

Raphael Semmes and
Confederate Commerce Raiding in the Civil War:
A Case Study on Operational Art

A Monograph

by

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Abstract

Raphael Semmes and Confederate Commerce Raiding in the Civil War: A Case Study on Operational Art, by LCDR Jeffrey W. Prickitt, 55 pages.

During the American Civil War, Confederate naval captain Raphael Semmes executed one of the most effective naval campaigns in modern history. As captain of the CSS *Sumter* and CSS *Alabama*, Semmes raided Union commerce not only in the Caribbean and North Atlantic, but also in the waters off Europe, Brazil, South Africa, and Southeast Asia.

An analysis of Semmes using the framework of US joint military doctrine provides valuable insight into the contemporary understanding of operational art. First, Semmes employed limited resources in effective ways. Second, his operational approach included maneuver, tempo, anticipation, center of gravity, branches, risk, operational reach, and culmination. Nevertheless, Semmes ultimately failed to accomplish his strategic objectives. Faulty assumptions, resource constraints, and limited sea control derailed his effort to bring neutral powers into the conflict or convince the North to abandon the war.

The lessons from this study are wide ranging. For the US Navy, military planners should prioritize flexibility and incorporate multiple tools of sea control, including decisive battle, blockade, convoys, raids, and patrols. In addition, expanded sea control is possible using a future hybrid fleet of both manned and unmanned surface, subsurface, and air platforms. Furthermore, Semmes's campaign emphasizes the potential exponential impact of asymmetric warfare. Conventional naval superiority is not enough.

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Preface

As the CSS *Alabama* passed astern the packet ship, Captain Raphael Semmes observed the men and women crowded on the deck. The passengers eyed his ship intently, some through opera glasses. Semmes signaled his crew to lower the Stars and Stripes and raise the Confederate flag. At the same time, one of the *Alabama*'s guns fired a blank cartridge. Screams rang out.

The merchant vessel increased speed. The *Alabama* pursued. Three hundred yards in trail and unable to keep pace, Semmes ordered his bow gunner to aim at the foremast of the fleeing ship. The round soon impacted, sending splinters of timber flying through the air. The merchant captain reconsidered his options. His vessel soon floated immobile in the water.

Several days before, on the second of December 1862, the *Alabama* passed the small island of Tortuga, off the north coast of Haiti. The following day, the Confederate raider stopped several commercial ships. Unfortunately, all the vessels were neutral. With no enemy warships in sight, Semmes continued to the east of Cuba and waited, hoping to intercept a steamship homebound from California and laden with gold.

Consulting New York newspapers, Semmes did not expect a ship for another three days. Such a prize, however, was worth the wait. Furthermore, the clear weather and full moon provided excellent visibility. In the meantime, another prize appeared. Without a chase, the *Alabama* captured the *Union*, a schooner out of Baltimore. However, the vessel carried neutral cargo, so Semmes released it on ransom.

On the sixth of December, the clear weather held and the lookouts gazed ninety miles distant. Nonetheless, they only saw blue skies and the brilliant blue-green water of the Caribbean Sea. During the morning of the next day, the *Alabama* crew readied the decks for muster and donned their white frocks and trousers. Below deck, Semmes enjoyed a cup of coffee, courtesy of his servant, Bartelli, when he heard the cry, "S-a-i-l h-o!"

Semmes's excitement soon faded when he learned the ship was headed in the wrong direction. Still, the *Alabama* pursued and, using its steam-driven propeller, closed to within a few miles. After showing the United States colors, the Confederate raider soon passed astern the merchant vessel.

When his boarding officer returned, Semmes learned that many of the women were in a state of panic. To calm their fears, he summoned his best-looking lieutenant and ordered him to don his nicest uniform, with sword, and take the captain's gig to the *Ariel*. After Semmes instructed him to impress the women, the lieutenant responded, "Oh! I'll be sure to do that, sir."¹ Once onboard, the ladies warmed up to the dashing young officer. After the crying stopped, one even requested a button as a souvenir. Soon others began plucking them off his uniform.

Semmes learned the *Ariel* was owned by a wealthy New York merchantman, who was no friend of the South. Semmes wanted to burn the ship, but did not have room to take on the passengers. In addition to five hundred women and children, the *Ariel* carried one hundred and forty military men, including a battalion of marines and some naval officers who were enroute to the Pacific. After a few days, Semmes decided to ransom the ship. After he paroled the military men and confiscated their weapons, the *Ariel* went free.²

Purpose and Scope

Linking tactical victories to strategic objectives is critical for military leaders and often plays a central role in determining the outcome of a war. In 1812, Emperor Napoleon Bonaparte invaded Russia with over five hundred thousand soldiers. Following several tactical victories, he occupied Moscow in September. Tsar Alexander I, however, refused to sue for peace. With the

¹ Raphael Semmes, *Memoirs of Service Afloat During the War Between the States* (Baton Rouge: Louisiana State University Press, 1868), 533.

² *Ibid.*, 528-35.

onset of winter deep in enemy territory, Napoleon's daring campaign faced disaster. His subsequent retreat decimated the Grand Armee. Only twenty-seven thousand men returned.

Half a century later, during the American Civil War, General Ulysses S. Grant executed an aggressive campaign of maneuver to capture Vicksburg and secure the Mississippi River for the Union. Over a period of six weeks, Grant moved his army one hundred and eighty miles, won five battles, and achieved one of the North's key strategic objectives.³ A century later, during the Vietnam War's Tet Offensive of 1968, the North Vietnamese launched simultaneous attacks throughout South Vietnam. Despite overwhelming losses, the North Vietnamese eventually achieved a strategic victory. The surprise offensive led to a perception of strength among the American public, who questioned the progress of the war and lost confidence in President Lyndon B. Johnson. These examples illustrate the necessity of linking the tactical to the strategic, which is the essence of operational art.

During the American Civil War, the commerce raiding conducted by Confederate naval captain Raphael Semmes provides a valuable case study on operational art. Due to the South's inferior navy, Semmes had to overcome limited resources to enable and sustain operations. In addition, due to the delays, uncertainty, and risks involved in communicating with his superiors, Semmes acted as the primary decision-maker for when and where to intercept Union shipping. Moreover, Semmes achieved remarkable results at the tactical level. He captured more prizes than any other Confederate raider and even sunk a Federal warship. His actions also increased maritime insurance rates and caused Union merchant owners to sell their ships to foreign entities. Some estimates total Semmes's damages at six million dollars, which equates to ninety-eight million dollars today.⁴

³ Christopher R. Gabel, *The Vicksburg Campaign: November 1862-July 1863* (Washington, DC: Center of Military History, 2013), 42-52.

⁴ Federal Reserve Bank of Minneapolis, "Consumer Price Index, 1800-," accessed 25 January 2020, <https://www.minneapolisfed.org/about-us/monetary-policy/inflation-calculator/consumer-price-index-1800->.

The accomplishments of Semmes transformed his second ship, the *Alabama*, into a legend. Even during the war, Semmes acquired worldwide renown. In South Africa, curious sightseers flocked to his ship. In France, crowds of spectators wagered on the *Alabama*'s epic sea battle off Cherbourg. Thirty years later, German Emperor Wilhelm II called Semmes "the greatest admiral of the nineteenth century."⁵ Arguably, Semmes was one of the most talented leaders in American naval history. Today, analyzing Semmes's approach can assist military leaders as they face contemporary operational environments. Specifically, Semmes's successes and shortcomings can inform operational planners in developing their own campaigns. Moreover, Semmes's approach to sea control informs the future force structure of the US Navy.

The analysis provides several key takeaways. One conclusion, and the main thesis of this study, is that while Semmes successfully integrated ways and means to achieve operational success, he failed to accomplish the South's strategic ends. His assumptions regarding the strategic environment proved misguided. Specifically, the impact of commerce raiding did not achieve the anticipated effects, as no neutral power entered the war. In addition, the North did not sue for peace and the blockade on the South remained intact. Furthermore, as Union merchants sold their vessels, the financial impact of further commerce raiding diminished. Running out of time, and options, Semmes departed Southeast Asia for Europe in December 1863. While awaiting repairs in France, Semmes challenged the USS *Kearsarge* off Cherbourg. On 19 June 1864, after a two hour gun battle, the *Alabama* settled to the bottom of the English Channel.

Despite strategic failure, Semmes effectively demonstrated numerous elements of operational art. Encumbered by limited resources, he used his skill, knowledge, creativity, and vision to organize and employ the South's first raider, the CSS *Sumter*. While in command of his next ship, the *Alabama*, Semmes became the Confederacy's most effective ship captain. To man

⁵ John M. Taylor, *Confederate Raider: Raphael Semmes of the Alabama* (Washington, DC: Brassey's, 1994), 208.

both vessels, Semmes recruited and motivated an enlisted crew consisting primarily of foreigners. Targeting high traffic sea routes, he increased captures, but frequently changed locations to avoid pursuing Federal warships. In these ways, Semmes effectively employed limited means to enable and sustain operations.

Semmes also achieved effects over a wide geographic area. Ultimately traveling seventy-five thousand miles, his operating area ranged from the east coast of the United States to Southeast Asia. To reduce the need for refueling stops, which would have revealed his location, Semmes operated the *Alabama* primarily under sail power. Semmes later expanded his efforts by launching another raider. In June 1863, he used part of his crew to man a captured vessel, which he converted into the CSS *Tuscaloosa*. To avoid alienating foreign powers, Semmes also avoided the destruction of neutral commerce. He understood that the strategic decision-makers in Washington, London, and Paris were the primary focus.⁶

Semmes's operational approach also informs the contemporary understanding of sea control. According to the American naval theorist Alfred Thayer Mahan, the purpose of sea power is "command of the sea." Mahan explored this subject in his 1890 work, *The Influence of Sea Power Upon History: 1660-1783*. Mahan argued that decisive battle, or blockade, leads to "overbearing power on the sea," which can effectively close an adversary's sea-based commerce. For the North, its blockade commanded the waters along the Southern coast and disrupted the Southern economy. This approach, however, was not entirely successful, as blockade-runners exploited gaps in coverage. At the same time, the oceans of the world remained largely unprotected. While Semmes exploited the unprotected sea lanes, the limited sea control offered by commerce raiding ultimately failed to impact the war's outcome.⁷

⁶ John M. Taylor, *Semmes: Rebel Raider* (Washington, DC: Brassey's, 2004), vii.

⁷ Alfred Thayer Mahan, *The Influence of Sea Power Upon History: 1660-1783* (Boston: Little, Brown and Company, 1890), 137-38.

British naval theorist Sir Julian Corbett, who published *Some Principles of Maritime Strategy* in 1911, also analyzed sea control. Corbett concluded that the purpose of sea power is to support the land force, using measures such as blockades, containment, or patrols. Unlike Mahan, Corbett did not focus primarily on decisive battle. This concept was critical for the South, which, due to its inferior naval means, could not adopt a direct offensive approach. Instead, smaller raids on enemy trade routes would have to suffice as a way to indirectly support the Confederate armies. A strategic defensive presented the South's Navy with a more feasible option. As a result, temporary and limited sea control, remained the Confederate approach throughout the conflict. In these ways, Semmes's operational approach provides insight on the sea control theories of Mahan and Corbett and their relevance to the contemporary strategic environment.⁸

Operational Art

US military doctrine defines and informs practitioners' understanding of operational art. Joint Publication 3-0, *Joint Operations*, describes operational art as "the cognitive approach by commanders and staffs--supported by their skill, knowledge, experience, creativity, and judgment--to develop strategies, campaigns, and operations to organize and employ military forces by integrating ends, ways, and means."⁹ This definition shows the broad nature of operational art. Ends, ways, and means equate to objectives, methods, and resources. The commander and their staffs play a central role. Since operational art involves the broad employment of "time and space," military leaders must "see" beyond the tactical realm. Commanders and their planners must also direct the effective and efficient use of resources, which often entails the planning and management of complex logistics.¹⁰ Campaigns can also

⁸ Julian S. Corbett, *Some Principles of Maritime Strategy* (Annapolis, MD: US Naval Institute Press, 1988), 155-280.

⁹ US Department of Defense, Joint Staff, Joint Publication (JP) 3-0, *Joint Operations* (Washington, DC: Government Printing Office, 2017), II-3.

¹⁰ US Joint Staff, JP 3-0 (2017), II-4; US Department of the Navy, Naval Doctrine Publication (NDP) 1, *Naval Warfare* (Washington, DC: Government Printing Office, 2010), 17.

involve multinational partners.¹¹ Throughout the process, commanders constantly assess the link between strategic aims and military operations. This might be the most important element. Changes in the operational environment or higher-level policy may necessitate adjustments via branches or sequels.

US military doctrine identifies several terms that help clarify operational art. The “operational environment” constitutes the “conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander.”¹² “Operational area” encompasses the geographic region where military operations occur.¹³ “Operational access” is the ability to project military force with sufficient freedom of action to accomplish the mission.¹⁴ The “operational level of warfare” is the level between the strategic and the tactical, where campaigns and major operations are “planned, conducted, and sustained.”¹⁵ The term “operational” can lead to the conclusion that operational art is solely related to “operations.” This is not necessarily the case; an “operation” is a broad term used in a variety of contexts. For example, “operations” can be any military action designed to achieve a “strategic, operational, tactical, service, training, or administrative military mission.”¹⁶ These related terms inform our understanding of operational art.

US doctrine also identifies numerous elements that play a central role in operational art. “Maneuver” involves positioning one’s forces to gain a relative advantage over an adversary. “Tempo” is the rate of change of military operations in relation to one’s opponent.¹⁷ It entails not

¹¹ US Department of Defense, Joint Staff, Joint Publication (JP) 5-0, *Joint Planning* (Washington, DC: Government Printing Office, 2017), V-19.

¹² US Joint Staff, JP 3-0 (2017), GL-13.

¹³ *Ibid.*

¹⁴ *Ibid.*

¹⁵ *Ibid.*, GL-14.

¹⁶ *Ibid.*, GL-13.

¹⁷ US Joint Staff, JP 5-0 (2017), IV-36.

just speed, but also rhythm. “Anticipation” involves remaining alert for opportunities to exploit a situation.¹⁸ A “branch plan” constitutes an alternative to an initial, basic course of action. It provides flexibility for a commander, possibly due to enemy actions.¹⁹ A “center of gravity” is a power source that “provides moral or physical strength, freedom of action, or will to act.”²⁰ “Risk” is a calculation required of a commander, when placing something of value in a position where it could be lost in return for potential gain. “Operational reach” is the “distance and duration across which a force can successfully employ military capabilities.”²¹ “Culmination” is the point in time when an “operation can no longer maintain momentum.”²² These elements encompass some of the primary components of operational art.

While operational art has existed throughout military history, it has garnered increased attention by military theorists during the last two centuries. In the early 19th century, as military forces became larger and more dispersed, the time and space of simultaneous operations expanded. While Napoleon initially used decisive battles and massive armies to conquer much of Europe, his adversaries responded by increasing the size of their armies and modifying their operational approach. Consequently, Napoleon’s later campaigns proved less effective. During his 1812 invasion of Russia, the Tsar’s forces fought a war of attrition.²³ As a result, individual tactical actions proved insufficient in achieving a decisive strategic victory, foreshadowing a future where winning wars required multiple battles across broad geographic areas.

In the years to come, decisive battle proved even more elusive. For example, in “Vulcan’s Anvil: The American Civil War and the Foundations of Operational Art,” published in

¹⁸ US Joint Staff, JP 5-0 (2017), xxiii.

¹⁹ Ibid., IV-38.

²⁰ Ibid., IV-23.

²¹ US Joint Staff, JP 3-0 (2017), III-38.

²² US Joint Staff, JP 5-0 (2017), IV-36.

²³ Cathal J. Nolan, *The Allure of Battle: A History of How Wars Have Been Won and Lost* (New York: Oxford University Press, 2017), 189-219.

1992, James Schneider argued that both the North and the South focused on theaters of operations vice battlefields. New technology, including the railroad and telegraph, expanded the theater of war.²⁴ As a result, decisive battle no longer occurred at a single point.²⁵ Instead, “dispersed battle” magnified the importance of maneuver, which could restrict an adversary’s freedom of movement. Such “deep distributed” operations, involving extended movements and geographically large battles, required the skillful application of operational art.²⁶ Schneider compared this dimensional transformation to be like moving from painting to sculpting.²⁷

During the wars of German unification, operational art also played a key role. In the war against Austria, Prussia effectively used railroads and telegraph to unite three armies at Königgrätz on 3 July 1866. With over four hundred and fifty thousand men in an area less than eight square miles, it was the largest European battle of the 19th century.²⁸ Operational art, combined with the breech-loading needle gun, proved decisive. Prussia lost ten thousand men, while the Austrians lost forty-five thousand, of which twenty thousand were captured.²⁹

Four years later, in the Franco-Prussian War, French forces retreated to several fortified cities. While the Army of Chalons defended Sedan, another army remained in Metz.³⁰ While these armies soon capitulated, the Army of Paris held on for another three months.³¹ Prussia’s failure to duplicate the quick victory of 1866 demonstrated the challenges in the effective use of operational art.

²⁴ James J. Schneider, “Vulcan’s Anvil: The American Civil War and the Foundations of Operational Art” (School of Advanced Military Studies Theoretical Paper No. Four, 1992), 33-35, 55.

²⁵ Ibid., 22.

²⁶ Ibid., 30, 60.

²⁷ Ibid., 23.

²⁸ Graham J. Morris, “The Battle of Königgrätz,” *Battlefield Anomalies*, January 2003, accessed 30 January 2020, <https://battlefieldanomalies.com/the-battle-of-koniggratz-2/>.

²⁹ Ibid.

³⁰ Geoffrey Wawro, *The Franco-Prussian War: The German Conquest of France in 1870-1871* (New York: Cambridge University Press, 2003), 204-5.

³¹ Ibid., 280-98.

Following World War I, Aleksandr Svechin, a Soviet military theorist, also recognized the impact of war's expansion in time and space. The advent of aircraft and submarines added new warfare domains. In addition, while the Eastern Front witnessed a more traditional war of maneuver, the Western Front experienced a prolonged, relatively static front. What could be learned from this? In *Strategy*, published in 1927, Svechin realized the importance of a holistic approach in defining the operational environment. Military strategists needed to consider economic, social, geographic, administrative, and technical factors.³² Svechin also recognized the value of attrition war, as opposed to decisive victory.³³ Attrition entailed a series of engagements that gradually diminished an adversary's ability to wage war. Furthermore, Svechin emphasized the necessity of linking the strategic to the tactical, describing operational art as the realm of creativity involving "the totality of maneuvers and battles."³⁴ In other words, connected operations would fit inside the overall preparations for war and hasten the attainment of strategic ends. Other Soviet military leaders, such as Vladimir Triandafillov and Mikhail Tukhachevsky, adopted Svechin's concepts. Two years later, they authored the *Provisional Field Regulations 1929*, formally incorporating operational art into Soviet military doctrine.³⁵

The US Army did not officially embrace operational art until after the Vietnam War. Post-war analysis identified an apparent gap in the nexus between the tactical and strategic levels of war. Many soldiers wondered about the effectiveness of fighting for an unnamed hill only to give it up hours later and then return to their forward operating base. At the same time, military leadership observed the 1973 Arab-Israeli War and recognized the need to prepare for large scale

³² Aleksander A. Svechin, *Strategy*, ed. Kent D. Lee (Minneapolis, MN: East View, 1992), 69.

³³ Ronald W. Sprang, "The Evolution of Russian Operational Art," *Small Wars Journal*, accessed 30 January 2020, <https://smallwarsjournal.com/jrnl/art/evolution-russian-operational-art>.

³⁴ Svechin, *Strategy*, 68-69; Wilson C. Blythe Jr., "A History of Operational Art," *Military Review* (November-December 2018): 40, accessed 25 January 2020, <https://www.armyupress.army.mil/Journals/Military-Review/English-Edition-Archives/November-December-2018/Blythe-Operational-Art/>.

³⁵ Blythe, "A History of Operational Art," 41.

conflict against the Soviet Union.³⁶ Consequently, in 1976, the US Army published Field Manual 100-5, *Operations*.³⁷ This doctrine focused on repulsing a Soviet invasion in Europe via an active defense, which would entail a war of attrition over a wide breadth and depth. Ground forces would defend key geographic points while air power would execute close air support and deep strike missions. In 1982, Field Manual 100-5, *Operations*, modified the doctrine by emphasizing initiative and maneuver. Referred to as “AirLand Battle,” it introduced the terms “deep battle” and “deep attack.”³⁸ In this way, the operational level of war officially entered US Army doctrine and was incorporated across the services as part of the joint warfighting construct.³⁹

The contemporary US Navy applies operational art to warfare at sea. While naval battles can occur in a matter of hours, a maritime campaign can last for months or even years.⁴⁰ In *Operational Warfare at Sea*, Naval War College professor Milan Vego argued that the era of sail inaugurated the operational level of war in the maritime domain.⁴¹ Nevertheless, Vego insisted that operational war at sea did not emerge until the middle of the 19th century. Specifically, he cited the Crimean War of 1854 to 1856 as its starting point.⁴² In this conflict, an undersea telegraph allowed the British Admiralty to communicate with their fleet in Crimea within forty-eight hours. While tactical control remained with the theater commanders, the naval headquarters in London directed the wider campaign.⁴³ Similar to land warfare, larger fleets spread over time

³⁶ Brian Linn, *The Echo of Battle: The Army's Way of War* (Cambridge, MA: Harvard University Press, 2007), 201-3.

³⁷ Richard M. Swain, “Filling the Void: The Operational Art and the U.S. Army,” in *Operational Art: Developments in the Theory of War*, ed. B. J. B. McKerche and Michael Hennessey (Westport, CA: Praeger, 1996), 152.

³⁸ Linn, *The Echo of Battle*, 210.

³⁹ Swain, “Filling the Void,” 160.

⁴⁰ Milan Vego, *Operational Warfare at Sea: Theory and Practice* (New York: Routledge, 2009), 18.

⁴¹ *Ibid.*, xii.

⁴² *Ibid.*, 5.

⁴³ *Ibid.*

and space increased the complexities of planning, preparing, and conducting operations.⁴⁴ For these reasons, operational art is equally important to naval and maritime operations.

Historiography

There are an abundance of works on Semmes and Civil War commerce raiding. Historian Spencer Tucker has authored several studies, including *Raphael Semmes and the Alabama*, published in 1998. In this work, Tucker chronicles Semmes's accomplishments, while also dissecting other central figures involved in commerce raiding.⁴⁵ Tucker revisited Semmes in "CSS *Alabama* and Confederate Commerce Raiders during the U.S. Civil War," published by the US Naval War College in 2013. This work analyzed commerce raiding as a military strategy and assessed its overall impact on the Civil War.⁴⁶

Historian John M. Taylor also focused on Semmes. In "Defiance: Raphael Semmes of the *Alabama*," published in 1998, Taylor provides a biographical summary of Semmes before detailing his Civil War accomplishments. He particularly highlighted the challenges Semmes overcame to conduct effective operations for nearly two years.⁴⁷ In "Neutral Schmootral!," published in 2003, Taylor emphasized international maritime law and its effect on the war. For example, Union vessels could not legally capture Confederate ships in neutral ports or territorial waters. Once a vessel left a neutral port, an adversary had to wait twenty-four hours before pursuing. In addition, the law enabled a vessel to fly false colors. Overall, breaches of maritime

⁴⁴ Vego, *Operational Warfare at Sea*, xvii, 1, 18.

⁴⁵ Spencer Tucker, *Raphael Semmes and the Alabama* (Abilene, TX: McWhiney Foundation Press, 1998).

⁴⁶ Spencer C. Tucker, "CSS *Alabama* and Confederate Commerce Raiders during the U.S. Civil War," in *Commerce Raiding: Historical Case Studies, 1755-2009*, ed. Bruce A. Elleman and S. C. M. Paine (Newport, RI: U.S. Naval War College, 2013), 73.

⁴⁷ John M. Taylor, "Defiance: Raphael Semmes of the *Alabama*," in *Raiders and Blockaders: The American Civil War Afloat*, ed. William N. Still (Washington, DC: Brassey's, 1998), 23-34.

law were rare. In one famous instance, however, the USS *Wachusett* entered the Brazilian port of Bahia and seized the CSS *Florida* on 7 October 1864.⁴⁸

In *War on the Waters: The Union and Confederate Navies, 1861-1865*, published in 2012, James McPherson provided an overview of the primary naval achievements of each belligerent and explored some of the key technological developments. He argued that Civil War histories have largely neglected the contribution of naval operations to the war's outcome. McPherson pointed out that President Abraham Lincoln and General Ulysses S. Grant both credited the Union navy with significant achievements. For example, the Union's brown-water navy facilitated Grant's achievements in the west. In addition, by the end of 1863, the Union blockade was forcing the South to "gasp for breath."⁴⁹ While McPherson primarily focused on the Union, he also pointed out the impact of Confederate commerce raiding arguing that it "crippled the American merchant marine."⁵⁰

In the article "Raphael Semmes and the Battle off Cherbourg," published in 2017, Bud Feuer highlighted the *Alabama*'s defeat by the USS *Kearsarge* on 19 June 1864. To provide background, Feuer examined several other aspects of Semmes's service. For example, he discussed Semmes's resignation from the US Navy and the beginnings of his career as a raider. Feuer then provided details on the building and launching of the *Alabama* from Liverpool, England. He described how Semmes joined the vessel in the Azores and recruited British sailors to stay on and fight for the Confederacy. The piece also evaluated the *Alabama*'s sinking of the *Hatteras* off Galveston, Texas.⁵¹

⁴⁸ John M. Taylor, "Neutral Schmootral!" *Civil War Times* 42, no. 4 (October 2003): 36.

⁴⁹ James M. McPherson, *War on the Waters: The Union and Confederate Navies, 1861-1865* (Chapel Hill: The University of North Carolina Press, 2012), 10.

⁵⁰ *Ibid.*, 188.

⁵¹ Bud Feuer, "Raphael Semmes and the Battle Off Cherbourg," *Sea Classics* 50, no. 8 (August 2017): 52-64.

There are a number of other works related to this monograph. In *Confederate Navy Chief: Stephen R. Mallory*, published in 1954, biographer Joseph Durkin analyzed Stephen Mallory's tenure as Confederate Secretary of the Navy. Using diary entries and personal letters, Durkin concluded that Mallory became one of the most competent leaders in the Confederate cabinet. Prior to the war, Mallory had commanded a longboat during the Seminole War and served as chairman of the Senate Naval Affairs Committee.⁵² In February 1861, on the eve of the war, Mallory resigned his Florida senate seat and warned the North not to "mistake a nation for a faction."⁵³

In *Guns for Cotton: England Arms the Confederacy*, published in 1996, Thomas Boaz examined the lack of industrialization in the South and the resulting need for arms and ships from outside sources. As a result, the South established networks to use cotton, or "White Gold," to finance the war effort.⁵⁴ Boaz also provided an overview of Confederate ship-building efforts in England. Overall, the South aimed to acquire six steam-powered cruisers and Mallory dispatched James Bulloch to lead the effort. Boaz further studied the blockade and points out that, by the end of 1861, the Union Navy deployed one hundred and sixty ships for enforcement.⁵⁵ Even so, during the year, more than four hundred vessels passed through the blockade. For this reason, Boaz questioned Southern confidence regarding the likelihood of neutral powers entering the war.⁵⁶ Finally, Boaz highlighted the implications of Britain's Foreign Enlistment Act of 1818, which stated that a belligerent vessel could only refuel in England to enable it to reach its home

⁵² Joseph T. Durkin, *Confederate Navy Chief: Stephen Mallory* (Columbia: University of South Carolina Press, 1954), 133.

⁵³ *Ibid.*, 121-23.

⁵⁴ Thomas M. Boaz, *Guns for Cotton: England Arms the Confederacy* (Shippensburg, PA: Burd Street Press, 1996), 54-56.

⁵⁵ *Ibid.*, 9.

⁵⁶ *Ibid.*, 10.

port. In addition, the act stipulated that belligerent ships could not mount guns in Britain or commission British citizens to fight for them.⁵⁷

In *The Confederate Navy in Europe*, published in 1983, Warren Spencer covered the early phases of the war involving the building of cruisers and ironclads in England. Later in the conflict, the British government tightened the restrictions on ship building. Spencer also investigated Confederate activities in France and the difficulties their agents encountered regarding ship construction. He further discussed the evolution of Southern financial policies in Europe.⁵⁸ In late 1861, the South's cotton embargo failed to significantly impact English workers, as previous cotton shipments kept the market supplied. As the war continued, England increased cotton shipments coming from Brazil, India, and Egypt. In addition, due to the South's assumption that the war would be short, the Confederate government failed to establish clear monetary policies.⁵⁹

In *The London Confederates*, published in 2008, John Bennett added a unique perspective to the historical literature by looking at Federal spying operations in England as well as British business relations with the Confederacy. Bennett covered the biographical details of the main Confederates who operated in, or transited, London throughout the war. These figures included Semmes and his executive officer, John Kell. He also pointed out that communications depended on ship-borne mail, since the transatlantic telegraph was not laid until 1866.⁶⁰

This historiography represents only a portion of the works dedicated to Raphael Semmes and Civil War commerce raiding. Additional works include *The Civil War at Sea*, by Craig Symonds; *Shark of the Confederacy*, by Charles M. Robinson; *Raphael Semmes: The*

⁵⁷ Boaz, *Guns for Cotton*, 21.

⁵⁸ Warren F. Spencer, *The Confederate Navy in Europe* (Tuscaloosa: The University of Alabama Press, 1983), 5.

⁵⁹ *Ibid.*, 6-7.

⁶⁰ John D. Bennett, *The London Confederates: The Officials, Clergy, Businessmen and Journalists Who Backed the American South During the Civil War* (Jefferson, NC: McFarland and Company, 2008), 4.

Philosophical Mariner, by Warren F. Spencer; and *Wolf of the Deep*, by Stephen Fox. Despite the popularity of this subject, this monograph adds a new perspective. In contrast to other historical works, this study evaluates Semmes's operational approach through the lens of contemporary US joint military doctrine.

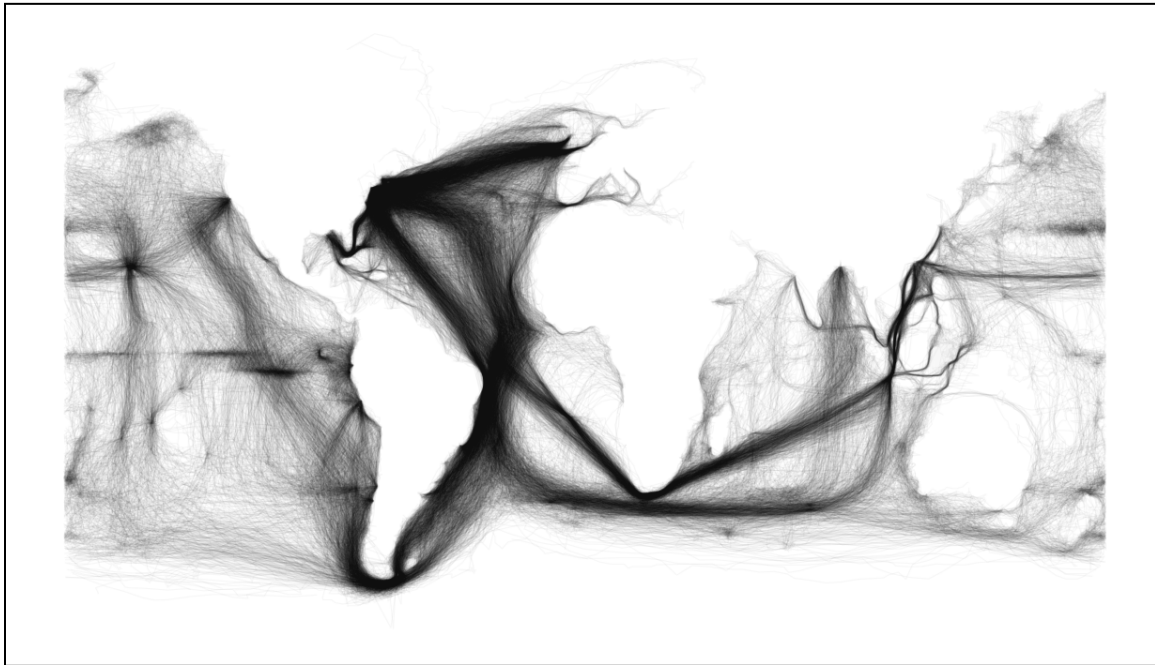


Figure 1. 19th Century Ship Routes. Ben Schmidt, "Visualization of 19th Century Ship Routes from Publicly Available NOAA Data Set," Unified Pop Theory, 3 January 2014, accessed 28 January 2020, <http://unifiedpoptheory.com/wp-content/uploads/2014/01/Ben-Schmidt-Uses-ICOADS-Maury-Dataset-of-Ships-Logs-to-Visualize-19th-Century-Shipping-Routes.png>.

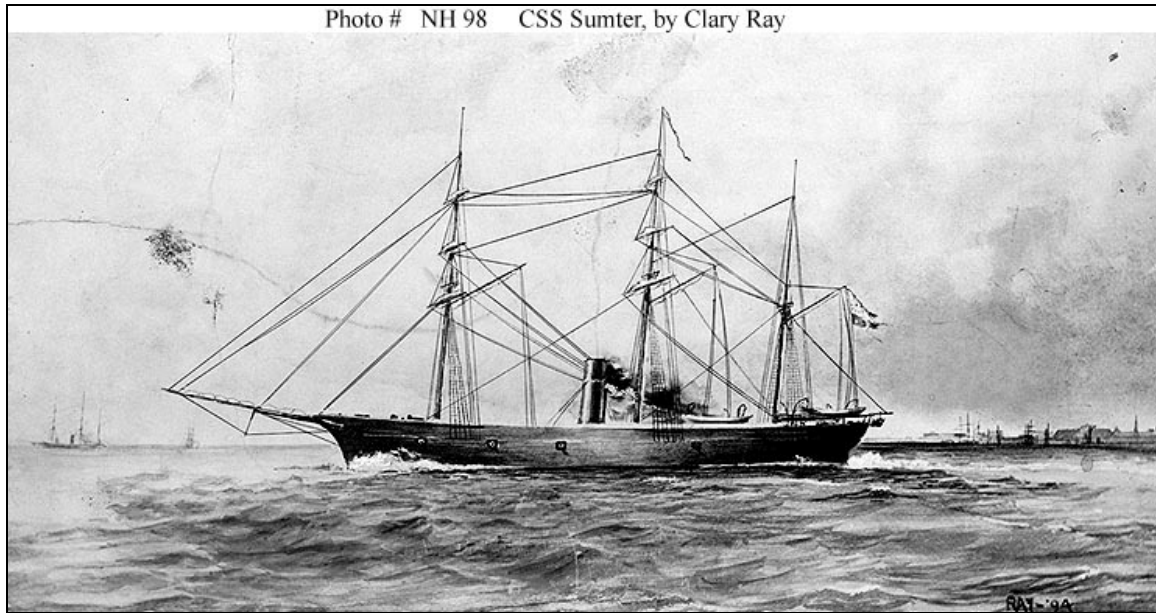


Figure 2. *CSS Sumter*. scvsemmes.org, “*CSS Sumter* (1861-1862): Semmes’ First Confederate Command,” contemporary photograph of an artwork by Clary Ray, 1894, US Naval Historical Center Photograph, accessed 19 January 2020, <https://www.scvsemmes.org/css-sumter.html>.

CSS Sumter

At the start of the American Civil War, Southern leaders made several critical assumptions. For example, President Jefferson Davis assumed the North would not fight to prevent secession. President Abraham Lincoln, however, planned to mobilize for war and used the resupply of Fort Sumter to entice the South into firing the first shots of the war. Confederate leaders also assumed that a cotton embargo would convince England to join their cause. In May 1861, however, over three and a half million bales of cotton had already been exported to New England and Europe. These supplies delayed the financial impact to the cotton market and, in 1862, England increased cotton imports from Brazil, Egypt, and India. At the same time, British policy makers resisted taking action in response to Southern extortion. President Davis also promoted a narrative that the South was fighting for freedom, not slavery. He believed this would help convince England and France to support the Southern cause. After Lincoln’s 1863 Emancipation Proclamation, however, the strong anti-slavery sentiment in England dashed

Confederate hopes. In these ways, erroneous assumptions undermined the Confederate war effort.⁶¹

The South's naval strategy also faced challenges. For example, while the Union Navy possessed forty-two ships, the South only had twelve. Even though the South had about two hundred naval officers, the shortage of vessels and limitations on building new ones resulted in many qualified officers never gaining command.⁶² These circumstances, combined with the blockade, presented Mallory with limited options. Even so, he developed two main objectives. First, blockade-runners would ensure the continuation of vital trade for the Confederacy. Second, Confederate raiders would capture Union merchant vessels and draw Federal warships away from the South's coast, loosening the blockade. Through these naval actions, Mallory aimed to bring neutral powers into the conflict and convince the North to abandon the war.⁶³

Even these limited objectives presented problems. The Navy did not represent the Confederate government's highest military priority. Demographics and infrastructure, notably railroads, meant that the North could build and sustain larger field armies. Concerned about a land invasion and the loss of Richmond, the Confederacy curtailed naval investment in favor of its land forces. This, along with limited manufacturing capability, led Mallory to focus on quality over quantity in regards to the Confederate Navy. It also convinced him of the necessity to build vessels overseas, primarily in France and England.⁶⁴ Due to the lack of fluid capital, Mallory used cotton as currency. Ultimately, shipbuilding efforts in England proved more successful than in France. Of the eighteen vessels contracted, seven were built for commerce raiding and the

⁶¹ Donald Stoker, *The Grand Design: Strategy and the US Civil War* (New York: Oxford University Press, 2010), 27-29.

⁶² Stoker, *The Grand Design*, 343; Durkin, *Confederate Navy Chief*, 146.

⁶³ Spencer, *The Confederate Navy in Europe*, 3.

⁶⁴ Durkin, *Confederate Navy Chief*, 146.

others were blockade runners.⁶⁵ What could Mallory do, however, before these vessels became operational?

In April 1861, the Confederacy purchased a merchant vessel in New Orleans. Even though it was built in Philadelphia only two years before, a board of naval officers condemned it, dismissing its value as a ship of war. Raphael Semmes, however, had a different vision. When the experienced veteran of the Mexican War met with Mallory on 17 April, he said, “Give me that ship.”⁶⁶ Over the next two months, Semmes oversaw extensive alterations to convert the vessel from a merchant into a raider. He designed and sketched the plans for the mechanics.⁶⁷ Even with the changes, the *Sumter* could only carry five days of fuel, lacked the crew accommodations of a warship, and only reached five to ten knots under steam power. Still, Semmes was not deterred. He set out as the South’s first commerce raider armed with one nine-inch Dahlgren gun and four 32 pounders.⁶⁸

At the same time, Semmes needed to man the *Sumter*. For officers, Mallory appointed nine officers and one midshipman, many of whom would later serve with Semmes on the *Alabama*, including John Kell, his second in command. For his enlisted crew, Semmes recruited sailors from the busy seaport of New Orleans. Men from America, England, Ireland, and Germany entered and departed the city looking for work on the next vessel to provide room and board. As a result, Semmes’s enlisted crew included less than six Southern-born men, who were mostly English and Irish.⁶⁹

⁶⁵ Tucker, “CSS *Alabama* and Confederate Commerce Raiders During the U.S. Civil War,” 74.

⁶⁶ Semmes, *Memoirs of Service Afloat During the War Between the States*, 93.

⁶⁷ *Ibid.*, 98.

⁶⁸ Semmes, *Memoirs of Service Afloat During the War Between the States*, 93; Tucker, “CSS *Alabama* and Confederate Commerce Raiders During the U.S. Civil War,” 76.

⁶⁹ Semmes, *Memoirs of Service Afloat During the War Between the States*, 300-301; Spencer, *The Confederate Navy in Europe*, 106-7, 124-125.

On departing New Orleans on 29 June 1861, Semmes faced his first test. Seeing an opening in the blockade, Semmes made a dash for the open ocean. After a four-hour chase by the USS *Brooklyn*, Semmes narrowly escaped by jettisoning extra weight and using the wind to increase speed. This demonstration of confidence, skill, and risk-taking foreshadowed his future command philosophy and aggressive operational approach to raiding. Semmes headed for the busy shipping lanes in the Caribbean and captured seven prizes in two days. He burned his first prize, the *Golden Rocket*, on 3 July 1861. While international law directed the taking of captured vessels to prize courts, it prohibited neutrals from bringing prizes into their home or colonial ports.⁷⁰ Nevertheless, Semmes decided to pull into Cuba and requested that the governor of Cienfuegos adjudicate.⁷¹ Instead, the Spanish government returned the ships to their owners, shocking Semmes. Thereafter, Semmes burned prizes.⁷²

Later that month, Semmes sailed to the island of Curacao, a Dutch colony in the southern Caribbean, for refueling. Here, Semmes demonstrated his plan to use neutral ports to sustain operations.⁷³ Semmes also employed methods of deception, realizing the US Navy would likely attempt to capture him. For example, Semmes told the harbor pilot and other locals that he planned to return to Cuba, hoping the information would reach US officials.⁷⁴ Instead, Semmes took the *Sumter* to the shipping lanes off Brazil. When he boarded several neutral vessels, Semmes also flew the American flag to conceal his identity. In these ways, Semmes hid his future plans and identity from possible enemy informants.⁷⁵

⁷⁰ Tucker, “CSS *Alabama* and Confederate Commerce Raiders During the U.S. Civil War,” 75.

⁷¹ Semmes, *Memoirs of Service Afloat During the War Between the States*, 138.

⁷² *Ibid.*, 139-41.

⁷³ *Ibid.*, 150-54.

⁷⁴ *Ibid.*, 159.

⁷⁵ *Ibid.*, 228-29.

Despite these actions, Semmes found himself cornered by the USS *Iroquois* in November 1861. Needing to refuel, the *Sumter* arrived in Saint Pierre on the island of Martinique. On 14 November, the Federal warship arrived off the coast. The *Iroquois*, one of six ships that Gideon Welles, the Union Secretary of the Navy, dispatched after the *Sumter*, was a new class of vessel. It was designed for steam power vice wind power, which increased its speed and range.⁷⁶ It also outmatched the *Sumter* in men and guns. Since it could not capture Semmes in port for legal reasons, it planned to overtake the *Sumter* once it entered international waters. Semmes assessed the situation and waited. On the night of 23 November, the *Sumter*, with all its lights off, departed to the south. Even though a lookout boat in the harbor signaled the *Iroquois*, Semmes slyly changed direction and escaped to the north.⁷⁷

Next, Semmes decided to depart for European waters. In addition to expanding his operational reach, the northern Atlantic positioned him near shipyards capable of repairing the *Sumter*'s deteriorating boilers. Enroute to Europe, Semmes captured another six prizes. On 4 January 1862, Semmes arrived in Cadiz, Spain seeking fuel and repairs. Delays in funding and pressure from the Spanish government eventually convinced Semmes to depart for Gibraltar. Nevertheless, more troubles ensued there. In addition to the presence of three Union warships, the US Consul pressured the local government and merchant vessels to refuse Semmes's request for coal.⁷⁸ Consequently, Semmes abandoned the *Sumter* in February 1862.⁷⁹ After dismissing most of his men, Semmes and Kell traveled to London on a commercial vessel to determine their next

⁷⁶ Craig Symonds, *The Civil War at Sea* (Santa Barbara, CA: ABC-CLIO, 2009), 7.

⁷⁷ Semmes, *Memoirs of Service Afloat During the War Between the States*, 260-62.

⁷⁸ Semmes to North, February 1862, in Naval War Records Office, *The War of the Rebellion: Official Records of the Union and Confederate Navies* [hereafter *OR*], series II, *Navy Department Correspondence 1862-1865, with Agents Abroad* (Washington, DC: Government Printing Office, 1921), 2:135-36, 140, 145.

⁷⁹ Semmes, *Memoirs of Service Afloat During the War Between the States*, 342-43.

move.⁸⁰ After meeting with James Bulloch, Mallory's secret agent, Semmes departed for the Bahamas in late May.⁸¹

The historical record supports the conclusion that Mallory did not directly dictate Semmes's operational approach. When Semmes received permission to launch the *Sumter*, it is likely that he and Mallory talked about cruise locations and overall Southern strategy. After this, their contact was minimal, although Mallory likely expected periodic updates. In fact, Mallory reprimanded John Maffitt, captain of the *Florida*, for his lack of dispatches.⁸² Biographer Joseph Durkin also pointed out that while Mallory directed the raiders, the evidence does not indicate significant involvement once he issued the initial orders. For example, on 26 July 1861, from Puerto Cabello, Venezuela, Semmes wrote a letter to Mallory reporting his capture of nine vessels in twenty-six days.⁸³ Later on, Mallory learned from papers that the *Sumter* was in the Spanish port of San Roque, near Gibraltar. In addition, Mallory sent a letter of credit to the Liverpool banking house *hoping* it would reach the *Sumter*'s paymaster, demonstrating that Mallory was generally out of contact with Semmes and unaware of his plans.⁸⁴ Semmes also confirmed this lack of direction in his letter to Confederate agent Lieutenant J. H. North in January 1862. From Cadiz, Semmes wrote North that he had not received a message from the South since he departed. Instead, he relied on news from "Yankee newspapers."⁸⁵ In this way, the evidence indicates that Semmes acted with decentralized initiative, but conformed his operational approach to strategic directives.

⁸⁰ Spencer, *The Confederate Navy in Europe*, 136.

⁸¹ *Ibid.*, 37.

⁸² Durkin, *Confederate Navy Chief*, 167.

⁸³ *Ibid.*, 166.

⁸⁴ *Ibid.*, 167.

⁸⁵ Semmes to North, 9 January 1862, in *OR*, series II, 2:126.

One of Semmes's challenges was to ensure the protection of neutral cargo. For example, if a Union ship carried the cargo of a neutral power, Semmes issued a ransom bond, which meant the North would pay the Confederacy the amount of the ship and cargo after the war.⁸⁶ Of course, the South would have to win the war for this to mean anything.⁸⁷ To prevent fraud, Semmes demanded legal documents with an official consul's stamp to ensure the cargo was neutral. Nevertheless, even if Semmes believed the documents were false, more aggressive action risked offending foreign nations.

After the Cuba incident in July 1861, Semmes made the decision to burn or ransom ships.⁸⁸ In addition, large numbers of passengers often led Semmes to bond ships, since he did not have room to take them onboard the *Sumter*. Semmes also attempted to send a prize vessel back to the Confederacy in July 1861. From Puerto Cabello, Venezuela, Semmes detached part of his crew on the *Abby Bradford*, a captured ship. Destined for New Orleans, the mission failed when Federal warships captured the vessel off the coast of Louisiana. This incident provided another reason for why Semmes chose to burn enemy vessels.⁸⁹

Semmes achieved several outcomes from his cruise on the *Sumter*. In six months, Semmes captured seventeen ships, with the least valuable prize covering the cost of running the ship.⁹⁰ In addition, public pressure contributed to Gideon Welles's decision to dispatch ships to capture the raiders.⁹¹ Nevertheless, the impact on the blockade proved minimal.⁹² In contrast, the economic repercussions of commerce raiding became significant. In addition to rising insurance rates, which diminished profits, merchant owners sold their ships to foreign powers rather than

⁸⁶ Tucker, "CSS *Alabama* and Confederate Commerce Raiders During the U.S. Civil War," 77.

⁸⁷ Symonds, *The Civil War at Sea*, 66.

⁸⁸ McPherson, *War on the Waters*, 116.

⁸⁹ Semmes, *Memoirs of Service Afloat During the War Between the States*, 166-67.

⁹⁰ *Ibid.*, 345.

⁹¹ McPherson, *War on the Waters*, 24.

⁹² *Ibid.*

risk capture.⁹³ Some merchant vessels also used new sea lanes, which Semmes blamed for his lack of prizes off Brazil and Gibraltar.⁹⁴ Ultimately, for a vessel initially dismissed as worthless, Semmes inflicted considerable damage on the North. Nevertheless, there was no indication that these results would achieve Semmes's strategic goals. No neutral power had entered the war and the Union had not sued for peace. Semmes, however, was not ready to give up.



Figure 3. CSS *Alabama*. 290 Foundation, "CSS *Alabama*." accessed 19 January 2020, <https://sites.google.com/site/290foundation/css-alabama>.

⁹³ Semmes, *Memoirs of Service Afloat During the War Between the States*, 287-89; Taylor, *Semmes: Rebel Raider*, 31; McPherson, *War on the Waters*, 117.

⁹⁴ Semmes, *Memoirs of Service Afloat During the War Between the States*, 221.

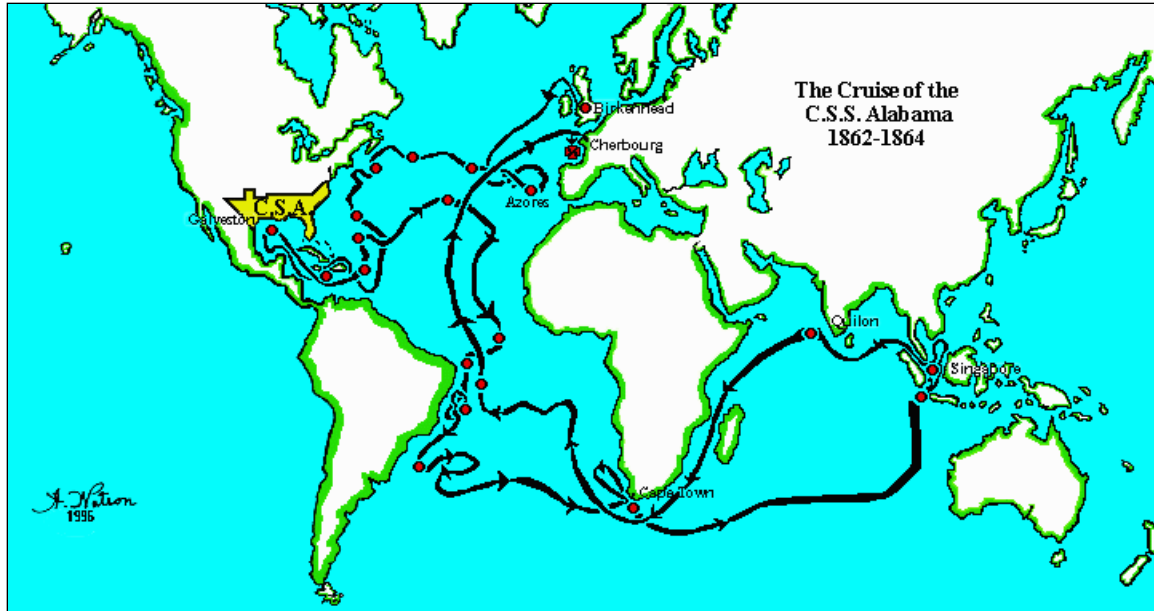


Figure 4. Voyages of the *Alabama*. scvsemmes.org, “Voyages of the *Alabama*,” University of Alabama Digital Collection, accessed 19 January 2020, <https://www.scvsemmes.org/voyages-of-the-alabama.html>.

CSS Alabama

The success of the *Sumter*, and the timing of the cruise’s conclusion, proved fortuitous for Semmes’s next command. From Nassau, Mallory ordered Semmes to the Azores to take command of his next ship, which was launching from the Laird shipyards in Liverpool.⁹⁵ Despite the Foreign Enlistment Act of 1818, which prevented British subjects from “equipping, furnishing, fitting out, or arming any vessel intended for service by belligerent navies,” the South leveraged Confederate sympathies to build ships in England.⁹⁶ Mallory directed James Bulloch to afford Semmes “all possible assistance in getting [the *Alabama*] to sea and maintaining her as a

⁹⁵ James D. Bulloch, *The Secret Service of The Confederate States in Europe or, How The Confederate Cruisers Were Equipped* (New York: Modern Library, 2001), 167.

⁹⁶ Tucker, “CSS *Alabama* and Confederate Commerce Raiders During the U.S. Civil War,” 77.

cruiser.”⁹⁷ To fill his officer ranks, Semmes brought with him thirteen men.⁹⁸ They were all Southerners who had served with him on the *Sumter*.⁹⁹

In the Azores in August 1862, the *Alabama* rendezvoused with a tender, which outfitted her with weapons of war. With the band playing “Dixie,” Semmes took command and addressed the crew, consisting mostly of English and Irish seamen.¹⁰⁰ Semmes needed the men to remain with the ship and stated, “There is a chance which seldom offers itself to a British seaman--to make a little money. . . . Your prize money will be divided proportionately, according to each man’s rank.”¹⁰¹ To a group of mostly single men needing work, prize money acted as a valuable incentive. In addition, Semmes promised pay in gold at a salary two times that of the British Navy.¹⁰² As a result, Semmes convinced over eighty men to serve on the *Alabama*.¹⁰³ Only ten men returned to England.¹⁰⁴ While the men later received some money from the sale of captured chronometers, the prize money never materialized since Semmes burned vessels instead of selling them.¹⁰⁵

To help with manning, Semmes also hired men from captured vessels. For example, a Dutch sailor from the *Benjamin Tucker* joined his crew in September 1862.¹⁰⁶ Later that month,

⁹⁷ Bulloch, *The Secret Service of The Confederate States in Europe or, How The Confederate Cruisers Were Equipped*, 166.

⁹⁸ Norman C. Delaney, “The *Alabama*’s Bold and Determined Man,” *Naval History* 25, no. 4 (August 2011): 18-25.

⁹⁹ Lynnwood Cockerham, “Raphael Semmes: A Leadership Study” (Report, Air Command and Staff College, Maxwell AFB, AL, 1986), 22.

¹⁰⁰ Semmes, *Memoirs of Service Afloat During the War Between the States*, 408-12.

¹⁰¹ Delaney, “The *Alabama*’s Bold and Determined Man,” 18-25; Semmes, *Memoirs of Service Afloat During the War Between the States*, 410-412.

¹⁰² Delaney, “The *Alabama*’s Bold and Determined Man,” 18-25.

¹⁰³ Ibid.

¹⁰⁴ Semmes, *Memoirs of Service Afloat During the War Between the States*, 412.

¹⁰⁵ William Marvel, *The Alabama and the Kearsarge: The Sailor’s Civil War* (Chapel Hill: The University of North Carolina Press, 1996), 261.

¹⁰⁶ Taylor, *Semmes: Rebel Raider*, 44; Marvel, *The Alabama and the Kearsarge*, 72.

while still in the Azores, Semmes added a German recruit from another vessel.¹⁰⁷ In October, while off Newfoundland, four more Englishmen joined the *Alabama*.¹⁰⁸ After capturing the *T. B. Wales* in November, Semmes gained eleven more sailors, which almost gave him a full crew.¹⁰⁹ In the West Indies later that month, Semmes used his tender, the *Agrippina*, to gain three new crewmembers while sending four ill sailors home.¹¹⁰ In March 1863, he added another ten men.¹¹¹ While in South Africa in August, twenty desertions forced Semmes to bring on thirteen men he referred to as “vagabonds.”¹¹² In Singapore, Semmes added four more men.¹¹³ In this way, Semmes found available manpower to sustain current and future operations.

Throughout the cruise, Semmes embraced unpredictability. Frequent port visits would reveal his location and increase the risk of capture. To maintain operational security, he concealed future plans from his crew and took his own celestial sightings for navigation.¹¹⁴ Unlike the *Sumter*, the propeller of the *Alabama* could be detached from the shaft and lifted into the hull. This provided better speed while under sail and enabled Semmes to conserve his eighteen-day coal supply.¹¹⁵ Consequently, Semmes minimized port visits and captured all but six vessels while under wind propulsion.¹¹⁶

¹⁰⁷ Marvel, *The Alabama and the Kearsarge*, 73.

¹⁰⁸ *Ibid.*, 74.

¹⁰⁹ *Ibid.*, 79.

¹¹⁰ *Ibid.*, 104.

¹¹¹ *Ibid.* 121.

¹¹² Marvel, *The Alabama and the Kearsarge*, 188; Semmes, *Memoirs of Service Afloat During the War Between the States*, 670-671.

¹¹³ Norman C. Delaney, “The Firing Here Became Continual,” *Naval History* 30, no. 3 (June 2016): 48-54; Taylor, *Semmes: Rebel Raider*, 88.

¹¹⁴ Cockerham, “Raphael Semmes: A Leadership Study,” 20.

¹¹⁵ Tucker, “CSS *Alabama* and Confederate Commerce Raiders During the U.S. Civil War,” 79.

¹¹⁶ Semmes, *Memoirs of Service Afloat During the War Between the States*, 419-20.

Due to his inability to rapidly communicate with his superiors, Semmes had near total operational freedom. In September 1862, after capturing whalers in the Azores, Semmes sailed to Newfoundland to target vessels transporting grain.¹¹⁷ In October, he even considered a raid on New York harbor, but learned from newspapers that Welles had dispatched several ships to search for him. At the same time, the Union's North Atlantic Blockading Squadron was aware of his presence. Moreover, Semmes only had four days of coal remaining. As a result, Semmes sailed for the Caribbean to rendezvous with his resupply vessel, the *Agrippina*.¹¹⁸ In these waters, Semmes captured additional prizes.

While in the Caribbean, Semmes entered port in Martinique in November 1862 to rendezvous with his tender. Once ashore, Semmes realized the captain of the *Agrippina* had revealed his mission to the locals. Semmes immediately ordered the ship to a new rendezvous, the sparsely populated island of Blanquilla, Venezuela.¹¹⁹ The next morning, the USS *San Jacinto* arrived in Martinique. Fortunately for Semmes, the *Agrippina* was gone. Since the Federal warship carried fourteen eleven-inch guns, Semmes decided not to seek battle. The *Alabama* only boasted eight cannons. Just as he had avoided the *Iroquois* while commanding the *Sumter*, Semmes used the cover of night and a light rain to escape the *San Jacinto*.¹²⁰ Semmes realized he could do more damage to the North as a raider. Unless he could achieve a fair or advantageous fight, he would not risk the *Alabama* in battle.

Semmes balanced risk by demonstrating both cautiousness and aggressiveness. After the *Agrippina* later failed to rendezvous in Fernando de Noronha, a Brazilian penal colony, Semmes

¹¹⁷ Marvel, *The Alabama and the Kearsarge*, 73; Semmes, *Memoirs of Service Afloat During the War Between the States*, 449-450.

¹¹⁸ Marvel, *The Alabama and the Kearsarge*, 78.

¹¹⁹ *Ibid.*, 516-17.

¹²⁰ *Ibid.*, 515-16.

decided to refuel from captured vessels.¹²¹ Further meetings with the tender were not worth the risk and coordination was becoming unreliable. In contrast to this cautiousness, information from newspaper reports emboldened Semmes. For example, in late 1862, the *New York Herald* provided the positions of “all the enemy’s gunboats.”¹²² Such details allowed Semmes to plan his attack against the Federal expedition on Galveston. He also felt he could achieve surprise after learning the North believed he was heading to Brazil and the East Indies.¹²³ His calculations proved accurate when he surprised and sunk the USS *Hatteras* off Galveston, Texas, in January 1863.

Surprisingly, from September 1862 to June 1864, a period of twenty-two months, Semmes experienced no unplanned encounters with enemy warships on the open ocean. Even so, by November 1862, more than a dozen Union warships were looking for the *Alabama* and other raiders.¹²⁴ The Union Navy, however, generally followed a practice of chasing location reports. By the time the ships arrived, Semmes was gone. This was no accident. In fact, Semmes calculated the timing of his movements. For example, after he disembarked prisoners from captured vessels, he estimated the time it would take for news to reach Washington. He then forecasted the arrival time of a Federal warship.¹²⁵ In this way, he maintained a tempo advantage over the enemy. His tactical movements only needed to be faster relative to the reaction time and speed of his opponent. In this way, Semmes “did not fall in with a single enemy’s cruiser at sea, at any time during [his] whole career!”¹²⁶

¹²¹ Marvel, *The Alabama and the Kearsarge*, 600-610.

¹²² *Ibid.*, 467.

¹²³ *Ibid.*, 520.

¹²⁴ Tucker, “CSS *Alabama* and Confederate Commerce Raiders During the U.S. Civil War,” 80.

¹²⁵ Semmes, *Memoirs of Service Afloat During the War Between the States*, 630.

¹²⁶ *Ibid.*

In April 1863, Semmes headed for the busy shipping lanes off Brazil, which he referred to as “the great turning-point of the commerce of the world.”¹²⁷ After three months, he sailed for South Africa, not willing to risk a longer stay. During this period, Semmes recognized the limits of his effectiveness and looked to expand operations. The capture of the *Conrad* off Brazil provided an opportunity. The vessel’s “good sailing qualities” and small size allowed Semmes to detach a team from his crew without hampering his own operations.¹²⁸ He manned the *Conrad* with ten enlisted and four officers from his crew. He also added one sailor from the *Conrad*.¹²⁹ At the time, the *Alabama* crew numbered over one hundred. Semmes armed the vessel with two twelve-pound brass rifled guns seized from another captured vessel, the *Talisman*.¹³⁰

The *Tuscaloosa* experienced limited success before its mission ended in failure. While it captured the *Santee* on 31 July 1863, it released the ship with a ransom bond, since it carried a British cargo of rice.¹³¹ After rendezvousing with the *Alabama* in South Africa, the *Tuscaloosa* ventured into the South Atlantic in August 1863.¹³² After it returned to Cape Town, however, South African officials detained the vessel on Christmas day. Semmes protested, pointing out that “no nation has the right to inquire into the *antecedents* of the ships of war of another nation.”¹³³ While this argument eventually worked, the delay caused by hearings in the British House of Commons caused the ship to remain in South Africa for the war’s duration.¹³⁴ As a result, during six months of operations, the *Alabama*’s satellite raider captured only one American vessel.¹³⁵

¹²⁷ Semmes, *Memoirs of Service Afloat During the War Between the States*, 126, 628.

¹²⁸ *Ibid.*, 627.

¹²⁹ Marvel, *The Alabama and the Kearsarge*, 176.

¹³⁰ Semmes, *Memoirs of Service Afloat During the War Between the States*, 627.

¹³¹ *Ibid.*, 648.

¹³² Marvel, *The Alabama and the Kearsarge*, 183.

¹³³ Semmes, *Memoirs of Service Afloat During the War Between the States*, 663.

¹³⁴ *Ibid.*, 739-44.

¹³⁵ Marvel, *The Alabama and the Kearsarge*, 181.

After operating off South Africa in the summer of 1863, Semmes heard the fifteen-gunned USS *Vanderbilt* was in the area. As a result, he departed for Southeast Asia on 24 September and arrived in early November.¹³⁶ In these waters, only the USS *Wyoming* guarded American interests and, since she only carried six guns, Semmes hoped to engage her. Semmes, however, did not find her. At the same time, disappointing reports on the war's progress mirrored the deteriorating condition of the *Alabama*. The ship needed repairs, the crew's morale waned, and American commerce vessels hid in port. Consequently, Semmes decided to head to Europe for repairs. Understandably, Semmes avoided Spanish ports due to his previous frustrations while in command of the *Sumter*.¹³⁷ Instead, in June 1864, the *Alabama* pulled into Cherbourg, France. While awaiting a response from Emperor Napoleon III, the *Kearsarge* arrived. Semmes decided to challenge the vessel and several days later, on 19 June 1864, a two-hour gun battle sent the *Alabama* to the bottom of the English Channel only six miles from shore.

The *Alabama*'s operational impact was multifaceted. Fear of Confederate raiders led American commerce vessels to avoid established trade routes. Semmes even claimed that one ship altered course by four hundred miles.¹³⁸ In addition, due to the *Alabama*'s presence in Southeast Asia, over twenty merchant ships remained in port in Singapore in December 1863. There were also several more vessels hiding in Bangkok, Canton, Shanghai, and the Philippines.¹³⁹ Furthermore, the US Navy shifted warships away from the blockade to combat the raiders, while the US government increased pressure on England, which tightened the reigns on ship construction by seizing "all rams and all other suspicious water animals."¹⁴⁰

¹³⁶ Tucker, "CSS *Alabama* and Confederate Commerce Raiders During the U.S. Civil War," 82.

¹³⁷ Semmes, *Memoirs of Service Afloat During the War Between the States*, 304.

¹³⁸ *Ibid.*, 587.

¹³⁹ *Ibid.*, 7, 708-709.

¹⁴⁰ Durkin, *Confederate Navy Chief*, 294.

The economic impacts of raiding proved the most significant. Historian John M. Taylor writes, “The rise in maritime insurance rates, the rush to switch vessels to British registry, and the attempts to fabricate ownership documents on cargo [hindered commerce and decimated profits].”¹⁴¹ In fact, “American ships could no longer get cargoes.” As a result, from 1862 to 1863, five hundred American ships changed flags.¹⁴² In total, eight hundred thousand tons of shipping changed to foreign ownership.¹⁴³ In this way, many American ships “disappeared” by sale rather than by capture.¹⁴⁴ In fact, in the East Indies in November 1863, the captain of the *Wyoming* reported to Welles, “Nearly all of the American vessels in the China seas have changed flags, otherwise [they] get no employment.”¹⁴⁵ In the first ten months, the *Alabama* took fifty-two of its sixty-four prizes.¹⁴⁶ As a result, from September 1862 to June 1864, Semmes achieved greater operational success than any other Confederate ship captain. Even so, the South’s strategic aims proved unattainable. Failure to achieve a decisive blow on the high seas, combined with a war of attrition on land, meant the Confederacy was running out of time.

Implications

There are numerous implications that can be drawn from Semmes’s Civil War commerce raiding. First, Semmes’s actions reflected operational art as described in current US joint military doctrine. Semmes overcame limited resources to enable operations. He then used these resources in a way that enabled tactical success over a period of two years. Semmes also demonstrated several elements of operational art, including maneuver, tempo, anticipation, center of gravity,

¹⁴¹ Taylor, *Semmes: Rebel Raider*, 53; Tucker, *Raphael Semmes and the Alabama*, 15-16.

¹⁴² Taylor, *Semmes: Rebel Raider*, 108; Semmes, *Memoirs of Service Afloat During the War Between the States*, 525.

¹⁴³ Tucker, “CSS *Alabama* and Confederate Commerce Raiders During the U.S. Civil War,” 86.

¹⁴⁴ Semmes, *Memoirs of Service Afloat During the War Between the States*, 626.

¹⁴⁵ Marvel, *The Alabama and the Kearsarge*, 193.

¹⁴⁶ Tucker, “CSS *Alabama* and Confederate Commerce Raiders During the U.S. Civil War,” 82.

branches, risk, operational reach, and culmination. Second, Semmes's exploits illuminate the contemporary understanding of sea control. Moreover, they inform the US Navy's future force structure. Third, Semmes's raiding supports the theories of both Alfred Thayer Mahan and Sir Julian Corbett. Finally, Semmes, despite his tactical and operational successes, ultimately failed to achieve his strategic objectives. This highlights the critical role that both assumptions and options play in the effective employment of operational art.

Semmes demonstrated operational art in accordance with current US joint military doctrine. He used his "skill, knowledge, experience, creativity, and judgment" to overcome limited resources.¹⁴⁷ Semmes organized and employed the South's first maritime raider, using a vessel that others deemed worthless. He also leveraged neutral powers by creatively using their basing for protection, supplies, repairs, and rest. England even built his second vessel, the *Alabama*, one of the most advanced ships in the world. Since the vessel could lift its propeller, Semmes mainly operated under sail power, decreasing his reliance on coal and expanding his operational reach. Semmes also relied on captured prizes for supplies. Semmes's resourcefulness also extended to building and sustaining his manpower. To man the *Sumter*, he recruited foreign enlisted sailors in New Orleans. For the *Alabama*, he convinced a mostly British crew to fight for the Confederacy. In these ways, Semmes overcame limited resources.

Semmes then employed these resources in several ways. His choice of high traffic sea lanes, and the timing of his movements, allowed him to maximize captures while avoiding federal warships. Minimal port visits also helped conceal his location from Northern informants. In addition, Semmes avoided the destruction of neutral commerce, carefully examining documentation to ensure valid ownership. Making a mistake risked alienating the neutral powers the South needed to win the war. Consequently, if an American vessel transported neutral cargo, Semmes bonded it. Semmes even ventured into Union-controlled waters off Galveston, Texas,

¹⁴⁷ US Joint Staff, JP 3-0 (2017), xii.

where federal warships patrolled the blockade. In a surprise attack in January 1863, he sank the *Hatteras*.¹⁴⁸ In these ways, Semmes decimated Northern commercial shipping and embarrassed the Union. Through these tactical successes, he hoped to achieve strategic results.

Semmes's operational art also included maneuver, tempo, anticipation, center of gravity, branches, risk, operational reach, and culmination.¹⁴⁹ He effectively used maneuver to gain and maintain positions of advantage. In twenty-two months, he raided Northern commerce not only in the Caribbean and North Atlantic, but also in the waters off Europe, Brazil, South Africa, and Southeast Asia. He used tempo, or frequency of movement, by relocating to new operating areas before enemy warships could corner him.¹⁵⁰ If undetected, he kept patrolling shipping routes. Once concerned about informants, he anticipated enemy response times and moved to new areas. For example, after learning the Union Navy was aware of his presence off Newfoundland, he moved to the Caribbean. After later sinking the *Hatteras*, he quickly departed the Union-controlled waters. Similarly, in South Africa, fearing the heavily gunned *Vanderbilt*, Semmes continued on to Southeast Asia.

Semmes's operational approach also considered centers of gravity, namely Southern and Northern public opinion. Despite the South's limited naval capabilities, the raiders illustrated "the spirit and energy" of the Confederacy.¹⁵¹ Semmes aimed to bolster the South's legitimacy, both in the eyes of its own populous and from the perspective of neutral powers. As for the Union citizens, Semmes inflicted financial hardship on merchants and caused the Northern newspapers to proclaim him a pirate. In these ways, he aimed to influence centers of gravity.

To help achieve this, Semmes recognized the need for more raiders and initiated a branch plan in June 1863. While enroute to South Africa, he detached part of his crew to man the

¹⁴⁸ Semmes, *Memoirs of Service Afloat During the War Between the States*, 545.

¹⁴⁹ US Joint Staff, JP 5-0 (2017), IV-19.

¹⁵⁰ *Ibid.*, IV-37.

¹⁵¹ Spencer, *The Confederate Navy in Europe*, 47.

Tuscaloosa. This, however, entailed risk. If the *Alabama* subsequently engaged in combat with a short-handed crew, Semmes would be at a disadvantage. Nevertheless, Semmes deemed it worthwhile, since he had not faced any unplanned high seas encounters with Federal warships. While the branch plan ultimately proved unfruitful, it demonstrated Semmes' ability to continually assess and adapt.

Semmes's cruises also displayed operational reach. The *Sumter* cruised the Caribbean before heading across the Atlantic to European waters. The *Alabama* surpassed this, traveling seventy-five thousand miles and reaching the waters off Singapore and Vietnam.¹⁵² To enable this range of operations, Semmes adopted a naval version of "living off the land." Using captured prizes and neutral ports, Semmes opportunistically acquired needed supplies. While cruising off Brazil in June 1863, Semmes discovered that weevils had ruined his bread supply. In early July, however, he fortuitously captured an American cargo ship out of Boston with a thirty day supply of bread.¹⁵³

Despite his opportunism and resourcefulness, Semmes's operations eventually culminated. For the *Sumter*, the necessity for repairs and the inability to refuel caused him to delay in port. After several American vessels cornered him, Semmes abandoned the *Sumter* in February 1862. For the *Alabama*, culmination occurred due to a reduction in captures and the crews' waning motivation. American vessels, upon hearing of the *Alabama*'s presence, remained sheltered. Many other vessels had already come under foreign ownership. In addition, the *Alabama* needed repairs and ammunition replenishment. As a result, Semmes returned to Europe and pulled into Cherbourg, France, in June 1864. Several days later, on 19 June, damp powder

¹⁵² Taylor, *Semmes: Rebel Raider*, vii.

¹⁵³ Semmes, *Memoirs of Service Afloat During the War Between the States*, 630-31.

and inaccurate firing doomed the *Alabama* during its engagement with the *Kearsarge*.¹⁵⁴ In these ways, Semmes's approach exemplified several key components of operational art.

Overall, Semmes's tactical successes achieved his operational objective of curtailing Northern commerce. In six months, the *Sumter* captured seventeen ships.¹⁵⁵ The *Alabama*, over a period of twenty-two months, captured sixty-four vessels.¹⁵⁶ Overall, Semmes calculated he burned over four million dollars of shipping and cargo, while bonding vessels in the amount of five hundred thousand dollars. Another estimate says the losses totaled nearly six million dollars, which equates to ninety-eight million dollars today.¹⁵⁷ Even so, while the *Sumter*, *Alabama*, and the other Confederate raiders captured a total of two hundred and fifty-seven merchant vessels, this accounted for only 5 percent of the total.¹⁵⁸ This does not tell the whole story, however, since more than half the American merchant fleet switched to foreign ownership, which amounted to eight hundred thousand tons of shipping.¹⁵⁹ This included seven hundred vessels that converted to British registry.¹⁶⁰

Semmes's operational approach to Civil War commerce raiding informs the contemporary understanding of sea control. Throughout the war, the North maintained a more numerous and powerful fleet. This enabled Gideon Welles to prioritize the Union blockade, which disrupted Southern trade. This in turn reduced the quality of life in the South and hindered the Confederate war effort. The Union Navy's advantage, however, only provided limited command of the sea, since Welles neglected to dispatch vessels to control the world's major sea

¹⁵⁴ Semmes, *Memoirs of Service Afloat During the War Between the States*, 9.

¹⁵⁵ *Ibid.*, 345.

¹⁵⁶ Wade G. Dudley, "Confederate Raider Raphael Semmes: Catch Me If You Can!," *Historynet.com*, accessed 18 August 2019, <http://www.historynet.com/confederate-raider-raphael-semmes-catch-me-if-you-can.htm>.

¹⁵⁷ Tucker, "CSS *Alabama* and Confederate Commerce Raiders During the U.S. Civil War," 86.

¹⁵⁸ *Ibid.*

¹⁵⁹ *Ibid.*

¹⁶⁰ *Ibid.*

lanes. He also failed to employ convoys. As a result, Semmes achieved considerable success outside of American waters.

This analysis supports the conclusions of American naval theorist Alfred Thayer Mahan. After examining England's rise to power in the 17th and 18th centuries, Mahan argued that sea power facilitated national dominance. Mahan also identified several factors that determine why nations develop as sea powers. These included a nation's geographical position, its number of harbors and ports, and the length of its coast. In addition, a country needed a population available for the "naval enterprise" and an aptitude for sea commerce. Lastly, the nation's government needed to support maritime development.¹⁶¹

The South, as an agrarian society, lacked the population size and aptitude for robust naval enterprises. It also lacked the trade and industrialization reflective of a naval power. This helps explain the South's naval disadvantage throughout the war. In addition, when the South seceded, US Navy ships remained in the North's possession. Even though a significant number of naval officers resigned to serve the Confederacy, Semmes lamented the South's inability to provide them with vessels. The lack of a fleet also meant the South could never challenge the North to Mahan's decisive battle.¹⁶²

On the rivers, the South's brown water navy faced similar challenges. Due to the inability to outpace Union ship construction, Mallory focused on quality over quantity. His new ironclad vessels, however, failed to significantly impact the war. For example, in the east, the Confederates added four inches of iron to the CSS *Virginia*. This protective armor shielded the vessel as it waged war against the North's wooden ships. As a result, it hampered Union operations off Hampton Roads for several months and delayed the Union campaign against

¹⁶¹ Mahan, *The Influence of Sea Power Upon History*, 29-69.

¹⁶² *Ibid.*, iii-vi, 1-23, 143-148, 416-418, 538-541.

Richmond.¹⁶³ In the western theater, the Confederates lost seven of their eight river gunboats in the failed attempt to defend Memphis in June 1862.¹⁶⁴ After this, they turned to another ironclad, the CSS *Arkansas*, which fought successfully in two engagements on the Yazoo and Mississippi Rivers. However, on 6 August 1862, a mechanical malfunction forced the crew to scuttle the vessel to prevent its capture.¹⁶⁵

Semmes's approach also supports the theories of Sir Julian Corbett. Like Mahan, Corbett argued that command of the sea is critical. Even so, he focused on the usefulness of containment through limited war instead of decisive battle. In the Seven Years War of 1756 to 1763, Corbett recognized how the decisive defeat of the French fleet at Quiberon Bay did not lead to absolute command of the sea. Afterwards, the British continued to lose transport vessels. In addition, Corbett pointed out that during the Peninsular Wars from 1807 to 1814, the Duke of Wellington worried about his naval supply lines, while fighting Napoleon.¹⁶⁶ For this reason, Corbett emphasized the value of asymmetric naval warfare, including blockade, containment, and patrols. In fact, during World War I, England's effective containment of the German surface fleet in the North Sea illustrated Corbett's point.

Corbett further valued strategic defense when a naval power lacked the strength for offense. For the South, and Semmes, this meant raiding enemy trade routes. Faced with a similar inferiority during World War I and II, the German Navy used submarines in a similar role to strike at Allied shipping.¹⁶⁷ While the Allies eventually combated submarines with surface convoys to protect unarmed vessels, the North never adopted such methods during the American

¹⁶³ "The Navies of the Civil War," *American Battlefield Trust*, 15 December 2008, accessed 30 January 2020, <https://www.battlefields.org/learn/articles/navies-civil-war>.

¹⁶⁴ McPherson, *War on the Waters: The Union and Confederate Navies, 1861-1865*, 5-6.

¹⁶⁵ "CSS *Arkansas* Civil War Confederate Naval Ship," *American Civil War*, accessed 30 January 2020, https://americancivilwar.com/tcwn/civil_war/Navy_Ships/CSS_Arkansas.html.

¹⁶⁶ Corbett, *Some Principles of Maritime Strategy*, 105.

¹⁶⁷ Fred Charles Ikle, *Every War Must End* (New York: Columbia University Press, 2005), 46-47.

Civil War. Instead, American merchants sought their own ways to survive. Many decided to sell their ships. Meanwhile, Union warships chased reports of Semmes's location, often arriving too late.

Semmes's achievements also illuminate the difference between "direct" and "indirect" sea control. For Semmes, his direct control of the sea extended from his ship to the extent of his vessel's ability to overtake another ship once seen. His indirect sea control, however, occupied a far greater range. For example, when American merchant captains heard of his arrival in Southeast Asia, they feared capture. As a result, in December 1863, over twenty American merchants remained in port in Singapore.¹⁶⁸ Additional vessels remained sheltered throughout Southeast Asia. Even so, Semmes leveraged indirect sea control even further to achieve strategic impact. His raiding transformed the economics of seaborne trade, leading to a rise in insurance rates, which in turn increased the cost of goods. Furthermore, owners sold their vessels to foreign buyers rather than risk their loss. In these ways, one Confederate sea captain achieved exponential results. Today, strategists and military planners should consider indirect sea control in planning their own operations and leverage maritime capabilities to increase their competitive advantage. At the same time, they must consider the indirect impact of an adversary with seemingly limited resources.

As rival states threaten American maritime interests in the Persian Gulf and South China Sea, the US Navy seeks ways to expand its control of the sea. In October 2019, six East Coast-based aircraft carriers remained in port at Norfolk, Virginia. Plagued by electrical problems, the USS *Harry S. Truman* joined five other carriers unable to deploy due to overhauls and maintenance issues. As a result, the USS *Abraham Lincoln* remained on extended deployment

¹⁶⁸ Semmes, *Memoirs of Service Afloat During the War Between the States*, 708.

and the *Harry S. Truman* strike group deployed without its carrier.¹⁶⁹ While such circumstances have been rare, it demonstrates a vulnerability in the US Navy's force structure. Consequently, persistent presence missions and the monitoring of strategic locations, such as the Strait of Hormuz and South China Sea, can be impacted. Future multi-domain operations may necessitate a new approach and may provide means to increase sea control.

One component of transformation entails the incorporation of unmanned surface, submarine, and air platforms to create a hybrid fleet. Over time, the fleet could potentially shift to a greater percentage of unmanned platforms, potentially in the range of 70 percent. While this will likely take decades, initial progress is being made. In September 2019, Boeing conducted the first test flight of a carrier-based unmanned refueling drone for the US Navy, which plans to acquire seventy-two of them.¹⁷⁰ In October 2019, an unmanned drone provided the first supply delivery to a US submarine, the USS *Hawaii*.¹⁷¹ In February 2020, the Navy announced the ability to command unmanned E/A-18G jamming aircraft via another manned EA-18G Growler.¹⁷² In addition, the Sea Hunter, an unmanned surface vessel, can traverse the open ocean for months at a time, tracking enemy submarines or conducting other intelligence, surveillance, and reconnaissance missions.¹⁷³ In 2020, the US Navy plans to integrate the Sea Hunter

¹⁶⁹ Paul McLeary, "All 6 East Coast Carriers In Dock, Not Deployed: Hill Asks Why," *Breaking Defense*, 28 October 2019, accessed 20 December 2019, <https://breakingdefense.com/2019/10/all-6-east-coast-carriers-are-at-the-dock-hill-presses-for-oversight/>.

¹⁷⁰ David Larter, "The US Navy's New Autonomous Refueling Drone Takes Historic First Flight," *Defense News*, 20 September 2019, accessed 5 February 2020, <https://www.defensenews.com/naval/2019/09/19/the-us-navys-new-autonomous-refueling-drone-takes-historic-first-flight/>.

¹⁷¹ H. I. Sutton, "First Navy Submarine Resupplied By Commercial Drone," *Forbes*, 29 October 2019, accessed 21 December 2019, <https://www.forbes.com/sites/hisutton/2019/10/29/navy-submarine-resupplied-by-commercial-drone/#4538cb9ee08f>.

¹⁷² David Larter, "US Navy and Boeing Use Manned Jet to Control Drone Growlers," *Defense News*, 4 February 2020, accessed 5 February 2020, <https://www.c4isrnet.com/naval/2020/02/04/us-navy-and-boeing-demonstrate-controlling-unmanned-aircraft-with-a-manned-jet/>.

¹⁷³ Naval Technology, "Sea Hunter: Inside the US Navy's Autonomous Submarine Tracking Vessel," *Naval Technology*, 3 May 2018, accessed 20 December 2019, <https://www.naval-technology.com/features/sea-hunter-inside-us-navys-autonomous-submarine-tracking-vessel/>.

“tactically and operationally into a strike group.”¹⁷⁴ The United States’ Fiscal Year 2020 National Defense Authorization Act authorizes the building of three of these unmanned surface vessels.¹⁷⁵

Ultimately, the shift to an unmanned fleet will amount to more platforms, minimized costs, less personnel strain, and decreased manning and risk. At the same time, it could increase sea control. For example, the Sea Hunter is estimated to operate at only 3 percent of the daily cost of a US Navy destroyer.¹⁷⁶ Today, unmanned and armed MQ-9’s monitor terrorist locations in remote regions of Asia, Africa, and the Middle East.¹⁷⁷ These drones are also cost effective when compared to employing ground forces to achieve similar effects.¹⁷⁸ In June 2019, Iran shot down an unmanned US Navy Global Hawk surveillance drone.¹⁷⁹ Since no Americans were killed, the strategic implications were minimal, and the United States opted not to respond with military strikes. Similarly, the future US Navy can use unmanned platforms to expand sea control while minimizing risk.

For Semmes, limited sea control failed to achieve the Confederacy’s strategic objectives. While the damage caused by the *Sumter* and *Alabama* imposed financial strain on Union

¹⁷⁴ Megan Eckstein, “Sea Hunter USV Will Operate With Carrier Strike Group, As SURFDEVCON Plans Hefty Testing Schedule,” *USNI News*, 21 January 2020, accessed 30 January 2020, <https://news.usni.org/2020/01/21/sea-hunter-usv-will-operate-with-carrier-strike-group-as-surfdevcon-plans-hefty-testing-schedule>; David B. Larer, “DARPA’s Latest Mad Science Experiment: A Ship Designed to Operate Completely without Humans,” *Defense News*, 21 January 2020, accessed 30 January 2020, https://www.defensenews.com/naval/2020/01/21/darpas-latest-mad-science-experiment-a-ship-designed-completely-without-humans/?utm_campaign=Socialflow+NAV&utm_source=facebook.com&utm_medium=social.

¹⁷⁵ Ben Werner, “House, Senate Defense Bill Signs Off on New Shipbuilding Programs, Restricts Others,” *USNI News*, 10 December 2019, accessed 2 February 2020, <https://news.usni.org/2019/12/10/house-senate-defense-bill-signs-off-on-new-shipbuilding-programs-restricts-others>.

¹⁷⁶ Naval Technology, “Sea Hunter: Inside the US Navy’s Autonomous Submarine Tracking Vessel.”

¹⁷⁷ Joe Penney, “C.I.A. Drone Mission, Curtailed by Obama, Is Expanded in Africa Under Trump,” *The New York Times*, 9 September 2018, accessed 21 December 2019, <https://www.nytimes.com/2018/09/09/world/africa/cia-drones-africa-military.html>.

¹⁷⁸ Brian Orend, *The Morality of War* (New York: Broadview Press, 2013), 136.

¹⁷⁹ Nasser Karimi and Jon Gambrell, “Iran Shoots Down US Surveillance Drone, Heightening Tensions,” *AP News*, 20 June 2019, accessed 18 December 2019, <https://apnews.com/e4316eb989d5499c9828350de8524963>.

merchants, it failed to bring European powers into the conflict or coerce the North to abandon the war. In fact, in an April 1862 letter to Mallory, James Bulloch recommended a shift to defensive naval efforts as the *Sumter* was causing concerns among the “commercial classes in Europe.”¹⁸⁰ Bulloch’s apprehension revealed the tension in the South’s naval strategy. How could the Confederacy damage Northern commerce without disrupting its relationships with neutral powers? To balance these concerns, Semmes safeguarded neutral shipping and cargo. Since this forced him to ransom vessels he otherwise could have burned, it reduced his tactical effectiveness. At the same time, neutral commerce captains soon benefited once American merchants began selling their ships. This in turn resulted in less targets for Semmes, which ultimately reduced the impact of commerce raiding over time. Ultimately, in the case of Civil War commerce raiding, the law of diminishing returns meant the South’s strategic goals were time sensitive.

Another key factor was that Northern merchants represented only a small part of the Union. In addition, these traders hailed mostly from the American northeast, which was heavily abolitionist. As a result, public pressure on Washington failed to convince Welles to significantly weaken the blockade to combat commerce raiding. In fact, in 1863, even though Welles dispatched a total of seventy-seven Union warships and twenty-three other vessels to hunt raiders, the blockade remained intact.¹⁸¹ Ultimately, Semmes’s exploits demonstrated one of the most critical factors in military planning. While a commander can achieve operational or tactical success, they can fail to accomplish their strategic objectives.

This fact highlights the critical role of both assumptions and options in the success of operational art. Just as Napoleon *assumed* the Tsar would sue for peace, the Confederate leadership *assumed* England and France would readily support their cause. In fact, Stephen

¹⁸⁰ Bulloch to Mallory, 11 April 1862, in *OR*, series II, 2:184.

¹⁸¹ Tucker, “CSS *Alabama* and Confederate Commerce Raiders During the U.S. Civil War,” 86.

Mallory expressed “astonishment” as to England’s hesitancy.¹⁸² In addition, for Mallory and Semmes, what were their other options if commerce raiding failed? If raiding proved ineffective, then what? Clearly, erroneous assumptions, and the lack of contingencies, can doom military operations.¹⁸³

While it is easy to look back on Semmes’s operational approach and identify its faults, the German military theorist, Carl von Clausewitz, argued that discovering “why a campaign failed is not the same thing as to criticize it.”¹⁸⁴ Moreover, Clausewitz pointed out that judging a commander based on the result alone is not “evidence of human wisdom.”¹⁸⁵ Indeed, while hindsight tends to bring things into focus, forward-looking planners often see a vast territory of unknowns.¹⁸⁶ Consequently, operational art requires assumptions. If these prove inaccurate, they add to the fog and friction already inherent in military operations. History shows that the results can be catastrophic.

Even so, small changes can dramatically affect the course of events. Scientific research proves that minor alterations of initial conditions can lead to significant effects over time. In other words, “little things [can] add up in unpredictably big ways.”¹⁸⁷ For Semmes, who could have predicted that the CSS *Sumter*, a ship deemed worthless, would successfully take the Civil War to the high seas. On the other hand, if the *Brooklyn* had been several knots faster, or the wind had shifted, the greatest admiral of the 19th century might have been stopped before he even started.

¹⁸² Bulloch, *The Secret Service of The Confederate States in Europe or, How The Confederate Cruisers Were Equipped*, 166.

¹⁸³ US Department of Defense, Joint Staff, Joint Doctrine Note 1-18, *Strategy* (Washington, DC: Government Printing Office, 2018), 1-18, IV-3, accessed 7 November 2019, https://www.jcs.mil/Portals/36/Documents/Doctrine/jdn_jg/jdn1_18.pdf?ver=2018-04-25-150439-540.

¹⁸⁴ Carl von Clausewitz, *On War*, ed. and trans. Peter Paret and Michael Howard (Princeton: Princeton University Press, 1984), 627.

¹⁸⁵ *Ibid.*

¹⁸⁶ John Lewis Gaddis, *The Landscape of History: How Historians Map the Past* (New York: Oxford University Press, 2002).

¹⁸⁷ John Lewis Gaddis, *On Grand Strategy* (London: Penguin Press, 2018), 13.

Instead, over the next two years, Semmes painted one of the most famous pictures of operational art in American history.

Bibliography

Primary Sources

- Bulloch, James D. *The Secret Service of The Confederate States in Europe or, How The Confederate Cruisers Were Equipped*. New York: Modern Library, 2001.
- Kell, John McIntosh. *Recollections of a Naval Life*. Washington, DC: The Neale Company, 1900.
- Naval War Records Office. *The War of the Rebellion: Official Records of the Union and Confederate Navies*. Series I, 27 Vols., Series II, 3 Vols. Washington, DC: Government Print Office, 1894-1922.
- Semmes, Raphael. *Memoirs of Service Afloat during the War Between the States*. Baton Rouge: Louisiana State University Press, 1868.
- . *The Confederate Raider Alabama*. Edited by Philip Van Doren Stern. Bloomington: Indiana University Press, 1962.
- Sinclair, Arthur. *Two Years on the Alabama*. Lexington, KY: CreateSpace Independent Publishing Platform, 1896.
- Welles, Gideon. *The Civil War Diary of Gideon Welles: Lincoln's Secretary of the Navy*. Edited by William E. Gienapp and Erica L. Gienapp. Chicago: University of Illinois Press, 2014.

Secondary Sources

- American Battlefield Trust. "The Navies of the Civil War." American Battlefield Trust. 15 December 2008. Accessed 30 January 2020. <https://www.battlefields.org/learn/articles/navies-civil-war>.
- American Civil War. "CSS *Arkansas* Civil War Confederate Naval Ship." American Civil War. Accessed 30 January 2020. https://americancivilwar.com/tcwn/civil_war/Navy_Ships/CSS_Arkansas.html.
- Bennett, John D. *The London Confederates: The Officials, Clergy, Businessmen and Journalists Who Backed the American South During the Civil War*. Jefferson, NC: McFarland and Company, 2008.
- Blythe Jr., Wilson C. "A History of Operational Art." *Military Review* (November-December 2018): 37-49. Accessed 25 January 2020. <https://www.armyupress.army.mil/Journals/Military-Review/English-Edition-Archives/November-December-2018/Blythe-Operational-Art/>.
- Boaz, Thomas M. *Guns for Cotton: England Arms the Confederacy*. Shippensburg, PA: Burd Street Press, 1996.
- Bradley, Paul F. "Raphael Semmes' Later Career." *America's Civil War* 12, no. 1 (March 1999): 39.

- Calore, Paul. *Naval Campaigns of the Civil War*. Jefferson, NC: McFarland and Company, 2002.
- Canfield, Eugene B. "Alabama's Defeat Was No Surprise." *Naval History* 18, no. 4 (August 2004): 43-46.
- Clausewitz, Carl von. *On War*. Edited and Translated by Peter Paret and Michael Howard. Princeton: Princeton University Press, 1984.
- Cockerham, Lynnwood. "Raphael Semmes: A Leadership Study." Report, Air Command and Staff College, Maxwell AFB, AL, 1986.
- Corbett, Julian S. *Some Principles of Maritime Strategy*. Annapolis, MD: US Naval Institute Press, 1988.
- DeKay, James Tertius. *The Rebel Raiders: The Astonishing History of the Confederacy's Secret Navy*. New York: Ballantine Publishing Group, 2002.
- Delaney, Norman C. "At Semmes's Hand." In *Raiders and Blockaders: The American Civil War Afloat*. Edited by William N. Still, 123-130. Washington, DC: Brassey's, 1998.
- . "The Alabama's Bold and Determined Man." *Naval History* 25, no. 4 (August 2011): 18-25.
- . "The Firing Here Became Continual" *Naval History* 30, no. 3 (June 2016): 48-54.
- Dudley, Wade G. "Confederate Raider Raphael Semmes: Catch Me If You Can!" Historynet.com. Accessed 18 August 2019. <http://www.historynet.com/confederate-raider-raphael-semmes-catch-me-if-you-can.htm>.
- Durkin, Joseph T. *Confederate Navy Chief: Stephen Mallory*. Columbia: University of South Carolina Press, 1954.
- Eckstein, Megan. "Sea Hunter USV Will Operate With Carrier Strike Group, As SURFDEVRON Plans Hefty Testing Schedule." *USNI News*, 21 January 2020. Accessed 30 January 2020. <https://news.usni.org/2020/01/21/sea-hunter-usv-will-operate-with-carrier-strike-group-as-surfdevron-plans-hefty-testing-schedule>.
- Encyclopedia.com. "Confederate Navy." *The Oxford Companion to American Military History*. 2000. Accessed 18 August 2019. <https://www.encyclopedia.com/social-sciences-and-law/political-science-and-government/military-affairs-nonnaval/confederate-navy>.
- Federal Reserve Bank of Minneapolis. "Consumer Price Index, 1800-." Accessed 25 January 2020. <https://www.minneapolisfed.org/about-us/monetary-policy/inflation-calculator/consumer-price-index-1800->.
- Feuer, Bud. "Raphael Semmes and the Battle Off Cherbourg." *Sea Classics* 50, no. 8 (August 2017): 52-64.
- Fox, Stephen. *Wolf of the Deep: Raphael Semmes and the Notorious Confederate Raider CSS Alabama*. New York: Alfred A. Knopf, 2007.

- Gabel, Christopher R. *The Vicksburg Campaign: November 1862-July 1863*. Washington, DC: Center of Military History, 2013.
- Gaddis, John Lewis. *The Landscape of History: How Historians Map the Past*. New York: Oxford University Press, 2002.
- . *On Grand Strategy*. London: Penguin Press, 2018.
- History.com Editors. "U-2 Spy Incident." History.com. 21 August 2018. Accessed 18 December 2019. <https://www.history.com/topics/cold-war/u2-spy-incident>.
- Ikle, Fred Charles. *Every War Must End*. New York: Columbia University Press, 2005.
- Karimi, Nasser, and Jon Gambrell. "Iran Shoots Down US Surveillance Drone, Heightening Tensions." *AP News*, 20 June 2019. Accessed 18 December 2019. <https://apnews.com/e4316eb989d5499c9828350de8524963>.
- Larter, David B. "DARPA's Latest Mad Science Experiment: A Ship Designed to Operate Completely without Humans." *Defense News*, 21 January 2020. Accessed 30 January 2020. https://www.defensenews.com/naval/2020/01/21/darpas-latest-mad-science-experiment-a-ship-designed-completely-without-humans/?utm_campaign=Social+flow+NAV&utm_source=facebook.com&utm_medium=social.
- . "US Navy and Boeing Use Manned Jet to Control Drone Growlers." *Defense News*, 4 February 2020. Accessed 5 February 2020. <https://www.c4isrnet.com/naval/2020/02/04/us-navy-and-boeing-demonstrate-controlling-unmanned-aircraft-with-a-manned-jet/>.
- . "The US Navy's New Autonomous Refueling Drone Takes Historic First Flight." *Defense News*, 20 September 2019. Accessed 5 February 2020. <https://www.defensenews.com/naval/2019/09/19/the-us-navys-new-autonomous-refueling-drone-takes-historic-first-flight/>.
- Linn, Brian. *The Echo of Battle: The Army's Way of War*. Cambridge, MA: Harvard University Press, 2007.
- Luraghi, Raimondo. *A History of the Confederate Navy*. Translated by Paolo E. Coletta. Annapolis, MD: Naval Institute Press, 1996.
- Mahan, Alfred Thayer. *The Influence of Sea Power Upon History: 1660-1783*. Boston: Little, Brown and Company, 1890.
- Marvel, William. *The Alabama and the Kearsarge: The Sailor's Civil War*. Chapel Hill: The University of North Carolina Press, 1996.
- McLeary, Paul. "All 6 East Coast Carriers In Dock, Not Deployed: Hill Asks Why." *Breaking Defense*, 28 October 2019. Accessed 20 December 2019. <https://breakingdefense.com/2019/10/all-6-east-coast-carriers-are-at-the-dock-hill-presses-for-oversight/>.
- McPherson, James M. *War on the Waters: The Union and Confederate Navies, 1861-1865*. Chapel Hill: The University of North Carolina Press, 2012.

- Merli, Frank J. *The Alabama, British Neutrality, and the American Civil War*. Edited by David M. Fahey. Bloomington: Indiana University Press, 2004.
- Morris, Graham J. "The Battle of Königgrätz." *Battlefield Anomalies*. January 2003. Accessed 30 January 2020. <https://battlefieldanomalies.com/the-battle-of-koniggratz-2/>.
- Naval Technology. "Sea Hunter: Inside the US Navy's Autonomous Submarine Tracking Vessel." *Naval Technology*, 3 May 2018. Accessed 20 December 2019. <https://www.naval-technology.com/features/sea-hunter-inside-us-navys-autonomous-submarine-tracking-vessel/>.
- Newton, Craig. "Inside Semmes." *Naval History* 7, no. 2 (Summer 1993): 6.
- Nolan, Cathal J. *The Allure of Battle: A History of How Wars Have Been Won and Lost*. New York: Oxford University Press, 2017.
- Olsen, John Andreas, and Martin Van Creveld, eds. *The Evolution of Operational Art: From Napoleon to the Present*. Oxford: Oxford University Press, 2011.
- Orend, Brian. *The Morality of War*. New York: Broadview Press, 2013.
- Penney, Joe. "C.I.A. Drone Mission, Curtailed by Obama, Is Expanded in Africa Under Trump." *The New York Times*, 9 September 2018. Accessed 21 December 2019. <https://www.nytimes.com/2018/09/09/world/africa/cia-drones-africa-military.html>.
- Prickitt, Jeffrey W. "The Leadership of John A. Winslow and Raphael Semmes: A Comparative Case Study." Masters Thesis, US Army Command and General Staff College, Ft. Leavenworth, KS, 2018.
- Roberts, William H. *Now for the Contest: Coastal and Oceanic Naval Operations in the Civil War*. Lincoln: University of Nebraska Press, 2004.
- Robinson, Charles M. *Shark of the Confederacy: The Story of the CSS Alabama*. Annapolis, MD: Naval Institute Press, 1995.
- Schneider, James J. "Vulcan's Anvil: The American Civil War and the Foundations of Operational Art." School of Advanced Military Studies Theoretical Paper No. Four, Fort Leavenworth, KS, 1992.
- Spencer, Warren F. *Raphael Semmes: The Philosophical Mariner*. Tuscaloosa: The University of Alabama Press, 1997.
- . *The Confederate Navy in Europe*. Tuscaloosa: The University of Alabama Press, 1983.
- Sprang, Ronald W. "The Evolution of Russian Operational Art." *Small Wars Journal*. Accessed 30 January 2020. <https://smallwarsjournal.com/jrnl/art/evolution-russian-operational-art>.
- Still Jr., William N., ed. *The Confederate Navy: The Ships, Men and Organization, 1861-65*. Annapolis, MD: Naval Institute Press, 1997.
- Stoker, Donald. *The Grand Design: Strategy and the US Civil War*. New York: Oxford University Press, 2010.

- Surdam, David George. "Northern Naval Superiority and the Economics of the American Civil War." Doctoral Dissertation, University of Chicago, Chicago, IL, 1994. Reprint, Ann Arbor: UMI, 1995.
- Sutton, H. I. "First Navy Submarine Resupplied By Commercial Drone." *Forbes*, 29 October 2019. Accessed 21 December 2019. <https://www.forbes.com/sites/hisutton/2019/10/29/navy-submarine-resupplied-by-commercial-drone/#4538cb9ee08f>.
- Svechin, Aleksandr A. *Strategy*. Edited by Kent D. Lee. Minneapolis, MN: East View Publications, 1992. Original printing 1927.
- Swain, Richard M. "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. 147-172. Westport, CA: Praeger, 1996.
- Symonds, Craig. *The Civil War at Sea*. Santa Barbara, CA: ABC-CLIO, 2009.
- Taylor, John M. *Confederate Raider: Raphael Semmes of the Alabama*. Washington, DC: Brassey's, 1994.
- . "Defiance: Raphael Semmes of the Alabama." In *Raiders and Blockaders: The American Civil War Afloat*. Edited by William N. Still, 23-34. Washington, DC: Brassey's, 1998.
- . "Neutral Schmootral!" *Civil War Times* 42, no. 4 (October 2003): 36.
- . *Semmes: Rebel Raider*. Washington, DC: Brassey's, 2004.
- . "Showdown Off Cherbourg." In *Raiders and Blockaders: The American Civil War Afloat*. Edited by William N. Still, 166-182. Washington, DC: Brassey's, 1998.
- Tucker, Spencer C. *A Short History of the Civil War at Sea*. Lanham, MD: Rowman and Littlefield, 2002.
- . "CSS *Alabama* and Confederate Commerce Raiders during the U.S. Civil War." In *Commerce Raiding: Historical Case Studies, 1755-2009*. Edited by Bruce A. Elleman and S. C. M. Paine, 73-88. Newport, RI: US Naval War College, 2013.
- . *Raphael Semmes and the Alabama*. Abilene, TX: McWhiney Foundation Press, 1998.
- US Department of Defense, Joint Staff. Joint Doctrine Note 1-18, *Strategy*. Washington, DC: Government Printing Office, 2018. Accessed 7 November 2019. https://www.jcs.mil/Portals/36/Documents/Doctrine/jdn_jg/jdn1_18.pdf?ver=2018-04-25-150439-540.
- . Joint Publication (JP) 3-0, *Joint Operations*. Washington, DC: Government Printing Office, 2017.
- . Joint Publication (JP) 5-0, *Joint Planning*. Washington, DC: Government Printing Office, 2017.
- US Department of the Navy. Naval Doctrine Publication (NDP) 1, *Naval Warfare*. Washington, DC: Government Printing Office, 2010.

- Vego, Milan. *Operational Warfare at Sea: Theory and Practice*. New York: Routledge, 2009.
- Veit, Chuck. "How the U.S. Navy Won the American Civil War." The Navy and Marine Living History Association. 2004. Accessed 18 August 2019. <https://www.navyandmarine.org/historicalref/HowNavyWonWar.htm>.
- Watts, Gordon P. "Investigation of the Confederate Commerce Raider CSS *Alabama* 2001." CSS Alabama Association. 11 November 2001. Accessed 19 August 2019. <http://mua.apps.uri.edu/alabama/reports/ala2k1.PDF>.
- Wawro, Geoffrey. *The Franco-Prussian War: The German Conquest of France in 1870-1871*. New York: Cambridge University Press, 2003.
- Werner, Ben. "House, Senate Defense Bill Signs Off on New Shipbuilding Programs, Restricts Others." *USNI News*, 10 December 2019. Accessed 2 February 2020. <https://news.usni.org/2019/12/10/house-senate-defense-bill-signs-off-on-new-shipbuilding-programs-restricts-others>.

