaign* provide a non-military perspective through the respective lens of a historian and a geographer. A review of multiple monographs and publications from the Center of Military History and the Combat Studies Institute presents the militarized viewpoint. These works include monographs focused on logistics during the Vicksburg Campaign, by Lieutenant Colonel Edwin Buffington and Major Mark Hurley, as well as publications such as *Quartermaster Support of the Army: A History of the Corps 1775-1939*, and support material for the Vicksburg Staff Ride.

The War Department's efforts in encapsulating the historiography of the American Civil War is exemplary, but not without faults. The collection assumes receipt of all correspondence as telegraphy did not possess a read-receipt function. It does not provide analysis or context of the conditions that the participants were facing while drafting their communications. There is no right or wrong... it just is. It presents the appearance of a completely objective event recollection as told by the personnel that lived them. The collection assumes candor of the individuals and does not capture the true thoughts or emotions that led to the correspondence and reports contained within. This interpretive nature of the analysis coupled with the hidden intent of the correspondence may provide differing discourse. This conjecture is inconsequential as the War Department's documentation only serves to exemplify the ideas and does not serve as the main idea themselves.

The second source of primary documentation comes from *Memoirs and Selected Letters: Personal Memoirs of U.S. Grant, Selected Letters 1839-1865* authored by Ulysses S. Grant. This

account is riveting and comprehensive; but it is an introspective narrative laced with bias and partial truths. For example, Grant's autobiography is the source of much debate regarding, by his own recollection, his decision "to cut loose from my base."¹⁷ Chapter 4 provides a new perspective on whether General Grant indeed cut loose or not. The reminiscent writings of Ulysses S. Grant, although debatable, provide great insight into the thoughts of the commander as he accounted for operational sustainment in his decision-making process.

The next sources of literature are those that have applied an analytical eye to the Vicksburg Campaign. Both non-military and military professionals alike have taken interest in the actions that led to a Union victory at Vicksburg. All are respectable works in their own right, but no singular source answers the questions outlined in Chapter 1. However, synthesizing the military and non-military perspectives affords the opportunity to arrive at evidentiary conclusions.

Michael B. Ballard and Warren E. Grabau are two of the foremost authorities on the Vicksburg Campaign and their works provide the major secondary sources supporting this research. Ballard's *Vicksburg: The Campaign That Opened the Mississippi* does a magnificent job at portraying the geo-political and strategic implications of the campaign. However, understandably, his narrative does not focus on the tactical actions as that level of detail was not required to meet his aims. Mr. Grabau achieves the complete opposite effect in *Ninety-Eight Days: A Geographer's View of the Vicksburg Campaign*. The author provides a detailed account of the tactical actions and logistical situations from both the Federal and the Confederate perspectives. However, the scope of his work constrains itself to the period between March 29, 1863 through the surrender of Vicksburg on July 4, 1863. The narrow scope of this period excludes the larger development and contributions of the operational sustainment throughout prior to and throughout the campaign. While each of these works have their shortcomings in the

¹⁷ Grant, *Memoirs and Selected Letters*, 221.

context of this research, when combined they present a compelling analysis spanning from policy through all three subsequent levels of war.

The military contributors provide their own unique perspectives to the Vicksburg Campaign. They assist this project by presenting points and counterpoints to the arguments made in subsequent chapters of this analysis. The author's focus on different areas centered on logistics during the Vicksburg Campaign, but they do share a common topic—the notorious did he or did not he cut loose debate. That aside, their arguments bring an all-important element of a professional military and logistical understanding to a complex campaign where success is often misattributed to maneuver excellence and military genius.

Lieutenant Colonel Edward Buffington, in 1992, wrote an Army War College paper entitled *Logistics During Grant's Vicksburg Campaign*. He portrays Ulysses S. Grant as a learned individual that utilized elements from his upbringing and experiences during the Mexican-American War to enable his logistical acumen during the Vicksburg Campaign.¹⁸ He finds himself on the Grant cut loose side of the debate as he argues that Grant abandoned the contemporary supply methods of the day to secure victory at Vicksburg.¹⁹ However, abandon may be too hasty a word that may discount Grant's thoughts in relation to his decision to cut loose. Abandon implies that General Grant forgot about or completely disregarded his supply methodology. By contrast, this research argues that Grant was keenly aware of his situation and mitigated risk by switching to a supply methodology to which he witnessed during the Mexican-American Campaign and later tested after Van Dorn's raid at Holly Springs. Chapter 6 further discusses this potential misappropriation of speech and discusses the change in supply methodology as risk mitigation as opposed to abandonment.

¹⁸ Edwin L. Buffington, "Logistics during Grant's Vicksburg Campaign" (US Army War College Military Studies Program Paper, US Army War College, 1992), 6-7.

¹⁹ *Ibid.*, 44.

Finally, Major Mark S. Hurley provides the remaining key secondary source of military analytics to this research through his 1992 thesis *Union Logistics in the Vicksburg Campaign*. His predominate argument centers on his assertion that General Grant did not cut loose, but rather relied on a multifaceted supply system to secure victory in Vicksburg.²⁰ The author bases his assertion on the vernacular as he understood it in the year 1992 and not in the contextual understanding in which General Grant possessed in his own time. His methodology imposes an unfair degree of presentism to his critique of Grant's memoirs. This study uses Major Hurley's perspective to evolve our own understanding of the did he or did not he cut loose debate in Chapter 4. The second part of his argument may serve as the greatest addition to this research. His analysis does a commendable job of outlining the particular support activities that occurred at the various logistics nodes throughout the campaign. This portion of his analysis assists in the development of Chapters 4, 5, and 6 by assessing the sustainment activities at those nodes against the selected elements of operational art and their enabling effect on Union operations.

In conclusion, this chapter presents the foundational works in structuring the theory, history and doctrine framework that encompasses this work. The review began by outlining the gap and convolution presented within current US Army doctrine, transitioned to forming a mental model as an explanatory method to understanding Ulysses S. Grant, and finally highlighted the major works pertinent to the history of the Vicksburg Campaign. All three vertices of this analytical triad layer the cut loose debate throughout. While not the crux of the overall research, words matter, and a fundamental understanding of this content enables synthesis of the greater contextual ideation of operational sustainment.

²⁰ Mark S. Hurley, "Union Logistics in the Vicksburg Campaign" (Master's Thesis, US Army Command and General Staff College, 1992), 7-9.

Section 2: Presenting the Evidence

Chapter 3: Closing the Gap

Your scientists were so preoccupied with whether they could, they didn't stop to think if they should.

—Dr. Ian Malcolm, *Jurassic Park*

In the early 1980s, the United States Army brought forward an abstract Russian idea identified as operational art, or more precisely, the operational-level of war. This idea embodied a “mediation between strategy and tactics.”²¹ The operational-level of warfare was subsequently enshrined into the US Army's doctrine and has remained a foundational element in understanding the framework of warfare ever since. Subsequently, as the new doctrine permeated through the army, other warfighting functions would inevitably have to adapt the operational-level ideation to their own functionalities.²²

Planners and doctrine writers unintentionally created a gap in understanding by failing to distinguish the phenomenon of the operational-level to the action of the operational-level and its various subsystems, such as operational-level sustainment or operational sustainment. Referring back to Chapter 2, the introduction of ‘operational-level sustainment support’ in Army Technique Publication (ATP) 4-94, *Theater Sustainment Command* is a prime example of this induced confusion.²³ Similar to Dr. Malcolm who opened this chapter, military professionals did not stop to think just because they could, of whether they should, introduce a ‘new’ level of war. That

²¹ Huba Wass de Czege, “Thinking and Acting Like an Early Explorer: Operational Art Is Not a Level of War,” *Small Wars Journal* (March 14, 2011), accessed August 14, 2017, www.smallwarsjournal.com/blog/journal/docs-temp/710-deczege.pdf, 4.

²² Richard M. Swain, “Filling the Void: The Operational Art and the U.S. Army,” in *Operational Art: Developments in the Theory of War*, edited by B.J.B. McKercher and Michael Hennessey (Westport, CT: Praeger, 1996), 164.

²³ US Army, ATP 4-94 (2013), 1-1.

question begs a larger study all together that this chapter does not particularly address. However, the fact remains that the introduction of the operational-level of war produced a cascading and lasting effect that continues to impact today's and the foreseeable future's actions. The findings of this research may contribute to a future larger body of work focused on the overarching phenomenon of operational art and its utility to the US military. This chapter seeks to reconcile and improve the reality as defined by current US Army doctrine by developing a common understanding for the concept of operational sustainment.

Operational sustainment is an undeniable phenomenon in the US Army, but its lack of a definitive structure presents ambiguity throughout the force. Winston Churchill once said, Russia "is a riddle wrapped in a mystery inside an enigma, but perhaps there is a key."²⁴ Replace Russia with Operational Sustainment in the quote above and one can discern the complexity inadvertently developed since the introduction of the operational-level of war in the 1980s. Fortunately, not all components of operational-level sustainment remain shrouded. Various US Army doctrine define the terms operational-level and sustainment. This chapter progresses on a reductive approach, enabled by the individual definitions, to deconstruct operational-level sustainment. The piecing together of the individual components back together to establish systematic linkages, subsequently formulating a definition of operational sustainment, permits utility opposed to mere abstraction.

A closer look at the operational-level of warfare begins the unravelling of operational sustainment. ADRP 3-0, *Operations* states the "operational level links the tactical employment of forces to national and military strategic objectives, with the focus being on the design, planning, and execution of operations using operational art."²⁵ This definition has remained largely unchanged since its inception. The existence, non-existence, or agreeance on definition is not the

²⁴ The Churchill Society London, "The Russian Enigma," last modified October 1, 1939, accessed February 18, 2018, <http://www.churchill-society-london.org.uk/RusnEnig.html>.

²⁵ US Army, ADRP 3-0 (2017), 1-1.

focus of the debate. Remember, this chapter is seeking to determine the how to operate at the operational-level, and more specifically how to conduct sustainment at the operational-level. The phrase “using operational art” provides the key to demystifying operational sustainment. However, one must find the lock paired with the key before the key can fulfill its purpose. Sustainment is the lock which the key of operational art must open to enable a better understanding of operational sustainment.

The US Army defines sustainment as “the provision of logistics, personnel services, and health service support necessary to maintain operations until successful mission completion.”²⁶

Sustainment, in a similar fashion to the operational-level, is another doctrinal abstraction that does not convey the effect sought by successfully

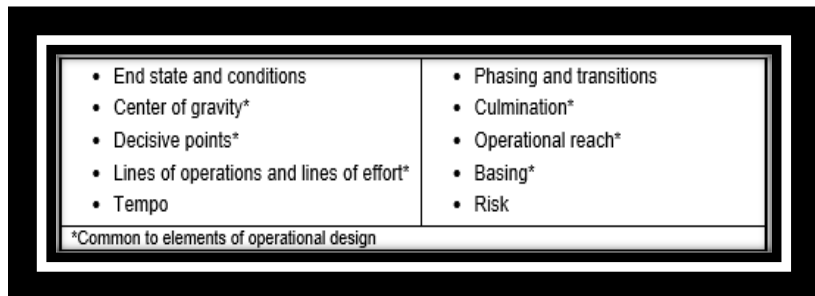


Figure 1: Elements of Operational Art. Army Doctrine Reference Publication (ADRP) 3-0, Operations, 2-4.

implementing sustainment operations. The definition of the sustainment warfighting function provides a more actionable terminology that enables this research to derive a usable definition of operational sustainment cobbled from the available and agreed upon language currently in US Army doctrine. The sustainment warfighting function describes sustainment as having three purposes: “to ensure freedom of action, extend operational reach, and prolong endurance.”²⁷ Each of the three purposes inextricably link to the previously identified key—operational art. The next sections and remaining chapters discuss those linkages. As shown above, operational art is the framework that guides commanders and planners at the operational level. Operational art is comprised of ten elements as shown in Figure 1, three which link unequivocally to the very

²⁶ US Army, ADRP 4-0 (2012), 1-1.

²⁷ US Army, ADRP 3-0 (2017), 5-5.

essence of sustainment.²⁸ Commander's and staff's cognitive adherence to basing, tempo and culmination result in, respectively, the sustainment byproducts of extending operational reach, enabling freedom of action and prolonging endurance. This research does not imply that pure loyalty to these elements is a prerequisite to operational success. The research asserts that *operational sustainment is the interplay of basing, tempo, and culmination governed by balancing opportunity and risk that extends operational reach, enables freedom of action, and prolongs endurance*. An all-encompassing fourth element of risk reconciles these deviations. The recognition and assessment of risk enables a calculated deviation from the aforementioned elements in pursuit of opportunity in lieu of costly unmitigated risk.

This chapter began with an understanding of operational sustainment no deeper than sustainment conducted on the operational-level. The preceding text reduced both the operational-level and sustainment down to their core components. The revelation of their purpose and intent in their individual states through reduction permits a construction of operational sustainment and thus a deeper understanding that guides not only this analysis, but future practitioners as well. This chapter concluded with a guiding definition of operational sustainment. The forthcoming chapters expand on this definition through a backdrop of General Grant's campaign to seize Vicksburg. Chapters 4, 5, and 6 discuss the correlation between basing and extending operational reach; tempo and enabling freedom of action; and culmination and prolonging endurance. The remaining chapters assess the element of risk throughout. Finally, Chapters 7 and 8 provide selected analytical conclusions and recommendations in relation to the underlying essence of operational sustainment and its contribution to success, not only during the Vicksburg Campaign, but also perhaps for the current and future US Army.

²⁸ US Army, ADRP 3-0 (2017), 2-4.

Chapter 4: Basing and Extending Operational Reach

When this was effected I felt a degree of relief scarcely ever equaled since. Vicksburg was not yet taken it is true, nor were its defenders demoralized by any of our previous moves. I was now in the enemy's country, with a vast river and the stronghold of Vicksburg between me and my base of supplies. But I was on dry ground on the same side of the river with the enemy. All the campaigns, labors, hardships and exposures from the month of December previous to this time that had been made and endured, were for the accomplishment of this one object.²⁹

—Ulysses S. Grant, *Memoirs and Selected Letters*

As discussed in Chapter 1 and the preceding epigraph, the US Army must stand ready to engage near-peer adversaries across the globe and “to respond to our enemies quickly.”³⁰ The required responsiveness emanates from basing and its subsequent extension of operational reach.³¹ Basing, with its correlation to operational reach and responsiveness, is the preeminent element of operational art, enabling operational sustainment to mature from an abstraction to an actualization. The Vicksburg Campaign demonstrates the importance of networked basing, its connection to operational sustainment, and its attributing systematic impact on operational success.

Multiple sources attribute the seizure of Vicksburg as the primary objective of the Vicksburg Campaign, but strategies and campaigns have a duplicity of objectives, political and military. While Abraham Lincoln wanted control of Vicksburg and “aimed to get the key in his pocket,” this was not the military objective.³² Grant viewed the military objective as establishing

²⁹ Grant, *Memoirs and Selected Letters*, 215.

³⁰ Trump, *The National Security Strategy of the United States of America*, 25.

³¹ US Army, ADRP 3-0 (2017), 2-9, Base is a locality from which operations are projected or supported.; US Army, ADRP 4-0 (2012), 1-3 and 3-5, Responsiveness is the ability to react to changing requirements and respond to meet the needs to maintain support; Operational reach is the distance and duration across which a unit can successfully employ military capabilities.

³² Ballard, *Vicksburg: The Campaign That Opened the Mississippi*, 146.

bases of supply and securing lines of communication. Grant spoke numerous times in his *Memoirs* that establishing bases of supply, such as Haynes' Bluff and Grand Gulf, were of utmost importance.³³ The military objective of a supply base is further evidenced by Major General William T. Sherman, XV Corps Commander, stating it "was the end of one of the greatest campaigns in history" upon the Union capture of Haynes' Bluff.³⁴ Grant understood basing was an essential enabler furthering his operational reach, without which his stratagems and operational maneuvers stood no chance of success.

Grant's own recollection of events, and researchers' misinterpretation of his actions and words undermine the importance basing played in the Union conquest of Vicksburg; a fundamental lack of understanding of the historical terminology further exacerbates this distortion. Contemporary researchers have fallen victim to presentism when analyzing Grant's assertions which have led to their wide-ranging conclusions.³⁵ This chapter seeks, not only, to clarify Grant's perception of basing as grounded in the time-period, but also and more importantly, to assist in understanding the prominence basing had throughout the Vicksburg Campaign.

Years after the Civil War's conclusion, an elder Grant recollected in his *Memoirs* that I "cut loose from my base" and proceeded to capture Vicksburg.³⁶ This claim gave life to multiple schools of thought. On one side of the argument, pundits argue that Grant indeed cut loose from his base of supply; conversely, another faction argues that he did not cut loose from his base. The arguments are well supported from each of the author's modern perspectives and the degree of

³³ Christopher R. Gabel, *The Vicksburg Campaign: November 1862-July 1863*, Army Historical Series CMH Pub 75-8 (Washington, DC: Center of Military History, 2013), 52; Grant, *Memoirs and Selected Letters*, 215.

³⁴ Grant, *Memoirs and Selected Letters*, 235.

³⁵ Buffington, "Logistics during Grant's Vicksburg Campaign," 6-7; Hurley, "Union Logistics in the Vicksburg Campaign," 7-9.

³⁶ Grant, *Memoirs and Selected Letters*, 221.

presentism in which they have viewed this subject. However, Grant was a graduate of the US Military Academy at West Point, a disciple of Winfield Scott, and a subordinate of General Henry Halleck, of which were all influenced heavily by Jominian principles. Grant was a student of Jomini, whether he admitted it or not.³⁷

He, most certainly, would have understood basing in the Jominian sense. Jomini differentiated base of operations between permanent and temporary bases, much like contemporary practitioners delineate bases amongst a variety of types such as intermediate staging and forward operating bases.³⁸ The decentralized depot system was the primary means of logistics during the Civil War, with the St. Louis Depot and Memphis Depots serving, respectively, as the base of operations and advanced or temporary depots.³⁹ These definitive associations are important in analyzing what Grant meant by stating I “cut loose from my base” prior to moving inland towards Jackson, Mississippi and eventually turning back to Vicksburg.

The base from which Grant referred to as cutting loose was the St. Louis Depot, which served as the Army of the Tennessee’s primary base of operations. Grant would have viewed bases, such as Holly Springs, Milliken’s Bend, and Grand Gulf, as temporary bases or points in keeping with his institutionalized knowledge. Understanding the historical context of the logistical system and the associated terminology of the time-period is of utmost importance. In

³⁷ Shields, *Ulysses S. Grant: The Architect of Victory in the U.S. Civil War*, 7–9.

³⁸ Antoine Henri baron de Jomini, *The Art of War* (Lippincott, 1862), 77- A base of operations is the portion of country from which the army obtains its reinforcements and resources, from which it starts when it takes the offensive, to which it retreats when necessary, and by which it is supported when it takes position to cover the country defensively; 84- Besides permanent bases, which are usually established upon our own frontiers, or in the territory of a faithful ally, there are eventual or temporary bases, which result from the operations in the enemy’s country; US Army, ADRP 4-0 (2012), 3–10, An intermediate staging base (ISB) is a tailorable, temporary location used for staging forces, sustainment and/or extraction into and out of an operational area; Forward operating bases extend and maintain the operational reach by providing secure locations from which to conduct and sustain operations.

³⁹ Erna Risch, *Quartermaster Support of the Army: A History of the Corps 1775-1939*, Army Historical Series CMH Pub 70-35 (Washington, DC: Center of Military History, 1989), 427–440; Hurley, “Union Logistics in the Vicksburg Campaign,” 15.

doing so, this research moves past the did he or did he not cut loose argument and analyzes the intricate network of bases, both permanent and temporary, and their effects on the campaign.

The Union's December 1862 march into Mississippi began as a deliberate two-pronged approach but quickly necessitated an emergent strategy as Confederates interdicted lines of communication and the Union forces approached the limits of their operational reach.⁴⁰ The emergent strategy consisted of a series of bases along the Mississippi River extending from Memphis, Tennessee to Grand Gulf, Mississippi. The selected bases afforded multiple opportunities to the Army of the Tennessee while simultaneously mitigating risk. Their proximity to high-speed railways, waterways and protection from Confederate forces in the vicinity of Vicksburg extended the operational reach of an army on the march.

Initially, Grant and Halleck envisioned divergent ways to approach Vicksburg. Grant, who ultimately won out, called for a conditions-based approach with him and Sherman moving along multiple lines of operation, whereas Halleck opined for a Jominian-like massed approach moving from Memphis.⁴¹ The Union possession of bases such as the advanced depot in Memphis and the temporary bases at Holly Springs and Helena made both approaches feasible. However, without further basing and protection efforts, the Army of the Tennessee would have approached the extent of its operational reach. Grant knew this when he telegraphed Halleck stating "it would not be safe to go beyond Grenada and hold present lines of communications."⁴² Grant was cognizant of the limiting effect that carrying capacities and rates of march imposed on his operational reach. Basing was his answer to counteract these limitations.

⁴⁰ Ballard, *Vicksburg: The Campaign That Opened the Mississippi*, 111–112; Henry Mintzberg, *The Rise and Fall of Strategic Planning: Reconceiving Roles for Planning, Plans, Planners* (New York: The Free Press, 1994), 24–27; US War Department, *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies*, vol. 17: Part 1 Reports, I (Washington, DC: US Government Printing Office, 1889), 474. Hereafter cited as OR.

⁴¹ OR, 17 (1): 471 and 473.

⁴² OR, 17 (1): 472.

Soldiers during the Civil War carried a one peck-capacity haversack consisting of approximately three days rations.⁴³ The trains accompanying the moving force carried additional days of supply. The Union force, given a fifteen to twenty mile per day rate of march, had an approximate overland range of operations of 100 miles before needing resupply. Mobility corridors possessing lines of communication, including rail and river routes, with their afforded speed and higher load-carrying capacities, often canalized ground movement.

The southerly advance by Union forces was an effort to establish temporary bases at Grenada and somewhere in the vicinity north of Vicksburg in an effort to extend operational reach and present the Confederates with multiple dilemmas.⁴⁴ Securing these temporary bases would enable the Union Army to move within 100 miles of Jackson, Mississippi and within striking distance of Vicksburg itself. Grenada was key terrain, as it extended the Union's operational reach by nearly seventy-five miles. Furthermore, it was the junction of the Mississippi-Central Railroad, from Holly Springs, and the Mississippi-Tennessee Railroad, from Memphis, which gave Grant a direct-access route to Jackson. If Grant were able to take Jackson, he would "force the evacuation of Vicksburg" as he would now control the Confederate supply lines leading into Vicksburg from seemingly all directions.⁴⁵ Unfortunately, this two-pronged effort never fully materialized as a harsher reality brought life to Grant's earlier anxiety, that he could not simultaneously extend operational reach and protect the extended lines of communication with his limited forces.

⁴³ Rodney C. Lackey, *Notes on Civil War Logistics: Facts & Stories* (Fort Lee, VA: United States Army Transportation Corps, n.d.), 10, accessed December 14, 2017, <http://www.transportation.army.mil/>. The haversack was the soldier's food larder. It was designed to carry roughly one peck of rations (i.e., 537.61 cubic inches), about a three day supply. By way of comparison, a modern paper grocery bag has a two peck capacity.

⁴⁴ *OR*, 17 (1): 467–469; Gabel, *The Vicksburg Campaign: November 1862-July 1863*, 18–21.

⁴⁵ Gabel, *The Vicksburg Campaign: November 1862-July 1863*, 18–19.

As early as November 17, 1862, Sherman had identified Haynes' Bluff as a key piece of terrain which without he could not "promise success in a direct assault against Vicksburg."⁴⁶ Haynes' Bluff is postured at the confluence of the Mississippi and Yazoo Rivers approximately fifteen miles north of Vicksburg. Union control of these bluffs would permit access to Vicksburg from Helena and Grenada without meandering through the malarial flood-plains and bayous prevalent on the Louisiana-side of the Mississippi River. More importantly, in addition to extending his operational reach, control of Haynes' Bluff would provide Grant with unrestricted freedom of action and prolonged endurance as he would now be sitting on the dry, high ground with secure river lines of communication connecting him to his depots and bases in the north. Unfortunately for the Union, the Confederates also understood the importance of these bluffs as they fortified and occupied them until the next spring. Once the Union controlled these bluffs on May 18, 1863, a steady stream of supplies powered the siege and eventual capitulation of Vicksburg.⁴⁷ However, it was not May 1863, but December 1862 and the simple direct approach to Vicksburg via Haynes' Bluff would have to wait as the Confederates and other obstacles prevented this initial approach.

Sherman began an unsuccessful river-borne operation aimed at securing a lodgment and establishing a supply base north of Vicksburg on the same day the Confederate cavalry was spoiling Grant's inland expedition.⁴⁸ On December 20, 1862, Confederate cavalry raiders, led by Major General Earl Van Dorn, destroyed the Union supply base at Holly Springs and railroads in the Union rear compelling Grant to abandon his overland campaign.⁴⁹ The lack of the supply base

⁴⁶ *OR*, 17 (2): 351–352, 879.

⁴⁷ Gabel, *Staff Ride Handbook for The Vicksburg Campaign, December 1862-July 1863*, 87–88.

⁴⁸ Ballard, *Vicksburg: The Campaign That Opened the Mississippi*, 129–144; Gabel, *The Vicksburg Campaign: November 1862-July 1863*, 21–25.

⁴⁹ Gabel, *The Vicksburg Campaign: November 1862-July 1863*, 20–21; Gabel, *Staff Ride Handbook for The Vicksburg Campaign, December 1862-July 1863*, 48–49.

at Holly Springs or the attempted establishment at Grenada nullified the Union's force projection capability. The advanced depot at Memphis was the nearest supply base capable of supporting operations against Jackson. Unfortunately, this spanned a distance of over 180 miles, almost double the operational range of the Union. Ultimately, the Holly Springs disaster forced Grant to withdraw his offensive and relocate to Memphis where he devised a plan focused on securing both water and overland lines of communication. This approach would simultaneously extend operational reach and provide the required protection allowing maximum combat power to remain forward on the battlefield.

Sherman's initial effort was an abysmal failure on the tactical-level as he attempted to secure Haynes' Bluff, but his expedition proved to be of utmost importance at the operational-level. His foray down the Mississippi River included the establishment of bases at Milliken's Bend, Lake Providence and Young's Point in Louisiana.⁵⁰ The establishment of these three base camps extended the Union's operational reach to within ten miles of Vicksburg and extended the Union's lines of communication and river supremacy from St. Louis, Missouri all the way to Young's Point, Louisiana. Perhaps more importantly, the Union's placement of the Mississippi River between itself and its objective provided the means of protection that had previously eluded Grant during his venture into the Mississippi interior.

The Union's newly-gained river supremacy enabled it to cover distances that were previously unattainable through the sole use of road and rail during the attempt into the Mississippi interior. As mentioned previously, once the Confederates destroyed Holly Springs, the distance between Memphis and Jackson was nearly 180 miles requiring a ground movement of between nine to twelve days. The distance between Memphis and Milliken's Bend was nearly 220 miles; however, an army could cover this distance on the river in less than twenty-four

⁵⁰ Warren Grabau, *Ninety-Eight Days: A Geographer's View of the Vicksburg Campaign* (Knoxville: University of Tennessee Press, 2000), 7.

hours.⁵¹ Unfortunately, the Union had once again reached the limits of its operational reach as the Confederates controlled the Mississippi River corridor between Snyder's Bluff and Port Hudson, Mississippi. Grant's strategy continued to emerge as he searched for additional basing opportunities to further his operational reach into this Confederate fortified zone.

Failures and setbacks met the Army of the Tennessee at every turn from Sherman's initial attempts against Snyder's Bluff in December 1862 through the early-springtime of 1863. Grant was understanding that a northern approach to Vicksburg was extremely difficult. This realization led Halleck and Grant to exchange correspondence between April 2 and April 27, 1863 indicating that Grand Gulf would be the next objective, which would extend operational reach from the north and south, and enable operations against either Vicksburg or Port Hudson.⁵² Securing Grand Gulf placed Grant within twenty miles of Vicksburg and forty miles of Jackson, should he choose to resume his December 1862 strategy, only this time from a southern approach. Grant's first problem in developing this approach was "the capture of Grand Gulf to use as a base" because it had "now become evident that the army could not be rationed by a wagon train over the single narrow and almost impassable road between Milliken's Bend and Perkins' plantation."⁵³

Grant's aspirations for seizing Grand Gulf as a base of operations would require a preceding basing operation to take place. The Union had gained significant operational reach through its subsequent basing operations throughout the late-winter and early-spring of 1863, but it still found itself on the west side of the Mississippi River with the Confederates maintaining corridor supremacy immediately north and south of Vicksburg. Fortunately, fate smiled on the Union on the 29th of April when a local passer-by informed Grant "that a good landing would be

⁵¹ James A. Huston, *The Sinews of War: Army Logistics 1775-1953*, Army Historical Series CMH Pub 30-4 (Washington, DC: US Government Printing Office, 1997), 211-214.

⁵² *OR*, 24 (1): 25-31.

⁵³ Grant, *Memoirs and Selected Letters*, 211, 215.

found at Bruinsburg” in which the Union’s “landing was effected without opposition.”⁵⁴ Grant now had unfettered access to the interior of Mississippi with the lodgment at Bruinsburg secured but still had to secure Port Gibson to turn Grand Gulf into a base of supply. The key that President Lincoln sought was finally within reach and Grant was intent on extending his operational reach one step further to gain possession of this elusive key.

Grant and the Union Army entered this chapter searching for basing opportunities that would extend their operational reach into the Mississippi interior in an effort to seize Vicksburg and gain complete control over the entire Mississippi River. The initial basing at Memphis and Holly Springs initiated a two-prong approach in which the Confederates quickly thwarted due to a lack of protection. Grant promptly reviewed his strategy and developed a series of basing efforts that would find themselves doctrinally sound today: an intermediate staging base at Memphis and forward operating bases at Lake Providence, Young’s Point and Milliken’s Bend, and lodgments at Bruinsburg and Grand Gulf. The possession of these bases alone did not assure victory for the Union in the Vicksburg campaign, but they did lead to subsequent opportunities that ultimately led to the isolation and successful siege of Vicksburg. Chapters 5 and 6 explore these opportunities, their contribution to operational sustainment and the overall effect the bases had during the campaign. The base acquisition provides the foundation from which emerges the ability to enable freedom of maneuver and prolong endurance.

Chapter 5: Tempo and Enabling Freedom of Action

You know, there are two good things in life, freedom of thought and freedom of action.

—W. Somerset Maugham, *Of Human Bondage*

The previous chapter introduced basing as the first element contributing to operational sustainment and its correlation to extending operational reach. An army’s ability to extend

⁵⁴ Grant, *Memoirs and Selected Letters*, 214.

operational reach and project forces is a necessity; however, possession of this ability alone is futile unless the army also retains its freedom of action. Currently US military doctrine does not define ‘freedom of action’, but ADRP 4-0, *Sustainment* describes freedom of action’s relationship with tempo as that which “enables commanders with the will to act, to achieve operational initiative and control, and maintain operational tempo.”⁵⁵ Enabling freedom of action is the second purpose of sustainment and primarily achieved through the sustainment preparation of the operational environment.⁵⁶ Grant’s persistent sustainment preparation of the operational environment enabled the Army of the Tennessee to retain its freedom of action and dictate the operational tempo throughout the Vicksburg Campaign. The following analyzes Union actions and their relation to operational tempo in which they either dictated or had forced upon them. These actions and subsequent tempo were enabled either by adequate or hindered by inadequate sustainment preparation of the operational environment.

The latter, inadequate preparation, is the first topic discussed but this research must return to November 1862 and the Union’s initial excursion into the Mississippi interior in doing so. Grant conducted a legitimate sustainment preparation prior to venturing into Mississippi. However, the sustainment preparation of the operational environment limited the Union options resulting in a restricted freedom of action which served as the ultimate undoing of this operation.

Grant’s sustainment preparation in November 1862 generated an assumption, which Sherman would later validate, that rain would significantly affect his inland mobility.⁵⁷ He would mitigate this risk by relying on the railroad to move his supplies as he advanced into the

⁵⁵ US Army, ADRP 4-0 (2012), 3–12; US Army, ADRP 3-0 (2017), 2–7; Tempo is the relative speed and rhythm of military operations over time with respect to the enemy.

⁵⁶ US Army, ADRP 4-0 (2012), 3–13. Sustainment preparation of the operational environment is the analysis to determine infrastructure, physical environment, and resources in the operational environment that will optimize or adversely impact friendly forces means for supporting and sustaining the commander’s operations plan (ADP 4-0).

⁵⁷ Ballard, *Vicksburg: The Campaign That Opened the Mississippi*, 101, 106; *OR*, 17 (1): 374.

Mississippi interior. Unfortunately, there was no direct rail line between the base of supply at Memphis and the Army of the Tennessee in Northern Mississippi (see Figure 2).⁵⁸ If Grant were to continue his two-pronged approach, he would have to travel along the Mississippi-Central Railroad as the weather and available mobility infrastructure limited his options, and subsequently his freedom of action. Van Dorn and his Confederate cavalry raiders would ultimately exploit the Union's limited freedom of action by moving through terrain inaccessible to the Union and cutting Grant's supply line to Holly Springs. Van Dorn's raid at Holly Springs

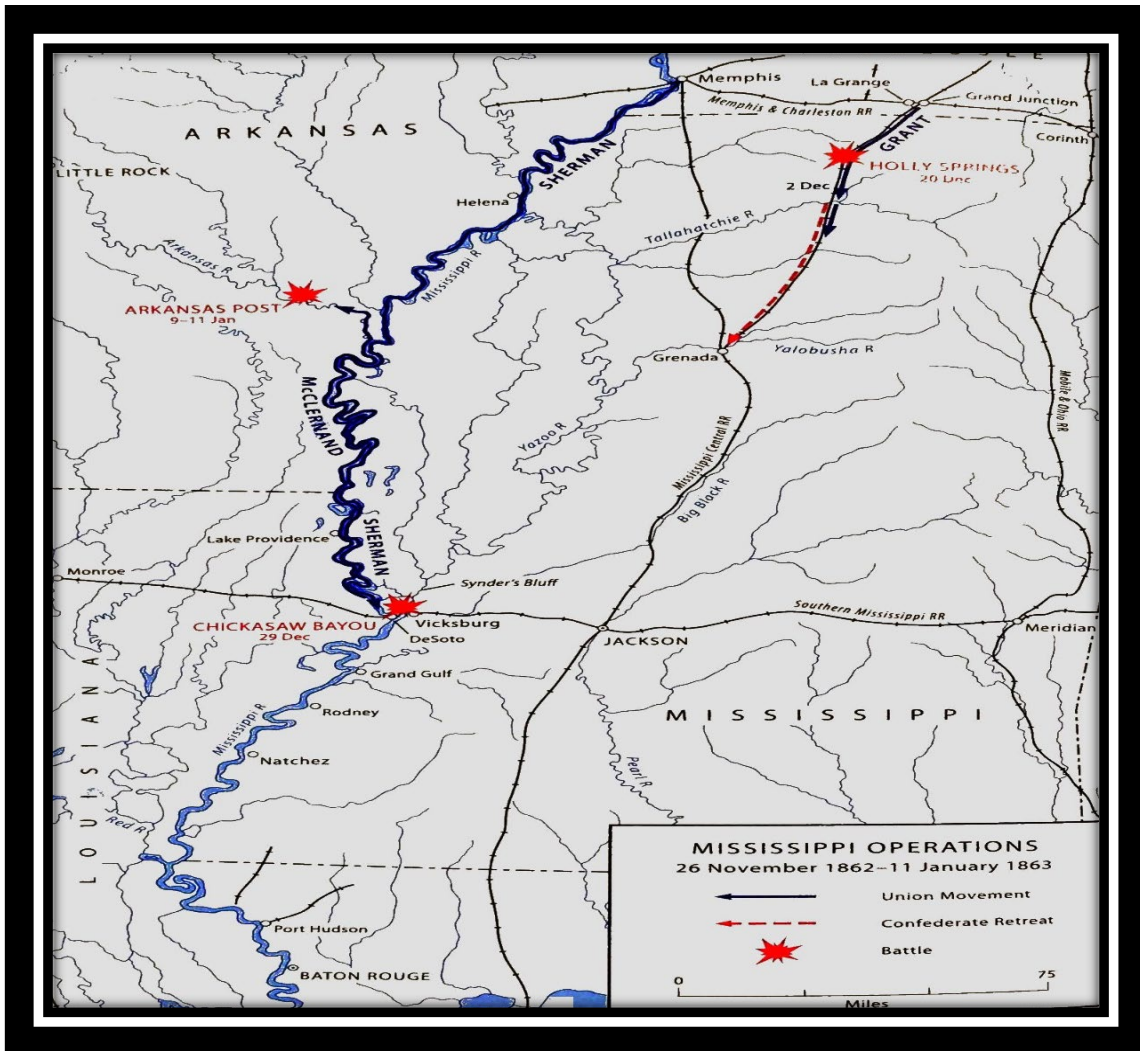


Figure 2. Map of Railroads. Christopher R. Gabel, *The Vicksburg Campaign: November 1862-July 1863*, Army Historical Series CMH Pub 75-8 (Washington, DC: Center of Military History, 2013), 22.

⁵⁸ Hurley, "Union Logistics in the Vicksburg Campaign," 30; Gabel, *The Vicksburg Campaign: November 1862-July 1863*, 22. Hurley's research identifies a lack of a direct line between Memphis and the Army of the Northern Tennessee in Northern Mississippi which Gabel's map further validates.

not only destroyed valuable supplies, but more importantly, it disrupted the tempo of the Union's drive into Mississippi. Grant had culminated along his advance; without Grant applying inland pressure, the Confederates were able to utilize their interior lines to reinforce against Sherman and his amphibious operation down the Mississippi River.⁵⁹ The Union's inability to maintain freedom of action, driven by weather and infrastructure limitations, disrupted operational tempo and ultimately prevented the achievement of its objectives in December 1862. This failure would lead to a protraction of the Vicksburg Campaign by an additional six months.

The Holly Springs debacle forced Grant to retrograde back to Memphis in January 1863 where he reassessed his operational approach. Grant assumed the direct command of the river-borne operation against Vicksburg; which at this time had shifted from a shaping to the main effort.⁶⁰ The Union's limited freedom of action compounded the problematic extended lines of communication from Holly Springs to Grenada throughout December 1862. The Union's inability to move freely, not only reduced their operational tempo, but also further exacerbated Grant's fear that he was unable to protect his extended lines. Grant's decision to lead the river expedition inadvertently dispelled this fear in the upcoming months. Research indicates that "Grant would use the Mississippi River as his primary line of communication."⁶¹ Unlike the Mississippi-Central Railroad, the river served, not only as a means of approach, but also as a means of protection as it placed a major geographical barrier between the Army of the Tennessee and the Confederates in Vicksburg.

The newfound protection for his line of communication presented Grant with unhindered freedom of action during the ensuing springtime Bayou Expeditions and enabled him to dictate the tempo throughout the remainder of the Vicksburg Campaign. The Bayou Expeditions (see

⁵⁹ Hurley, "Union Logistics in the Vicksburg Campaign," 39–40.

⁶⁰ Gabel, *The Vicksburg Campaign: November 1862–July 1863*, 26.

⁶¹ Buffington, "Logistics during Grant's Vicksburg Campaign," 25.

Figure 3), as Grant named them, were a series of attempts to gain a foothold on the eastern bank of the Mississippi.⁶² These probing excursions began with Sherman's failed attempt at Chickasaw Bayou, partially limited by Grant's own failure at Holly Springs, and ended with Grant and Porter deciding to run the Vicksburg batteries in an effort to establish a lodgment south at Bruinsburg, Mississippi. However, an impromptu adventure into Arkansas possibly achieved the freedom of action enjoyed by Grant throughout the bayou phase and subsequently the remainder of the campaign.

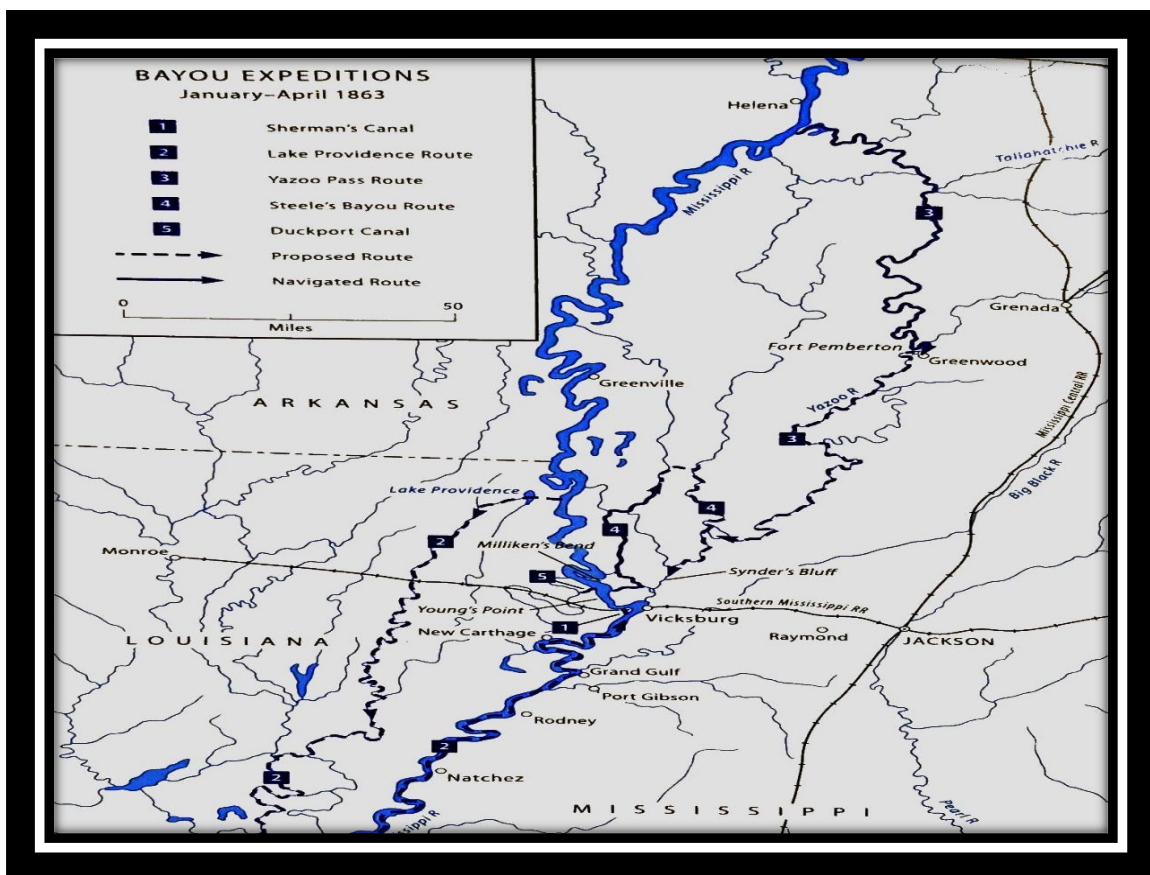


Figure 3. The Bayou Expeditions. Christopher R. Gabel, *The Vicksburg Campaign: November 1862-July 1863*, Army Historical Series CMH Pub 75-8 (Washington, DC: Center of Military History, 2013), 28.

⁶² Gabel, *The Vicksburg Campaign: November 1862-July 1863*, 26–30. The Bayou Expeditions consisted of two attempted canals and three routes. The canals consisted of Sherman's Canal and Duckport Canal. The routes were Lake Providence Route, Yazoo Pass Route and Steele's Bayou Route.

On January 2, 1863, sustainment preparation of the operational environment once again made its way to the forefront of Union decision-making with the objective of Arkansas Post, a possible decisive point, resulting from the analysis.⁶³ The Mississippi River offered protection of Union forces from interference by Confederates on the east side of the Mississippi. However, problems could still arise from Confederates operating in the Trans-Mississippi Theater moving eastward on the Arkansas River towards the Mississippi River and interdict the line of communication between Grant and his depot at Memphis. Rebel interdiction of the *Blue Wing*, a Union supply boat, on the Mississippi River on December 29, 1862 revealed an unforeseen critical vulnerability of the Union supply line.⁶⁴ Grant admittedly professed in his *Memoirs* that he did not foresee, at first, the value of the Arkansas Post objective but soon realized his blindness:

I was at first disposed to disapprove of this move as an unnecessary side movement having no especial bearing upon the work before us; but when the result was understood I regarded it as very important. Five thousand Confederate troops left in the rear might have caused us much trouble and loss of property while navigating the Mississippi.⁶⁵

The seizure of Arkansas Post, January 11, 1863, was an unforeseen decisive point permitting Grant the freedom of action which he desired. Without securing Arkansas Post, Grant's supply line on the Mississippi River remained vulnerable. The ghosts of Holly Springs may once again become a reality resulting in his unprotected, overextended supply line being susceptible to interdiction.

Sustainment preparation of the operational environment garnered a freedom of action, supported by basing and a secure line of communication, which preserved Grant's decision-space

⁶³ US Army, ADRP 3-0 (2017), 1–26. A decisive point is a geographic place, specific key event, critical factor, or function that, when acted upon, allows commanders to gain a marked advantage over an adversary or contribute materially to achieving success.

⁶⁴ Ballard, *Vicksburg: The Campaign That Opened the Mississippi*, 147–148.

⁶⁵ Grant, *Memoirs and Selected Letters*, 196–197.

and options, and further allowed him to dictate tempo throughout the remainder of the bayou phase. Many considered the bayou expeditions, by themselves, unsuccessful. Grant himself did not believe that any of the attempts in the bayous would be successful; however, he was ever an opportunist and would exploit any prospects if presented.⁶⁶ Grant and his Union forces attempted no less than five courses of action in the bayous from January-April 1863 seeking a high-ground lodgment on the east bank of the Mississippi River. The bayou experiments themselves achieved limited success. However, the constant movement of ground forces operating from Milliken's Bend, Lake Providence and Young's Point coupled with the river movement of Admiral Porter's watercraft, surely created uncertainty amongst the Confederates in Vicksburg.

Both enemy and weather interdicted the Union attempts, but the enemy was primarily reactive.⁶⁷ The reactive posture of the Confederates conceded the initiative to the Union and permitted them to operate west of the Mississippi River without fear of Confederate interference. Ultimately, Grant's perseverance, coupled with his uninterrupted freedom of action and persistent quest for new basing opportunities, led his army to their landing at Bruinsburg, Mississippi. Unfortunately, while Grant now dictated tempo in relation to the enemy, nature and the upcoming malarial season were simultaneously dictating the tempo against his own forces.

The Union's sustainment preparation of the operational environment from December 1862 through April 1863 led to both successful and failed attempts to gain freedom of action and the ability to control tempo. While a lack of security for the lines of communication at Holly Springs hindered success, the attention to and provision of security during the bayou expeditions bolstered the attainment of Union success. Grant's freedom of action was his center of gravity and paramount to his operational approach. His line of communication was a critical capability of the Union army and its security served as a critical requirement. Unfortunately, Van Dorn

⁶⁶ Grant, *Memoirs and Selected Letters*, 199.

⁶⁷ Gabel, *The Vicksburg Campaign: November 1862-July 1863*, 26–30.

exploited the lack of security, turning this requirement into a vulnerability during the initial inland campaign, and effectively thwarted Grant's advance. Conversely, whether by happenstance or design, McClelland, as commander of the expedition, delivered the critical requirement in a secure line of communication to Grant when he captured Arkansas Post in January 1863.⁶⁸ This energized the Union center of gravity throughout the bayou expeditions. Unfortunately, although the Union enjoyed freedom of action, it had an expiration date if not exploited. The Union attained freedom of action during the first five months of the Vicksburg Campaign through basing and the options they generated. But what happens when those bases are no longer a suitable means? The next chapter explores this very question while presenting the third component of operational sustainment.

Chapter 6: Culmination and Prolonging Endurance

There are strategic attacks that have led directly to peace, but these are the minority. Most of them only lead up to the point where their remaining strength is just enough to maintain a defense and wait for peace. Beyond that point the scale turns and the reaction follows with a force that is usually much stronger than that of the original attack. This is what we mean by the culminating point of the attack.

—Carl von Clausewitz, *On War*

The preceding chapters began with Grant's disastrous inland campaign in December 1862 and ended with Union forces making landfall at Bruinsburg, Mississippi on April 30, 1863. Grant finally felt a slight elation, but this was short-lived. He realized the Union must "capture

⁶⁸ Ballard, *Vicksburg: The Campaign That Opened the Mississippi*, 147–155; Grant, *Memoirs and Selected Letters*, 196–197; *OR*, 17 (1): 546, 883. Triangulation of these multiple documents leaves an unclear picture of whose idea to whom the Arkansas Post expedition belonged. Correspondence between Porter and Sherman indicate the idea's genesis belonged to Sherman. Grant's *Memoirs* corroborate this stance. However, Grant utilized second-hand information himself provided by Sherman and Porter. Meanwhile, McClelland claims, in his reporting to Grant, that he "determined, with the co-operation of Admiral Porter" that the reduction of Arkansas Post would provide the "means of freeing the navigation of the Mississippi River." Ballard provides the most objective assessment focusing on the benefits and the deliberate planning effort comprising the Arkansas Post expedition while not attributing the idea to any party in particular. The importance of this expedition on the over-arching Vicksburg Campaign is undeniable. Unfortunately, the accreditation for embarking on the expedition remains a debatable mystery.

Grand Gulf to use as a base” as he “was now in the enemy’s country, with...Vicksburg between me and my base of supplies.”⁶⁹ Basing and tempo fueled operational sustainment which in turn enabled both operational reach and freedom of action leading to success to this point in time. Conversely, failure met previous operations when adhering to only a singular component of operational sustainment, such as the adequate basing but a deficient freedom of action, as witnessed at Holly Springs in December 1862. Grant’s unrestricted basing access was closing as he found himself in enemy territory and the tether to his existing bases was becoming more of a risk rather than an enabler. How could he possibly achieve success while being reduced back to a singular variable of operational sustainment?

Grant’s basing shortcomings, or belief thereof, provided a catalyst to develop other ways to seize Vicksburg without the benefit of a known or secure line of communication with his base of supply at the Memphis depot. This uncertainty reintroduced the risk of culmination, for which Grant had shown little concern since moving his forces west of the Mississippi River four months prior. ADRP 4-0, *Sustainment* presents forward operating bases as a counter-balance to culmination as the basing provides extended operational reach which in turn enables an avoidance of culmination.⁷⁰ Unfortunately at this point, Grant believed his basing strategy was no longer viable as a means to sustain his army and prevent culmination. Grant, realizing in this moment, required a creative pivot focused on the third purpose of sustainment, prolonging endurance, if he were to have any success in reaching and seizing Vicksburg.⁷¹

Grant turned to the seemingly risky approach discussed earlier in chapter 2 as his basing strategy was culminating and he could no longer extend operational reach or gain freedom of action through basing alone. The strategy consisted of two operational-level sustainment actions

⁶⁹ Grant, *Memoirs and Selected Letters*, 215.

⁷⁰ US Army, ADRP 3-0 (2017), 3–5 and 3-10.

⁷¹ US Army, ADRP 4-0 (2012), 3–16. Endurance stems from the ability to create, protect, and sustain a force, regardless of the distance from its base and the austerity of the environment.

designed to avoid culmination while maintaining the freedom of action enjoyed by the Union forces since January 1863. His operational experiences in the Mexican-American War, as a regimental quartermaster, as well as his recent experience in December 1862, emboldened his willingness to assume risk in sustainment configuration in order to prolong endurance. The following passages analyze the impact of the two aforementioned actions, the first being an intent to detach from his base of supply enabled by an operational pause conducted from May 3-9, 1863 serving as the secondary and supporting action. The combination of these two efforts provided the final impetus ultimately leading to the Confederate capitulation at Vicksburg on July 4, 1863.

The first action is one of much debate as previously discussed in Chapter 4 that maintained a focus on the term basing. The focus now pivots to the verb usage of cut loose and its impact on Grant's ability to prolong endurance and stave off culmination. Grant, according to separate reports to Halleck on May 3 and 6, wanted to "immediately follow the enemy" but "ferrying and transportation of rations to Grand Gulf is detaining us on the Big Black River."⁷² Grant could not pursue the enemy as promptly as he wished as the lessons from Holly Springs and his overextended lines of communication were certainly at the forefront of his thought process. His opportunity to exploit the surprise gained by the landing at Bruinsburg was waning by the moment.

Looking for answers, he turned to an approach he witnessed nearly sixteen years prior when Winfield Scott severed his line of communication during the Mexican-American War in an effort to maintain maximum combat power forward while reducing protection requirements for a lengthy line of communication from the Gulf of Mexico.⁷³ Scott's decision to detach from his own line of communication had a completely different result than the enemy-induced severing of Grant's line of communication at Holly Springs. Scott and his Army of Occupation marched

⁷² *OR*, 24 (1): 33–35.

⁷³ Johnson, *A Gallant Little Army*, 139.

overland nearly fifty miles, capturing Mexico City without the relative assurance of a viable line of communication, and his base of supply at Vera Cruz being over 120 miles from his army. Surely, if Scott could accomplish this feat in Mexico, Grant must have been confident in his own army's application of this sustainment approach given a distance from Grand Gulf to Vicksburg by way of Jackson was only seventy-five miles or five days march. The Holly Springs fiasco taught Grant lessons which solidified his confidence in this new approach as he later recalled in his *Memoirs*:

I was amazed at the quantity of supplies that the country afforded. It showed that we could have subsisted off the country for two months instead of two weeks without going beyond the limits designated. This taught me a lesson which was taken advantage of later in the campaign when our army lived twenty days with the issue of only five days' rations by the commissary. Our loss of supplies was great at Holly Springs, but it was more than compensated for by those taken from the country and by the lesson taught.⁷⁴

Grant's experiences and willingness to inject audacity into not only his maneuver operations, as demonstrated at Shiloh and Fort Henry, but also his sustainment operations, catapulted the Union to success throughout the remainder of the Vicksburg Campaign. However, the attempt to exploit the successful landing in Mississippi by cutting loose from his base of supply would not have been successful if not for a secondary and supplemental action designed to prolong endurance and ward off culmination.

Although Grant was audacious, he was not reckless. He demonstrated throughout the Vicksburg Campaign, as well as his prior military experiences, that he was proficient in the art of sustainment. However, he was continually learning in the science of sustainment. While Grant the artist yearned to break-free and exploit the initiative, Grant the calculated scientist showed restraint as the cut loose approach was a high-risk endeavor. Therefore, Grant conducted a

⁷⁴ Grant, *Memoirs and Selected Letters*, 193.

deliberate operational pause from May 3-9, 1863 prior to implementing this new method and to bring up wagons and forage for carriages.⁷⁵

Grant chose a line of operation that would take him northeast to Jackson to interdict the Confederates' ability to reinforce Vicksburg via the Southern Railroad of Mississippi prior to doubling back to lay siege to Vicksburg itself. As mentioned above, the seventy-five-mile route would require five days of supply given the standard march rate of fifteen miles per day for an army on the move. However, this planning consideration did not account for major enemy contact which could negatively impact movement rates in turn threatening the Army of the Tennessee with culmination prior to their ultimate objective of Vicksburg. Grant's forces accumulated an additional five days of supplies during the operational pause.⁷⁶ A total of eight days of supplies, the three standard combined with the built up five additional, accompanied Grant's army as they resumed operations into the Mississippi interior. The ability to amass this supply train required an immense effort often overlooked or annotated as a footnote. Grant, concerned with ammunition shortfalls, accomplished this feat by directing Sherman to "collect a train of 120 wagons" bringing them to Grand Gulf and required "all the vehicles and draft animals . . . in the vicinity should be collected and loaded to their capacity with ammunition" upon landing at Bruinsburg.⁷⁷ These actions resulted in a total of 540 wagons and 3,240 draft animals with a total capability to carry eight days of supply.⁷⁸ This amount matched the necessary endurance requirements by both uncontested movement and anticipated delayed rates of march resulting from enemy activity. Additionally, Grant was fully prepared to augment his sustainment through foraging, although the

⁷⁵ Department of Defense, *DOD Dictionary of Military and Associated Terms*, 2017, 174, accessed February 3, 2018, www.jcs.mil/Portals/36/Documents/Doctrine/pubs/dictionary.pdf?ver=2017-12-23-160155-320. Operational pause — a temporary halt in operations. (JP 5-0)

⁷⁶ Buffington, "Logistics during Grant's Vicksburg Campaign," 32–40.

⁷⁷ Hurley, "Union Logistics in the Vicksburg Campaign," 81; Grant, *Memoirs and Selected Letters*, 219; *OR*, 24 (3): 268.

⁷⁸ Hurley, "Union Logistics in the Vicksburg Campaign," 92–93.

countryside was not as fortuitous in the pre-harvest spring as it had been five months prior in the post-harvest winter.⁷⁹

Whether precision in planning, luck, or a combination of the two, Grant sent Sherman to secure Haynes' Bluff, the prize they had been seeking since December of the previous year, on May 18, 1863...exactly eight days later. When this action was complete, Grant was able to breathe a sigh of relief as his most trusted general, Sherman, turned to him:

saying that up to this minute he had felt no positive assurance of success. This, however, he said was the end of one of the greatest campaigns in history . . . Vicksburg was not yet captured, and there was no telling what might happen before it was taken; but whether captured or not, this was a complete and successful campaign.⁸⁰

Grant's venture into the Mississippi interior nearly met culmination because of inadequate basing and the inability to secure lengthy supply lines. He overcame these obstacles by shifting his operational sustainment focus to prolonging endurance through adaptive sustainment practices, within acceptable tolerance, instead of strict reliance on the doctrinal depot and basing system of the time period.

Grant's ability to establish the sustainment requirements was the key difference between the absences of the supply line after the Holly Springs raid versus the situation he faced during the May 1863 advance to Vicksburg. Grant was proactive and anticipated an eight-day timetable during the interior-Mississippi phase, from the end of the operational pause to the seizure of Haynes' Bluff, whereas he was uncertain of sustainment requirements and reactive after the Holly Springs raid. However, Grant required supporting efforts to ensure the endurance that he was attempting to prolong, in the temporal sense, remained in the eight day window in which he would be without assured supply lines.

⁷⁹ *OR*, 24 (1): 33; Grabau, *Ninety-Eight Days*, 209–210.

⁸⁰ Gabel, *The Vicksburg Campaign: November 1862-July 1863*, 52–53.

Grant used *getrennte heersteile* to keep Pemberton in a state of uncertainty and tethered to defending Vicksburg.⁸¹ Sherman remained in Louisiana until May 3 when Grant called him forward upon establishing a temporary base at Grand Gulf, Porter maintained a fleet of iron clads posing an amphibious threat to Vicksburg, and Grant's ambiguous movements into the Mississippi interior all added to Pemberton's state of confusion.⁸² The information ambiguity presented Pemberton with multiple dilemmas. Grant's plan worked to perfection and enabled his force to reach Vicksburg within the eight days as anticipated.

Grant gained the initiative and relative advantage during the bayou expeditions through a combination of basing and tempo extending his operational reach and permitting unfettered freedom of action. He entered May 1863 looking to exploit the advantages gained over the previous four months but the strategy that had brought him to this point would no longer be feasible going forward. He would have to adapt his approach if he were to advance on Vicksburg. He developed an audacious sustainment plan, enabled by multiple deception operations, deliberately focusing on the third purpose of sustainment by prolonging endurance and preventing culmination through two enabling operational sustainment actions including a cut loose strategy and a calculated operational pause. This strategy ultimately proved successful resulting in the occupation of Haynes' Bluff on May 18, 1863. An audacious approach born of necessity, supported by Grant's experiences, and infused with the right amount of calculated risk averted culmination and exploited the grandest of opportunities.

⁸¹ Moltke, *Moltke on the Art of War*, 11. *Getrennte Heersteile*: separated parts of the army.

⁸² *OR*, 24 (3): 268; Grabau, *Ninety-Eight Days*, 55, 514-516, 520-521.

Section 3: Closing Arguments

This final section presents the research findings and summarizes the applicability to the contemporary military practitioner in order to advance the institutional body of knowledge and understanding of operational sustainment.

Chapter 7: Findings and Applicability

Grant's Vicksburg Campaign was a testament to Union perseverance. The original advance projected a quick two-pronged advance to Vicksburg, giving the Confederates multiple dilemmas against which to react. However, this projection did not unfold as anticipated for Grant and his Army of the Tennessee. The Confederates were able to exploit gaps in the Union's inland forces, led by Grant, by destroying the supply depot at Holly Springs and subsequently thwarted Sherman and his river-borne operation at Chickasaw Bayou by shifting their defensive main effort to the bluff region north of Vicksburg. This prevented the overall Union effort of achieving a lodgment and establishing a base of supply on the high, dry ground on the eastern bank of the Mississippi River. The presumptive quick operation on Vicksburg never materialized and the campaign lasted another six months with the final surrender of the Confederate forces in Vicksburg on July 4, 1863. At first glance, the successes and failures appear to correlate with Union's maneuver execution. However, when viewed through the lens of operational sustainment, this analysis identifies a unique perspective on Grant's Vicksburg Campaign and presents contemporary practitioners with a new tool in which to view future operations.

This research established a definition of operational sustainment as *the interplay of basing, tempo, and culmination governed by balancing opportunity and risk that extends operational reach, enables freedom of action, and prolongs endurance*. Modern sustainers tend to view the aforementioned three purposes of sustainment as a trinity requiring fulfillment in its entirety in order to commence operations; a lack of preparedness in any singular purpose risks mission failure or sub-optimal accomplishment at best. The Union's approach to Vicksburg

demonstrates a methodology contrary to this thinking. Grant seemingly focused his attention on two of the three purposes at a time and achieved the purposes through applying their corresponding elements of operational art. This focus on two purposes, at particular times, given particular circumstances, simultaneously enabled victory and minimized risk while providing opportunities to achieve the remaining purpose of sustainment. Likewise, a failure to fulfill a minimum of two purposes seemingly resulted in the Union's inability to achieve success.

In December of 1862, Grant prioritized his efforts on extending his operational reach through basing at Holly Springs. However, he neither achieved freedom of action, as environmental conditions tethered him to the railroad, nor was he prepared to accept foraging as a primary means of sustainment in order to prolong endurance. The Union's disregard for the sustainment preparation of the operational environment allowed the Confederates to dictate the tempo and shorten Union endurance. This ultimately led to premature culmination during the advance into the Mississippi interior as Van Dorn cut Grant's line of communication to his base of supply at Holly Springs and the Union failed to explore the other two purposes of sustainment in an effort to maintain momentum and move the operation onto Vicksburg. Grant would not make this mistake again and the Union would be better off because of it.

Grant's next series of attempts on Vicksburg, known as the Bayou Expeditions, lasted from January to late-April 1863. The Union established a series of bases, such as Milliken's Bend and Young's Point, during Sherman's attempt on Chickasaw Bayou in December 1862. However, the basing alone did not enable success for the Union. McClelland and Sherman concocted a plan, in conjunction with Porter's fleet, to seize Arkansas Post on the Arkansas River. The successful seizure of Arkansas Post in January 1863 provided Grant with the ability to dictate tempo as his primary line of communication, the Mississippi River, was relatively free from Confederate threat in the Trans-Mississippi Theater. The Union had fulfilled two purposes of operational sustainment, extending operational reach and enabling freedom of action, unlike the singular fulfillment during the Holly Springs disaster. The achievement of at least two purposes

eventually led to the Union's successful lodgment establishment at Bruinsburg, Mississippi on April 29, 1863. This landing demonstrates a successful application of operational sustainment but Grant was only beginning to gain momentum through operational sustainment. Grant now had a foothold on Mississippi soil and he would again use operational sustainment to secure victory in his Vicksburg Campaign.

In early May 1863, the operational approach placing the Union forces in Mississippi had begun to run its course and faced a risk of culmination. The combination of basing and tempo was no longer extending operational reach nor enabling freedom of action. Grant had to reassess his approach if he wanted to maintain and ride momentum to success in his Vicksburg Campaign. He again turned to operational sustainment to maintain the initiative as he advanced into the Mississippi interior. However, this time Grant would not focus his effort on the element of basing to enable freedom of action, but rather the complete opposite. Grant shifted his focus to the third purpose of operational sustainment which is to prolong endurance through an avoidance of culmination.

The Union prolonged its endurance through an operational pause conducted from May 3-9, 1863. During this time period, Grant accumulated eight days of supply for his final advance to the Vicksburg perimeter. The deliberate and calculated effort to prolong endurance enabled the needed secondary purpose of sustainment . . . enabling freedom of action. The eight days of supply were precisely enough to place Union forces on the key piece of terrain, Haynes' Bluff, on May 18, 1863. This research conveyed the importance of Haynes' Bluff in Chapter 4, but the aforementioned operational pause, seeking to prolong endurance, subsequently enabled the required freedom of action leading to the acquisition of Haynes' Bluff itself. The precision in the numerical science of sustainment empowered a crafty application in the art of sustainment. Grant decided to cut loose from his base of supply after the completion of the operational pause. The Union moved through the Mississippi interior without a cumbersome supply train which allowed Grant to dictate the operational tempo garnering freedom of action. Once the Union occupied

Haynes' Bluff eight days later, the fall of Vicksburg on July 4, 1863, was just a matter of time as operational sustainment has cast the conditions for the siege.

Grant exploited any opportunity in which he was able throughout the duration of the Vicksburg Campaign. This research has demonstrated operational sustainment as a key component in setting the conditions presenting the exploited opportunities. Grant was audacious in both his maneuver and sustainment, as mentioned earlier in Chapter 6, but he was also cognizant that his audacious search for opportunities presented an increased degree of risk to his operations as well. Therefore, Grant took particular measures to mitigate the increased risk in which the use of only two purposes of operational sustainment introduced. As the campaign progressed through the different phases, the Union seemingly kept in place the elements enabling success in the rear area and previous phases as a purposeful reserve should Union progress be thwarted and force Grant to take a step backwards and reassess.⁸³

After the Holly Springs debacle, Grant kept the working basing components, Corinth and Memphis, available throughout his subsequent Bayou Expeditions. Likewise, although extending operational reach through basing was not a primary Union focus after the river-crossing at Bruinsburg, Grant was still heavily concerned about his basing. As mentioned earlier, Grant's cut loose strategy required adherence to an eight-day movement timeline. Should circumstance elongate this timeline, the Union would have to either bring supplies forward or return to existing bases to refit and reassess their approach. Grant ensured his operational fail-safe possessed both the capability and capacity to remain viable. The Navy and two Army divisions maintained lines of communication security in Louisiana, all available Union wagons were returned to Grand Gulf, Hard Times possessed 500 wagon teams, and Grant directed the establishment of "a supply base

⁸³ The different phases consisting of the initial Holly Springs attempt, the Bayou Expeditions, and the second advance into Mississippi after the river crossing at Bruinsburg, Mississippi.

on the west bank of the Mississippi below Warrenton” to shorten the supply line.⁸⁴ Grant consciously buttressed his risky maneuver audacity with the mitigating reassurance of proven operational sustainment components in the rear area.

The Vicksburg Campaign is a compelling example of Union perseverance as well as maneuver prowess. However, history has lost countless factors making victory possible in the fields of battle. Operational sustainment is often one of those lost factors buried in success. The fact that the sustainment community within the US Army has failed to define operational sustainment further complicates the identification of operational sustainment’s contribution to enabling success. This research sought to describe and understand a potentially overlooked enabler present throughout the Vicksburg Campaign. It would be naïve to think that operational sustainment alone delivered victory to Grant or has the potential to single-handedly secure victory in the future. However, it would be a tragedy to leave operational sustainment obscured and potentially omit a key factor from future analyses of military operations. Operational sustainment is not a panacea for victory or failure, but its revelation perhaps moves the US Army and future researchers one step closer to a comprehensive understanding of war.

⁸⁴ Hurley, “Union Logistics in the Vicksburg Campaign,” 86–89; Gabel, *The Vicksburg Campaign: November 1862–July 1863*, 40–41; Ballard, *Vicksburg: The Campaign That Opened the Mississippi*, 248.

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