

Changing Tides:
The Importance of the Navy in the American Civil War

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Abstract

This paper will provide much deserved attention and recognition to the efforts of the Navy during the American Civil War. This is a topic that does not get enough study for how influential it was. The Navy proved instrumental both in the outcome of the War itself and in the implementation of a new form of modern naval warfare. Through the study of records on topics such as the blockade, river warfare, ironclads, submarines and torpedos, this paper will prove that the Navy was an important aspect of the American Civil War that deserves far more credit than it is given.

Table of Contents

Acknowledgements.....4

Introduction.....5

Part 1: The Blockade.....7

Part 2: Rivers.....17

Part 3: Ironclads.....27

Part 4: Submarines and Torpedos.....37

Conclusion.....45

Bibliography.....47

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Introduction

The navy has always been an important part of America's military. The American Civil War, from 1861 to 1865, was the setting for some of the most important naval actions and strategies in the country's history. Before that time, there were no studies on naval strategies and tactics, so the navy during the Civil War was responsible for setting patterns of strategies and introducing new means of fighting wars on the water.¹ It did its job wonderfully, and helped the Union to win the war, in addition to setting precedents for future wars. At the beginning of the war, the Union Navy had only 42 ships in service. Within a year, the Navy had grown to around 300 ships.² This navy proved its strength and influence consistently over the course of the War. However, historians and the public, then and now, give most credit and recognition to the Army, its generals, and the battles that were fought on the land. Without the navy, the Union could not have won the war. In addition, the navy tested and improved upon several technological advancements, which gave the American Civil War the title of the first modern war.

The strategies used by the Union Navy provided the means for winning the war. President Abraham Lincoln called for the establishment of a naval blockade in 1861 that stretched across the Southern coastline and would cut off the South from the outside world. This blockade, and the Confederacy's inability to break it, led to a shortage of supplies and resources that would cripple the South's economy. Without the effects of the navy's blockade, the Union would not have won the war as easily as it did. In addition to the blockade, the Union established

¹ Bern Anderson, "The Naval Strategy of the Civil War," *Military Affairs* 26, no. 1, (1962), 11.

² Anderson, "The Naval Strategy of the Civil War," 13.

a plan for taking control of several major rivers that the Confederacy depended on for travel and the transport of supplies. This Anaconda Plan aided the blockade in cutting the South off and furthered the shortages that ultimately led to the Union's victory. The ability of the navy to carry out these strategies effectively proved instrumental to the Union's war efforts, and is part of the reason the navy deserves more recognition for its actions.

Another key factor in the importance of the navy during the American Civil War was its use of technological advancements. The introduction of ironclads, submarines, and marine torpedos revolutionized naval warfare, and forever changed how wars were fought at sea. The battle at Hampton Roads, which was the first fought between two ironclads, served to prove the immense power and superiority of this class of warship. Although this battle sparked contention among critics of modern warfare, ironclads soon became a staple weapon in navies around the world. Similarly, the Confederacy's use of submarines and torpedos introduced a new way of fighting that was incredibly deadly and very difficult to counter. Combining the importance of introducing new means of naval warfare with that of the implementation of the blockade and the Anaconda Plan, the naval side of the American Civil War showed how monumental an effect it had on the War itself and on how future wars would be fought.

Part 1: The Blockade

The Union's main naval strategy during the American Civil War was a blockade that stretched along the coastline and cut the Confederacy off from the outside world. This blockade was an influential part of the war, as it dictated the main naval goals on both sides. The Union's success with the blockade, as well as the effects it had on the Confederacy, was the biggest cause of the Union's eventual victory. By providing the means of carrying out this instrumental strategy, the Navy asserted itself as a powerful and necessary component of the American Civil War.

One crucial aspect of the Union's naval strategy during the American Civil War was the use of a blockade off the coast of the United States. The blockade required incredible amounts of Union organization, as it would have to use hundreds of ships to cover a coastline that stretched for thousands of miles. The Navy had never attempted the sheer level of tactical and strategic planning that went into pulling off this blockade, which would effectively cut off the Confederacy by sea.³ The proclamation issuing the order to create the blockade by President Abraham Lincoln provided both sides of the war with their main naval tasks. The Union approached this task through the creation of the Strategy Board in 1861. This Strategy Board provided key strategic ideas for the Union Navy, and helped to decide how it would approach the establishment of the blockade. The Confederacy attempted to breach the Union's blockade using blockade-runners. However, this strategy met many challenges, such as insufficient cargo and internal espionage. In addition to the challenge of preventing blockade-runners from breaking through its defenses, the Union Navy also had to endure hardships such as harsh weather conditions and diseases. Overall, the blockade was very effective and deserves more attention from historians, teachers, and popular memory.

Historians have claimed that the decision to implement the blockade was mainly political in nature, and came in direct retaliation to a proclamation by the president of the Confederacy, Jefferson Davis. This proclamation called for "volunteers to take out letters of marque, the privateers of our earlier wars, to prey on Northern commerce at sea."⁴ Lincoln retaliated against this threat by issuing his own proclamation to establish the blockade and treat any ship

³ Gordon Calhoun and Becky Poulliot, "Civil War at Sea," *The Daybook*, (The Hampton Roads Naval Museum), 4.

⁴ Anderson, "The Naval Strategy of the Civil War," 12.

attempting to carry out Davis' orders under the laws of piracy.⁵ In this proclamation, Lincoln stated:

If, therefore, with a view to violate such blockade, a vessel shall approach, or shall attempt to leave either of the said ports, she will be duly warned by the commander of one of the blockading vessels, who will endorse on her register the fact and date of such warning, and if the same vessel shall again attempt to enter or leave the blockaded port, she will be captured and sent to the nearest convenient port, for such proceedings against her and her cargo as prize as may be deemed advisable.⁶

Thus, the reason for implementing the blockade was both political and economic, as Lincoln issued it out of political retaliation and it carried with it the hopes of economic destruction of the Confederacy. Lincoln's proclamation effectively made it the main task of the Union Navy to establish and maintain the blockade, and in so doing made the main task of the Confederate Navy breaking or getting around the blockade.⁷ The Union approached their task of creating and supporting the blockade by establishing a board of men to develop a Union strategy.

The "Blockade Board," or the "Strategy Board," as it was sometimes called, was established on June 25, 1861 in response to the Union's need to plan how it was going to go about establishing this blockade. The Strategy Board was comprised of four men who met almost daily in the Smithsonian Institution in Washington.⁸ The Board's main purpose was to brainstorm ideas on how the blockade could be effectively established and maintained. To this end, the Board was relatively successful, and several of their ideas were eventually incorporated

⁵ Anderson, "The Naval Strategy of the Civil War," 12.

⁶ Abraham Lincoln, "Proclamation by the President of the United States of America on Blockade of Confederate Ports," *Library of Congress*, (18 April, 1861), <https://www.loc.gov/resource/lprbcsesm.scs0582/>.

⁷ Anderson, "The Naval Strategy of the Civil War," 12-13.

⁸ Calhoun and Poulliot, "Civil War at Sea," 5.

in to the Union's strategic plans.⁹ In a report written to Secretary of the Navy Gideon Welles, the Board wrote that: "One of the results of our study of the Southern Atlantic coast of the United States in reference to its blockade is to recommend that it be divided into two sections..."¹⁰ By dividing the blockade into different sections, the Board made it easier for the Union to cover the coastline effectively. The recommendations of the Strategy Board would not only provide a means for the Union to establish and maintain its blockade, but would simultaneously remove strategic ports along the coast from Confederate control. These key ports included Hatteras Inlet, Port Royal, Ship Island, and the Head of Passes.¹¹ In an example of why these seizures would be important, the Board wrote that: "the naval power that commands the coast of Georgia will command the State of Georgia. For what would be the means and resources of the government of the State of Georgia in the hands of rebels if its peculiar productions could only find a market by passing through the hands of its loyal citizens..."¹² If the Union controlled key ports along the coast, the hope of the Strategy Board was that it would inevitably control the rebel states themselves. The capture of these ports by the Union Navy was an impressive show of naval force to say the least, and set the Union on its path to victory.

The seizure of strategic ports along the Confederate coastline proved to be key both to establishing the Union's blockade, and also to its overall success in the American Civil War. The first port that the Union attacked was Hatteras Inlet, a target suggested by the Strategy Board itself. Lieutenant Selfridge reported that at Hatteras Inlet, "they have a fortification that protects them from assault... So long as these remain it will be impossible to entirely prevent their

⁹ Calhoun and Poulliot, "Civil War at Sea," 5.

¹⁰ S. F. Du Pont et al., "July 16, 1861," in *Official Records of the Union and Confederate Navies in the War of the Rebellion*, vol. 12, (Harrisburg: National Historical Society, 1987), 198.

¹¹ Anderson, "The Naval Strategy of the Civil War," 13.

¹² S. F. Du Pont et al., "July 26, 1861," in *Official Records*, vol. 12, 205.

depredations, for they do not venture out when men-of-war are in sight...”¹³ The capture of this specific port on August 29, 1861 was monumental for the Union Navy. The operation was the first of its kind, as ships would try to defeat shore fortifications.¹⁴ Selfridge suggested that a “fleet of steamers enter the inlet... In three weeks there will not be a vessel left that can be productive of harm.”¹⁵ Selfridge’s suggestion to attack the fortifications by water was successful. The attack and capture of Hatteras Inlet set a precedent for future operations and added to the Union’s strategic arsenal. In fact, one such future operation was the attack on Port Royal, another port that the Union captured in response to the suggestion of the Strategy Board. While the attack on Hatteras Inlet was accomplished using naval bombardments in addition to land attacks, the capture of Port Royal was achieved using naval bombardments alone.¹⁶ The capture of these two ports, along with others along the coast, not only helped to establish an effective blockade for the Union, but also demonstrated the immense power and strength of the Navy. In addition to establishing the blockade, the Union also faced the challenge of maintaining it.

Blockade-runners were the Confederacy’s main hope of being able to circumvent the Union’s blockade. However, the blockade-runners’ cargo did not lend itself well to their purpose. The ships used by blockade-runners had a very small carrying capacity, which meant that they were unable to carry an adequate amount of goods to support the export of cotton.¹⁷ As cotton was the main source of Southern revenue, the blockade-runners’ limited capacity to ship the good actually aided the Union by harming the Confederate economy. In addition to this limitation, the goods carried back to the south by the blockade runners often consisted of

¹³ Thos. O. Selfridge, “August 10, 1861,” in *Official Records of the Union and Confederate Navies in the War of the Rebellion*, vol. 6, (Harrisburg: National Historical Society, 1987), 72.

¹⁴ Anderson, “The Naval Strategy of the Civil War,” 14.

¹⁵ Selfridge, “August 10, 1861.”

¹⁶ Anderson, “The Naval Strategy of the Civil War,” 14.

¹⁷ David Cunningham, “The Naval Blockade: A Study of Factors Necessary for Effective Utilization,” (Kansas State University, 1975), 55.

expensive luxury items for southern aristocracy, rather than necessary goods and resources.¹⁸ These imports did nothing to support the Confederacy's war efforts, which would have benefited greatly from imported goods such as weapons, clothing, food, and other greatly needed materials. One blockade running ship, the *Denbigh*, was among the few that actually brought in supplies that would be useful to the war effort. Major W. B. B. Cross wrote that the ship "has fortunately just arrived at Mobile with a large lot of shoemakers' tools and findings," which would be used to increase production of shoes for soldiers in the army.¹⁹ The *Denbigh*, and others like her, were examples of how blockade running could aid the Confederacy in procuring the needed materials to boost the war effort. However, the fact that a vast majority of blockade-runners failed to aid the Confederacy through imports added to the overall success of the Union blockade by creating a shortage of much needed supplies. Along with the inefficiency of blockade-runners' choices of cargo, the ships also had to deal with the inevitability of running into the Union ships that were maintaining the blockade.

Although the efforts of the blockade-runners were ultimately unsuccessful, many were able to get through Union defenses. Several runners were captured on their first attempt at getting through the blockade, but others were able to build the skills necessary to repeatedly make their way through.²⁰ These successful runs demonstrated that effective blockade running was possible, but required skill and determination. An estimated 250 blockade runners successfully avoided detection or capture in Florida alone.²¹ Several of these were narrow escapes. *The Galveston Weekly News*, a newspaper published in Houston, Texas, covered one such run. The article stated that "a blockade steamer arrived that had been chased by gunboats

¹⁸ Cunningham, "The Naval Blockade," 55.

¹⁹ W. B. B. Cross, "April 15, 1864," <https://nautarch.tamu.edu/PROJECTS/denbigh/disp01.htm>.

²⁰ Anderson, "The Naval Strategy of the Civil War," 17.

²¹ Robert Davidsson, "Civil War Blockade-Running at Jupiter Inlet: 1861-1865," (2015), 16.

since 5 o'clock in the morning. She passed boldly through the fleet several vessels firing at her - in all, 150 shots. She was struck four times, and had to throw all her cargo overboard."²² This report clearly demonstrated the dangers faced by blockade-runners. However, capture by Union ships were not the only thing that threatened Confederate blockade-runners.

In addition to the looming threat of confrontation by a Union blockade ship, sailors aboard Confederate blockade-runners faced a new threat; espionage and sabotage. A newspaper published in February of 1865 included a quote from a private letter of a sailor on a blockade-runner, which read: "I am of the opinion that during this winter, blockade runners will have more to fear from enemies in their own crews than they will have from the blockading fleet. Hundreds of Yanks are now here, and I suspect that it is a settled plan to capture vessels by a stratagem at sea."²³ The newspaper credited these Union spies with the destruction of three Confederate steamers, and wrote that: "We should never forget that treachery, falsehood and deception are the peculiar characteristics of Yankees, and we believe we have more to fear from these traits than from all their power in open and honorable war."²⁴ This strategy of sabotage by the Union, intended to counteract the blockade runners, introduced a new means of reinforcing the blockade, and forced Confederate ships to be more cautious about who they let on board. While several attempts to break through the Union's forces were successful, the blockade was ultimately too strong for the Confederacy to overcome, eventually cutting it off almost completely from the outside world.

The Union blockade, the initial goal of which was to cut the South off from overseas trading, carried with it several unforeseen consequences for the Union. The blockade was a

²²"Galveston, April 2, 1865," *Galveston Weekly News*, (5 April, 1865), <https://nautarch.tamu.edu/PROJECTS/denbigh/News05.htm>.

²³ *Galveston Weekly News*, (15 February 1865), <https://nautarch.tamu.edu/PROJECTS/denbigh/news03.htm>.

²⁴ *Galveston Weekly News*.

crucial part of the Union's strategy during the War, and brought much needed recognition to the Navy, but the extent to which it influenced the overall War is monumental. In fact, not until after the blockade had effectively crushed the Southern economy did the Union Army start scoring major victories.²⁵ By weakening the Southern economy, the blockade succeeded not only in cutting them off from much needed supplies, but also gave a substantial advantage to Union land forces. However, some effects of the blockade were not so friendly towards the Union. For instance, the unpredictable nature of the sea added an element of danger for Union ships. Captain Chauncey wrote in a report to Gideon Welles that: "Yesterday, a heavy gale springing up from the southeast making this a dry exposed anchorage, I judged it prudent to proceed to sea during the violence of the gale."²⁶ Dangerous and unpredictable weather and sea conditions forced Chauncey's and other ships to relocate and abandon their positions in the blockade. Clearly, maintaining the blockade was not quite as simple as sitting on a boat in the middle of the ocean. In addition to this, some ships such as the USS *Honeysuckle* faced outbreaks of diseases like yellow fever while on duty in the blockade.²⁷ One ship, the U.S. bark *Roebuck*, came into contact with the *Honeysuckle*, and saw cases of yellow fever increase rapidly. Acting Master of the ship William Martine wrote that while cases on board had been very low before the meeting with the *Honeysuckle*, "The same night we left, about 12 or 1 o'clock, two men were attacked, and before night again we had 6 cases."²⁸ These cases rose rapidly over the next few days. However, getting supplies to ships in general was a Union strength, and Martine wrote in his report that he was able to get assistance and medical supplies to help control the outbreak.²⁹

²⁵ Anderson, "The Naval Strategy of the Civil War," 20.

²⁶ Jno. S. Chauncey, "September 28, 2861," in *Official Records*, vol. 6, 262.

²⁷ Davidsson, "Civil War Blockade-Running," 16.

²⁸ Wm. L. Martine, "September 28, 1864," in *Official Records of the Union and Confederate Navies in the War of the Rebellion*, vol. 17, (Harrisburg: National Historical Society, 1987), 761.

²⁹ Martine, "September 28, 1864."

The Union blockade was an astounding accomplishment for the North, and a source of much frustration for the South. The strategy itself was well developed by the Union through the use of the Strategy Board, a group of four men who provided inspiration for much of the blockade. This included the capture of key ports along the Southern coastline, including Hatteras Inlet, Port Royal, and others, which led to the seizure of more and more ports and eventually allowed the Union to sever any meaningful contact the South had with the outside world. The Confederacy's use of blockade-runners prevented complete loss of contact, to varying degrees of success. Several blockade-runners were able to sail past the Union blockade with the hopes of trading with foreign countries. These blockade-runners, however, faced challenges such as limited carrying capacity, low cash flow from cotton, and subpar importation of necessities such as food, clothing, and weapons. The shortages caused by this lack of effective trade crippled the Confederacy. In addition to this, many blockade-runners were sabotaged by Union sailors in disguise, a new threat that forced an extra level of caution on Confederate ships. For the Union, some unavoidable hardships of maintaining the blockade included unpredictable weather and disease, which spread rapidly through ships. Overall, the Union's blockade introduced several key characteristics of a successful blockade, including the capture and possession of strategic ports, the need for superior sea power, control of blockade-runners, the ability to resupply blockading forces, and several others.³⁰ The Union blockade was not only successful in advancing the North's war efforts during the American Civil War, but also in providing guidelines and precedents for future uses of blockades around the world. The blockade, which became the Union's main naval strategy during the American Civil War, was one of the most

³⁰ Cunningham, "The Naval Blockade," 61-62.

prominent reasons for the victory of the North, proving that a strong Navy was crucial for success.

Part 2: Rivers

In addition to the blockade, the Union's main naval strategy in the American Civil War hinged on its use of rivers. Since the Confederacy depended heavily on the rivers as a source of fast travel and the shipment of goods and resources, the Union could easily cripple the South by gaining control of these inland waterways. By gaining control of the rivers, the Union secured its eventual victory in the overall war. As with the blockade, the navy's success on the rivers proved instrumental in the defeat of the Confederacy.

The main part of the Union's Anaconda Plan focused on the use of rivers such as the Mississippi and the Tennessee, which proved to be incredibly important to both the Confederacy and the Union. The Confederacy depended on the rivers to act as a system of transportation, while the Union resolved to take away this system and thereby choke out the South. At the time, success of the Union on the rivers caused much celebration and a call for future generations to acknowledge the monumental impact of the Union navy. However, historians of naval warfare highlight how the undoubted success came with significant struggles. In particular, the Union Navy faced rampant disease and the unpredictable rising and falling of the rivers. In addition to this, the Union Navy encountered stiff resistance from the Confederacy in locations such as Vicksburg, the capture of which allowed the Union to take full control of the rivers and ultimately contributed to a Union victory.

The Union blockade, which was positioned to cut off the entire Southern coast, was eventually incorporated into the Union's famous "Anaconda Plan." This plan, proposed by General Winfield Scott, was intended to expand the blockade up the Mississippi River, essentially surrounding and constricting the South through the use of rivers, much like a snake. By combining the use of rivers with the already established blockade, the Anaconda Plan allowed the Union to contain and weaken the South considerably.³¹ Scott initially drafted this plan, which was central to Union victory, in March of 1861 as a means of avoiding what he referred to as an "enormous waste of human life."³² While Scott's hope of avoiding excessive bloodshed was dashed, his Anaconda Plan became one of the most successful strategies of the War.

³¹ Anderson, "The Naval Strategy of the Civil War," 15.

³² qtd in Calhoun and Poulliot, "Civil War at Sea," 4.

Rivers were a large part of the Union's naval strategy during the American Civil War, and had a monumental impact on its outcome. When the war started, the Confederacy used rivers as natural highways for internal transportation of supplies and troops. As such, the Union's plan to gain control of these waterways was a logical move that would extend the effects of the blockade.³³ In fact, the rivers were the source of some of the most intense fighting of the war. Control of the rivers was important to both sides of the American Civil War. The majority of goods and people were transported using rivers, and most major urban areas in the Confederacy were located along these waterways.³⁴ The developments of river gunboats and steamships enabled the transport of supplies and people on rivers to be much faster than they would be on roads.³⁵ The South's dependency on rivers as means of rapid transportation was exactly the reason the Union wanted to take control of them.

The Union intended to cut off the South's use of the rivers as means of transportation. Rear-Admiral David D. Porter, the Commander of the Mississippi Squadron for the Union, wrote in a report to Secretary of the Navy Gideon Welles that he had "stationed the smaller class of gunboats to keep the banks of the Mississippi clear of guerrillas, who were assembling in force and with a large number of cannon to block up the river and cut off the transports bringing down supplies, reinforcements, and ammunition for the army."³⁶ For the Union, which knew how important the rivers were to the South, it was clear that if access to these rivers was denied, the Confederacy would begin to choke. This constriction of supplies and territory was the main idea of the Anaconda Plan, and it succeeded. Once the Union had taken over control of the rivers,

³³ Cunningham, "The Naval Blockade," 51-52.

³⁴ Calhoun and Poulliot, "Civil War at Sea," 2.

³⁵ Calhoun and Poulliot, "Civil War at Sea," 11.

³⁶ David Porter, "July 4, 1863," in *Official Records of the Union and Confederate Navies in the War of the Rebellion*, vol. 25, (Harrisburg: National Historical Society, 1987), 104.

there was much praise for the navy, whose work was vital to the success of the river campaigns. For instance, David Porter wrote that “Without a watchful care over the Mississippi, the operations of the army would have been much interfered with, and I can say honestly that officers never did their duty better than those who have patrolled the river from Cairo to Vicksburg.”³⁷ At the time, the navy’s contributions to the campaign were highly valued, and they deserve to be so again. The Union, reveling in its success, had high hopes for the implications of its control of the rivers. Gideon Welles wrote:

When the squadrons of the upper and lower Mississippi shall combine, and the noble river be again free to a united people, the nation will feel its integrity restored, and the names of the heroic champions who signalized themselves in this invaluable service will be cherished and honored. Present and future millions on the shores of those magnificent rivers which patriotism and valor shall have emancipated will remember with unceasing gratitude the naval heroes who so well performed their part in these eventful times.³⁸

Those in positions of power looked upon the navy’s success as a means for future celebration. They believed, and correctly so, that the Union’s victory on the rivers would help them succeed in the overall war, and that future generations would still be singing the praises of the Union navy. By allowing the naval aspect of the American Civil War to be overshadowed by land battles, these hopes for future recognition have been buried. Regardless, the battle for control of the rivers was difficult for the Union, and not only in the military sense.

The troubles that the Union faced on the rivers during the American Civil War went beyond battles with the enemy. One such struggle was with disease. As sailors on a ship were traveling together in a confined space for significant periods of time, it was unsurprising that a

³⁷ Porter, “July 4, 1863,” in *Official Records*, vol. 25, 104.

³⁸ Gideon Welles, “July 13, 1863,” in *Official Records*, vol. 25, 110

case of any disease could take entire ships out of commission. In January of 1863, Major-General Rosecrans of the Union Army wrote to Fleet Captain A. M. Pennock to ask for reinforcements from his fleet. Pennock replied, denying the request by writing: “Have but two boats at my disposal. One has smallpox on board and the other has not sufficient motive power to stem the current.”³⁹ Thus, diseases such as smallpox on ships often prevented the sending of reinforcements to areas that needed them. Throughout the war, diseases such as typhoid fever, smallpox, measles, and several others led to the deaths of more troops than gunshots.⁴⁰ On the rivers, the daunting task of fighting the spread and deadly nature of these diseases fell on the USS *Red Rover*, a Confederate ship that the Union seized and converted into the navy’s first hospital ship.⁴¹ The Union designed *Red Rover* to have much better sanitation and air circulation than the other ships in the Union Navy, which helped greatly to prevent the spreading of disease among patients.⁴² The ability of *Red Rover* to travel on the rivers meant that she could go wherever she was needed to treat sick and wounded Union soldiers. *Red Rover*’s dependency on rivers to travel to her patients was another reason Union control of rivers was so important, as she would have safer and faster passage.

In addition to disease, the Union navy also had to face the unpredictability of the rivers it was trying to conquer. For example, during the Red River expedition, Rear-Admiral David Porter and his squadron were trapped when the river they were trying to sail down had fallen when it was predicted to have risen.⁴³ This water level threat was a recurring problem for the Union. Fleet Captain A. M. Pennock wrote in a report to Colonel W. W. Lowe, “I have

³⁹ A. M. Pennock, “January 22, 1863,” in *Official Records*, vol. 24, 11.

⁴⁰ “Red Rover,” *Naval History and Heritage Command*, November 17, 2017.

⁴¹ “Red Rover.”

⁴² “Red Rover.”

⁴³ Anderson, “The Naval Strategy of the Civil War,” 19.

information from pilots and from Captain Fitch that it is impossible for our gunboats to ascend the Tennessee at this time drawing as much water as they do. Captain Fitch has orders to ascend Tennessee with part of his force as soon as rise will permit.”⁴⁴ However, due to the fact that rivers could be unpredictable, it was often unknown how soon the rise of the water would allow ships through. Lieutenant-Commander LeRoy Fitch, for example, upon receiving orders to ascend the Tennessee River as soon as he could, wrote, “Gunboats can not get to Nashville just now; probably there may be water in a few days. Might possibly get within 35 miles of there.”⁴⁵ Fitch’s inability to give an exact time that he could proceed up the river demonstrated that the problem of the rise and fall of the rivers was one that caused unsureness and thus the inability to form an accurate schedule. The unpredictable nature of the rivers, as well as the problem of disease-ridden ships, were troubles that the Union had to face alongside frequent battles with the Confederacy. The site of some of the fiercest fighting on the rivers was Vicksburg.

The fall of Vicksburg in July 1863 was one of the most important and influential victories of the Union Navy. Before it was captured, Vicksburg was the most formidable obstacle faced by the Union in the Mississippi River.⁴⁶ This fact was recognized by the Secretary of the Navy, Gideon Welles, who stated that: “The occupation of the river between Vicksburg and Port Hudson is the severest blow that can be struck upon the enemy, [and] is worth all the risk encountered...”⁴⁷ For the Union, Vicksburg was the only thing standing in the way of gaining control of the Mississippi River, a key aspect of the Anaconda Plan. If the Union could conquer Vicksburg, the Confederacy would not be able to stop it from carrying out its plan to choke the

⁴⁴ A. M. Pennock, “January 1, 1863,” in *Official Records*, vol. 24, 3.

⁴⁵ LeRoy Fitch, “January 1, 1863,” in *Official Records*, vol. 24, 4.

⁴⁶ Calhoun and Poulliot, “Civil War at Sea,” 15.

⁴⁷ Gideon Welles, “Apr 2, 1863,” in *Official Records of the Union and Confederate Navies in the War of the Rebellion*, vol. 24, (Harrisburg: National Historical Society, 1987), 522.

rebel states. For a while, the Confederates at Vicksburg were able to hold off Union attacks. Union ships would have to coast past Vicksburg and endure enemy fire on their way up the Mississippi River. For instance, Lieutenant Byron Wilson of the *USS Mound City* wrote to Rear-Admiral David D. Porter in a report stating that on his way past Vicksburg, “a huge bonfire was kindled on the opposite point making it almost as light as day... While we were in the vicinity of this light, we were made a splendid target for the enemy, who availed himself of the opportunity by sending a 10-inch shot through both casemates, passing out through the iron on the starboard side, wounding 4 men.”⁴⁸ Vicksburg, therefore, had to fall in order for the Union to be successful in conquering the rivers. Union forces were largely optimistic about their prospects at Vicksburg. This positive outlook was due mainly to their astounding successes in the war thus far, helped in no small part by the Navy and its incredible show of force with the blockade. David Porter wrote a report to Welles highlighting this optimism, stating that: “There never has been a case during the war where the rebels have been so successfully beaten at all points, and the patience and endurance shown by our army and navy for so many months is about to be rewarded.”⁴⁹ The success of the Union Navy during the American Civil War was not only instrumental to its victory in the war in that it was a substantial show of military power, but also in that it inspired Union soldiers, and gave them a sense of optimism and nationalism. This morale boost, in turn, helped the Union to secure more victories, including the eventual fall of Vicksburg.

The Union’s ongoing struggle with Vicksburg lasted until the summer of 1863, when it was finally successful in defeating Confederate forces there. On the Fourth of July, 1863, the anniversary of our country’s independence, a combination of Union forces from both the army and navy finally secured the surrender of Vicksburg, giving them the opportunity to navigate and

⁴⁸ Byron Wilson, “April 17, 1863,” in *Official Records*, vol. 24, 559.

⁴⁹ David Porter, “May 20, 1863,” in *Official Records*, vol. 25, 6.

control the entire Mississippi River from St. Louis all the way to the Gulf of Mexico.⁵⁰ Upon hearing of the victory at Vicksburg, Welles wrote a congratulatory letter to Porter, in which he said: “For the past year the key to the Mississippi has been Vicksburg... By the herculean efforts of the Army under the admirable leadership of General Grant, and the persistent and powerful cooperation of the Navy, commanded by yourself, this great result, under the providence of Almighty God, has been achieved.”⁵¹ In this letter, Welles highlighted the cooperation between the army and the navy, and again emphasized the importance of Vicksburg. In fact, Vicksburg was not only a monumental military success for the Union, but also a psychological success. On the same day as he led the navy to their glowing success, Porter wrote to Welles and stated: “The effect of this blow will be felt far up the tributaries of the Mississippi. The timid and doubtful will take heart, and the wicked I hope will cease to trouble us for fear of the punishment which will sooner or later overtake them.”⁵² Thus, Porter hoped that not only would the victory at Vicksburg inspire the Union, but also that it would discourage the Confederacy, which had just lost its only remaining standing point on the Mississippi River.

The surrender of Vicksburg by the Confederacy was caused not only by the superior power of the Union, but also by the fact that supplies such as food had been dwindling as an effect of the blockade. In a cry for help, starving Confederate soldiers wrote to General J. C. Pemberton, “If you can’t feed us, you had better surrender us, horrible as the idea is, than suffer this noble army to disgrace themselves by desertion. I tell you plainly, men are not going to lie here and perish, if they do love their country dearly. Self-preservation is the first law of nature, and hunger will compel a man to do almost anything.”⁵³ The starvation that the Union blockade

⁵⁰ Calhoun and Poulliot, “Civil War at Sea,” 16.

⁵¹ Gideon Welles, “July 13, 1863,” in *Official Records*, vol. 25, 109.

⁵² David Porter, “July 4, 1863,” in *Official Records*, vol. 25, 104.

⁵³ Many Soldiers, “June 28, 1863,” in *Official Records*, vol. 25, 118.

caused was so widespread and detrimental that it was threatening to cause the desertion of Confederate troops. While the naval blockade was part of the reason that the Union was so successful, it was also something that caused terrible amounts of repercussions for the South. Nevertheless, Pemberton surrendered, stating: "I had then to choose between such favorable terms as I might be able to obtain and an unconditional surrender, or subject the garrison and the citizens (including hundreds of women and children) to the horrors of an assault, which I could no longer hope to repel."⁵⁴ The Confederacy, rather than face mass desertion of starving soldiers, negotiated with General Ulysses S. Grant of the Union army regarding terms of surrender which, according to Colonel Edward Higgins, "are the best we can hope to obtain."⁵⁵ A few days after the surrender of Vicksburg to Union forces, Port Hudson, the last remaining barrier to complete Union control of the Mississippi River, also surrendered, allowing the Union to sever the Confederacy and complete its Anaconda Plan.⁵⁶

The rivers on which the Union enacted its plan of strangling the South proved invaluable to its overall success in the American Civil War. By taking control of these rivers, the Union effectively stripped the Confederacy of its most useful method of transportation for supplies and reinforcements. The Union's success on the rivers brought much deserved glory to the navy, which has since been buried by the overwhelming preference of modern day historians for the land battles of the War. The navy deserves this recognition and glory as it endured countless struggles while fighting for the control of the rivers, such as diseases and rapidly changing tides, adding an aspect of unpredictability to the War and leading to the introduction of the *Red Rover*,

⁵⁴ J. C. Pemberton, "August 2, 1863," in *Official Records*, vol. 25, 114.

⁵⁵ Edward Higgins, "July 3 ?," in *Official Records*, vol. 25, 119.

⁵⁶ Anderson, "The Naval Strategy of the Civil War," 19.

the first hospital ship. In addition, the victory of the Union at Vicksburg could not have been accomplished without the help of the navy; a fact that was recognized by those in positions of authority at the time such as Gideon Welles and David Porter. This key victory is what allowed the Union to claim control of the entire Mississippi River, which in turn led to the success of the Anaconda Plan, a strategy that has been proven to have led to the Union's overall victory in the American Civil War. All of this was made possible by the relentless and powerful efforts of the Union Navy to gain control of the rivers.

Part 3: Ironclads

The use of ironclads by both sides of the American Civil War became one of the most talked about aspects of the navy during the War. These mighty ships forever changed the dynamic of naval warfare by providing a much more powerful design than wooden gunships. By introducing and perfecting the ironclad, the navies of both the Union and the Confederacy sparked contention among influential writers of the time, who feared for the future of war. The impact of these monstrous war ships on naval warfare and among the people of America forever immortalized the navy as an agent of change and technological advancement.

Historians often refer to the American Civil War as the first modern war, and the navies on both sides of the War helped to contribute to this idea. Two industrializing democracies faced each other on the battlefield for the first time. Modern wars are times of technological progress, and the navies of the American Civil War led to the widespread recognition of new developments such as the ironclad. These ironclads, unlike earlier ships, were steamships encased in metal, making them faster and harder to damage with shots from gunboats. These ships were immensely powerful. While not invented during the American Civil War, the battle of Hampton Roads, which occurred on March 8, 1862 was the first battle between two ironclads, the *Monitor* and the *Merrimac*. This battle not only displayed the strength and power of these ships, but also showed how they matched up to the wooden gunships they went up against. This battle, and the progress of technology in general, led to several warnings about the future of warfare from well-known writers such as Herman Melville, Henry Adams, and Nathaniel Hawthorne. For example, Henry Adams wrote, "I firmly believe that before many centuries more, science will be the master of man. The engines he will have invented will be beyond his strength to control. Some day science may have the existence of mankind in its power, and the human race commit suicide by blowing up the world."⁵⁷ Ironclads were a symbol of modern warfare, and demonstrated how technology would rule the battlefields, rivers, and oceans.

Ironclads were a far more powerful alternative to wooden gunboats. Although ironclads were not invented during the American Civil War, the War did have a hand in popularizing these machines, as their power was displayed repeatedly over the course of the war. For example, four

⁵⁷ Henry Adams, "HA to CFA, Jr., London, 11 April 1862," in Masur, Louis P, *The Real War Will Never Get in the Books: Selections from Writers during the Civil War*, (New York: Oxford University Press, 1995), 7.

ironclads in the Union Navy attacked Fort Henry in January of 1862. The bombardment that ensued lasted less than two hours before Fort Henry surrendered.⁵⁸ This brief attack clearly demonstrated the massive power possessed by ironclads. A similar case occurred in March of 1862, during an attack on Island No. 10 in New Madrid, Missouri. The attack started with the use of wooden ships, but no real progress was made in the lengthy bombardment until the arrival of two ironclads, which tipped the attack in favor of the Union.⁵⁹ The powerful capabilities of these ironclads was a source of pride for the Union. However, the knowledge that the Confederacy also possessed these powerful machines was often a source of anxiety. Assistant Secretary of the Navy, G. V. Fox wrote to Rear-Admiral Porter, “What I fear is that while Farragut is in the river, Buchanan will be out of Mobile and attack our fleet with his ironclads. I fear disaster there every day, and I hope you can arrange it so as to get him out safely and as early as possible.”⁶⁰ Fox’s report showed that the power of ironclads was a daunting concept even for the Union, whose navy was indisputably more powerful than that of the Confederacy. The powerful nature of these machines was displayed during the very first battle between two ironclads, which occurred at Hampton Roads on March 8, 1862.

The battle at Hampton Roads was monumental in proving the strength and capabilities of ironclad ships. In this battle, both sides of the War sent an ironclad; the *Merrimac* from the Confederacy, which was renamed the *Virginia*, and the *Monitor* from the Union. The *Merrimac* was not originally built as an ironclad, but was a sunken Union ship that was remodeled after being salvaged by the Confederacy. The ship was covered in iron and armed with powerful guns. Confederate Secretary of the Navy Stephen Mallory wrote that “It is believed that thus prepared

⁵⁸ Anderson, “The Naval Strategy of the Civil War,” 15.

⁵⁹ Anderson, “The Naval Strategy of the Civil War,” 16.

⁶⁰ G. V. Fox, “April 6, 1863,” in *Official Records*, vol. 24,

[the *Merrimac*] will be able to contend successfully against the heaviest of the enemy's ships, and to drive them from Hampton Roads and the ports of Virginia."⁶¹ At Hampton Roads, the *Merrimac* encountered several Union gunboats and was engaged in a battle that would thoroughly test her abilities. H. Ashton Ramsay, the Chief Engineer on the *Merrimac* wrote that: "As we approached the Federal ships we were met by a veritable storm of shells which must have sunk any ship then afloat – except the *Merrimac*. They struck our sloping sides, were deflected upward to burst harmlessly in the air, or rolled down and fell hissing into the water, dashing the spray up into our ports."⁶² The Union's wooden gunboats were no match for this monstrous ship. While the Union's ships did little damage to the *Merrimac*, the ironclad was able to all but flatten her enemies. Captain Van Brunt, the commander of the *USS Minnesota* wrote in a report that "The *Merrimack* then hauled off, taking a position, and about 2:30 p. m. engaged the *Congress*, throwing shot and shell into her with terrific effect, while the shot from the *Congress* glanced from her iron-plated sloping sides without doing any apparent damage."⁶³ The *Merrimac*'s performance at Hampton Roads showed that ironclads were far more powerful than wooden gunboats, and its battle with the *Monitor* symbolized a new era in water warfare.

The *Monitor*, like the *Merrimac*, had its first real combat experience at Hampton Roads. Unlike the Confederate ship it faced, the *Monitor* was built as an ironclad and was completely encased in iron. However, it was brand new, and had not yet had an opportunity to be employed in combat. According to Lieutenant Worden, who sailed on the *Monitor* at Hampton Roads, "Never was a vessel launched that so much needed trial-trips to test her machinery and get her

⁶¹ Stephen Mallory, "Voices From the War: 1861 – A Blockade Buster is Born," in Calhoun and Poulliot, "Civil War at Sea," 5.

⁶² H. Ashton Ramsay, "The Merrimac and the Monitor," in *The Monitor and the Merrimac: Both Sides of the Story*, (New York: Harper & Brothers, 1912), 36.

⁶³ G. J. Van Brunt, "Report of Captain Van Brunt, U.S. Navy, commanding the steam frigate *USS Minnesota*, March 10, 1862," in "USS *Monitor* Versus CSS *Virginia* (formerly *USS Merrimack*) and the Battle for Hampton Roads, 8-9 March 1862," Naval History and Heritage Command, (February 6, 2017), 7.

crew accustomed to their novel duties. We went to sea practically without them.”⁶⁴ The trial trip that the *Monitor* so desperately needed came in the heat of battle at Hampton Roads. The *Monitor* and the *Merrimac* directly challenged one another, the larger Confederate ironclad dwarfing the much smaller *Monitor*. The two ironclads engaged in the very first battle of its kind, shooting at each other repeatedly. While the *Merrimac* had, just hours before, decimated two Union gunboats with her shells, Captain Van Brunt wrote that “Gun after gun was fired by the *Monitor*, which was returned with whole broadsides from the rebels with no more effect, apparently, than so many pebblestones thrown by a child.”⁶⁵ The inability of the *Merrimac* to damage the smaller ship showed that the *Monitor*’s size in no way made her weaker than her opponent.

One shot fired by the *Merrimac*, however, served as a test of what Worden considered to be a point of weakness on the *Monitor*; the turret. Worden stated that “If anything could test the turret, it was that shot. It did not start a rivet-head or a nut!... I touched the lever – the turret revolved as smoothly as before. The turret had stood the test; I could mark that point of weakness off my list forever.”⁶⁶ The trial run of the *Monitor* at Hampton Roads was a success. Worden wrote that once he was sure of the ship’s strength, he “told the men, what was true, that the *Merrimac* could not sink us if we let her pound us for a month. The men cheered; the knowledge put new life into all.”⁶⁷ Thus, the *Monitor* and the *Merrimac* had both passed their first tests of combat and proven their strength as ironclads. While the battle at Hampton Roads ultimately ended in a stalemate, it served as an example of the immense power of ironclad ships. Major-General Huger, of the Confederate Army, wrote in a report on the impact of ironclad ships:

⁶⁴ J. L. Worden, “The Monitor and the Merrimac,” in *The Monitor and the Merrimac*, 6.

⁶⁵ Van Brunt, “Report of Captain Van Brunt,” 7.

⁶⁶ Worden, “The Monitor and the Merrimac,” 10-11.

⁶⁷ Worden, “The Monitor and the Merrimac,” 13.

Cannon shot do not harm them, and they can pass batteries or destroy large ships. A vessel like the *Virginia* or the *Monitor*, with her two guns, can pass any of our batteries with impunity. The only means of stopping them is by vessels of the same kind. The *Virginia*, being the most powerful, can stop the *Monitor*, but a more powerful one would run her down or ashore. As the enemy can build such boats faster than we, they could, when so prepared, overcome any place accessible by water. How these powerful machines are to be stopped is a problem I can not solve. At present, in the *Virginia*; we have the advantage; but we can not tell how long this may last.⁶⁸

Huger's report highlighted the extraordinarily formidable nature of this new class of warships. He was not the only one who wrote about the ironclads' influence in warfare and how this technological development would shape the future of wars in general.

The development and use of ironclads by the navy in the American Civil War sparked numerous critiques about the future of war in a new, technology based, era. These discussions that were brought about as a result of the ironclads is part of the reason the navy was so important during the War. An article titled "The New and Better Way," published in 1869, marveled at the speedy development of new technology such as the ironclads, and stated:

Nor does it appear likely that a time will ever come when nations can be sure of fighting each other on the same equal terms as was possible in past times. Minnie rifles are no sooner converted into Sniders than a new improvement is devised which makes that arm a still more deadly one. The same is true of gunboats, of ironclads, of wooden ships...⁶⁹

⁶⁸ Benj. Huger, "Report of Major-General Huger, C.S. Army, commanding Department of Norfolk, on the Impact of Ironclad Warships in Warfare, March 10, 1862," in "USS *Monitor* Versus CSS *Virginia*," 21.

⁶⁹ "The New and Better Way," *Advocate of Peace I.* no. 8 (Aug 1869), 115.

Critics of modern warfare claimed that since technology was developing so rapidly, opposing sides of the war would never truly be on the same terms, as new developments would place them on unequal footing faster than ever before. This concern is echoed by Nathaniel Hawthorne, who wrote of ironclads that “even this will not long be the last and most terrible improvement in the science of war. Already we hear of vessels the armament of which is to act entirely beneath the surface of the water...”⁷⁰ The invention that Hawthorne is referring to, the submarine, is just an example of a development that critics were concerned would offset the balance of warfare.

Warnings about modern warfare were also made regarding the future of military values such as bravery and skill. “The New and Better Way,” states that “Formerly war was a matter of military skill and personal bravery, even more than numbers or equipments. This is no longer the case.”⁷¹ Courage was at the center of civilian and military culture during the Civil War, and the development of machines such as ironclads threatened to take away this quality.⁷² Hawthorne wrote: “All the pomp and splendor of naval warfare are gone by...and even heroism...will become a quality of very minor importance when its possessor cannot break through the iron crust of his own armament and give the world a glimpse of it.”⁷³ For Americans at the time of the American Civil War, it was vital for soldiers to be brave and heroic. The idea that they would no longer be so due to advancing technology like ironclads, however, is debatable. For example, Captain Worden “had volunteered to take command of the *Monitor*, at the risk of his life and reputation, before the keel was laid.”⁷⁴ The *Monitor* was far from finished when it sailed for Hampton Roads in the spring of 1862. By volunteering to command the ironclad, Worden

⁷⁰ Nathaniel Hawthorne, “Chiefly About War Matters,” *The Atlantic*, (July 1862), 32.

⁷¹ “The New and Better Way,” 115.

⁷² Gerald Linderman, *Embattled Courage: The Experience of Combat in the American Civil War*, (New York, NY: The Free Press, 1989), 7.

⁷³ Hawthorne, “Chiefly About War Matters,” 30.

⁷⁴ “Introduction,” in *The Monitor and the Merrimac*, 4.

demonstrated the kind of bravery that Hawthorne, and those who thought like him, were afraid was gone forever. Similarly, in a speech given aboard the *Merrimac*, Buchanan addressed the sailors by saying, ““in a few minutes you will have the long-looked-for opportunity of showing your devotion to our cause. Remember that you are about to strike for your country and your homes. The Confederacy expects every man to do his duty.””⁷⁵ Buchanan’s speech, as well as Worden’s actions, demonstrate that for those involved in the war, the invention of the ironclad did nothing to diminish the bravery and heroism of those fighting to protect their nation.

A third criticism of the technological advancements of warfare was that such developments were taking the focus off those fighting, and placing it not only on those who were creating this new machinery, but on the machinery itself. Hawthorne wrote:

the Millennium is certainly approaching, because human strife is to be transferred from the heart and personality of man into cunning contrivances of machinery, which by-and-by will fight out our wars with only the clank and smash of iron, strewing the field with broken engines, but damaging no one’s little finger except by accident.⁷⁶

In Hawthorne’s eyes, and the eyes of those who agreed with him, the future of warfare was for man’s fights to be carried out by machinery, and the bodies of fallen soldiers would be replaced with broken bits of technology. While this may seem like a positive change that would save countless human lives, critiques at the time lamented the loss of passion and sacrifice in war. Another who spoke out about the future of warfare was Herman Melville, who wrote:

Hail to victory without the gaud
Of glory; zeal that needs no fans
Of banners; plain mechanic power

⁷⁵ Qtd. In Ramsay, “The Merrimac and the Monitor,” 34-35.

⁷⁶ Hawthorne, “Chiefly About War Matters,” 33.

Plied cogently in War now placed –

Where War belongs –

Among the trades and artisans...

No passion; all went on by crank.

Pivot, and screw,

And calculations of caloric...

War shall yet be, and to the end;

But war-paint shows the streaks of weather;

War yet shall be, but the warriors

Are now but operatives; War's made

Less grand than Peace,

And a singe runs through lace and feather.⁷⁷

Melville, much like Hawthorne, felt that the use of machines in warfare took away all of the passion it previously held. Melville mentioned that this new form of modern warfare now belongs ‘among the trades and artisans,’ rather than among the brave, heroic soldiers of the past, who he now viewed as merely operatives of the machines that had taken over the passion and glory of war. Overall, many of the complaints against developments such as ironclads had to do with the idea that machinery and technology overshadowed the role of brave soldiers.

⁷⁷ Herman Melville, “A Utilitarian View Of The Monitor’s Fight,” *Battle Pieces and Aspects of the War*, (1866).

The use of the ironclad in the American Civil War was an important development in military strategy. While the ironclad was invented before the War, the battle that occurred at Hampton Roads was the first battle to be fought between two of these powerful ships. This battle served to test the limits of ironclads and prove their immense power and strength. Ironclads could practically destroy the wooden gunboats used in previous wars, but took longer to destroy other ironclads. In fact, neither the *Monitor* nor the *Merrimac* were able to claim a solid victory in the battle, but it was a decisive victory for technology and the future of warfare. This perceived future was the cause of numerous critiques about new technology, including the idea that machines were going to replace the bravery and heroism of human soldiers. This idea was in contrast to the bravery shown by Worden on the untested *Monitor* and the sailors on the *Merrimac*, who demonstrated that a new kind of bravery was needed in the face of terrible new weapons. Well-known authors such as Adams, Hawthorne, and Melville lamented the shift in focus from human lives to heartless machines. The use of ironclads by the navy revolutionized warfare, were crucial to Union victory, and signaled the new and terrifying potential of modern warfare and technology.

Part 4: Submarines and Torpedos

The introduction of submarines and torpedos in the American Civil War revolutionized the way naval wars were fought, both offensively and defensively. They provided the unindustrialized Confederacy with a strategy that was as destructive as it was inspiring. By utilizing and improving upon the craftsmanship of submarines and torpedos, the navies on both sides of the War again asserted their importance and relevance in a changing world of modern warfare.

In addition to the ironclads, submarines and torpedos helped to herald in a new form of modern naval warfare. These advancements accelerated and achieved their modern form during the American Civil War. The Civil War as the first modern war pioneered and previewed naval warfare in the 20th century. Even the Confederacy that lacked the industrial capabilities of the Union came up with defensive naval techniques and technologies that would be adopted by all great powers in WWI. While both sides in the Civil War used ironclads, submarines and torpedos began as a part of the Confederacy's naval strategy, and one that proved challenging for the Union to overcome. Early attacks by submarines carrying torpedoes, such as that of the CSS *David* against the USS *New Ironsides* on October 5, 1863 were less successful than the Confederacy had hoped, but paved the way for future attacks. The first submarine to sink a ship was the CSS *Hunley*, which, although going down herself, managed to take the USS *Housatonic* with her on February 17, 1864. Both of these attacks served as examples of how technological advancements could be used in warfare, and furthered the modernization of warfare that so many had warned against with the implementation of the ironclads.

Submarines and torpedoes were used in tandem with each other to carry out strikes against Union ships. Much like the ironclads, these pieces of technology were not invented during the War, but their use in the navy served as a showcase and source of recognition for the powerful nature of changing military technology. One of the earliest submarine and torpedo attacks was made by the CSS *David*, a cigar-shaped submarine that attempted to sink a Union ironclad, known as the USS *New Ironsides*, through the use of a torpedo in October 1863.⁷⁸ Lewis H. West, a Union sailor aboard the USS *New Ironsides* described this "infernal machine"

⁷⁸ "The Civil War and Early Submarine Warfare, 1863," *The Gilder Lehrman Institute of American History*.

as being “a small steamer on the same principle as Winan’s cigar ship, with an outrigger to her bows carrying the torpedo. She was so constructed as to be almost entirely under water, excepting a very low smokestack.”⁷⁹ West’s description of the *David* showed that early designs of submarines were not intended to be fully submerged, and were constructed to carry torpedos, which are now referred to as mines, which would be deployed in attacks such as the one against the *Ironsides*.

The *David*’s attempt at an attack, however, did not work out very well for the small submarine. West wrote: “On exploding the torpedo, which was done by simply running against the side, an additional effect was produced which he had not counted on. The immense body of water thrown up came down his smokestack putting his fires out, and entirely destroying his motive power.”⁸⁰ This unintended effect was not the only reason the attack failed. The wave of water that put the CSS *David* out of commission was one of very few sources of inconvenience for the *Ironsides*. West wrote that: “Many tons of water were thrown on deck by the explosion, but on examination the ship was not injured in the least, beyond having a few storeroom bulk heads demolished by the concussion. A man had his leg broken, and the officer of the deck was shot through the body...”⁸¹ Whether this failed attack demonstrated the strength of ironclads or the weakness of early submarine and torpedo designs is not clear, but it did serve as an excellent example of the changing nature of technology and warfare during the American Civil War. The assault on the USS *New Ironsides* was not the only submarine attack that drew attention to the new form of modern naval warfare.

⁷⁹ Lewis H. West, “Lewis H. West to R. West, October 8, 1863,” *The Gilder Lehrman Institute of American History*, 1.

⁸⁰ West, “Lewis H. West,” 1-2.

⁸¹ West, “Lewis H. West,” 1.

In addition to the *David*, the Confederacy also used a submarine known as the CSS *Hunley* to attack Union ships. In fact, the *Hunley* was credited as being the first submarine to sink a warship; the USS *Housatonic*.⁸² However, this success came at a great cost. The first two crews of the *Hunley* were drowned while preparing for the attack, and the crew that was on board during the engagement also drowned.⁸³ The construction of this particular submarine, the class of the “Diver,” differed slightly than that of the *David*. Rear-Admiral John A. Dahlgren wrote of the *Hunley* that it “is nearly submerged and can be entirely so. It is intended to go under the bottoms of vessels and there operate.”⁸⁴ Not only was the design of the *Hunley* different, but the way it attacked was also new. Dahlgren wrote that the *Hunley* was intended to “submerge completely, get under the bottom, attach the torpedo, haul off and pull the trigger.”⁸⁵ While the *David* made its attack by attaching the torpedo to the side of the targeted ship, the *Hunley*’s goal was to attach it to the bottom and then detonate the mine from a safe distance. J. H. Tomb, an engineer in the Confederate Navy, sounded a warning about this strategy:

Should [the *Hunley*] attempt to use a torpedo as Lieutenant Dixon intended, by submerging the boat and striking from below, the level of the torpedo would be above his own boat, and as she had little buoyancy and no power, the chances were the suction caused by the water passing into the sinking ship would prevent her rising to the surface, besides the possibility of his own boat being disabled.⁸⁶

The suction effect that Tomb mentioned in his report led to the downfall of the *Hunley*, and the loss of the submarine’s third crew. However, the *Hunley* succeeded in taking the *Housatonic*

⁸² Cunningham, “The Naval Blockade,” 59.

⁸³ Cunningham, “The Naval Blockade,” 59.

⁸⁴ John A. Dahlgren, “January 7, 1864,” in “The Sinking of the USS *Housatonic* by the Submarine CSS *H.L. Hunley*, off Charleston, South Carolina, 17 February 1864,” *Naval History and Heritage Command*, (October 31, 2017), 1.

⁸⁵ Dahlgren, “January 13, 1864,” in “The Sinking of the USS *Housatonic*,” 3.

⁸⁶ J. H. Tomb, “January, 1865,” in “The Sinking of the USS *Housatonic*,” 9.

down with her, striking a blow to the Union and providing a much needed victory to the Confederacy. The success of the *Hunley*, as well as its unintended downfall, was another example of the powerful yet deadly nature of modern naval warfare.

Aspects of their design that served as crude camouflage aided submarines, such as the *Hunley*. The ability for the majority of submarines to be underwater meant that the parts that were not submerged were significantly smaller in size than the whole ship, and could be mistaken for floating objects. In the case of the CSS *David*, West wrote that sailors on the USS *New Ironsides* were “keeping up a heavy fire of musketry on some small object in the water, that in the darkness looked as much like a barrel as anything else.”⁸⁷ Similarly, a sailor on the USS *Housatonic* described the *Hunley* as having “the appearance of a plank moving in the water.”⁸⁸ The ability of these submarines to take on the appearance of floating debris and everyday objects meant that their presence was not discovered as easily as an above water ship would be. Another sailor on the *Housatonic* wrote of the *Hunley* that while at a distance it resembled a floating log: “on further and closer observation it presented a suspicious appearance, moved apparently with a speed of 3 or 4 knots in the direction of the starboard quarter of the ship, exhibiting two protuberances above and making a slight ripple in the water.”⁸⁹ The introduction of submarines to naval warfare forced sailors to become adept at noticing small inconsistencies in their surroundings, such as speed and water displacement, rather than simply being on the look out for rival ships on the water. The fact that Confederate submarines were able to camouflage themselves so easily in the water meant that it would take Union ships longer to respond to the

⁸⁷ West, “Lewis H. West,” 1.

⁸⁸ F. J. Higginson, “February 18, 1864,” in “The Sinking of the USS *Housatonic*,” 5.

⁸⁹ J. F. Green, “March 7, 1864,” in “The Sinking of the USS *Housatonic*,” 7.

threat. This threat of disguised approach led to several defense measures that made approaching a Union ship very dangerous.

In response to the Confederacy's deadly naval strategy, the Union put into place various new protections against submarine attacks. Rear-Admiral Dahlgren wrote in an order:

The ironclads must have their fenders rigged out and their own boats in motion about them. A netting must also be dropped overboard from the ends of the fenders, kept down with Command History 1945 shot, and extending along the whole length of the sides; howitzers loaded with canister on Shelling of the Alaskan Native the decks and a calcium [light] for each monitor. The tugs and picket boats must be American Village of Angoon, incessantly upon the lookout, when the water is not rough, whether the weather be clear or rainy.⁹⁰

In addition to these new defenses, ships were ordered to fire at anything they saw moving in the water. After the attack by the CSS *David* West, still aboard the USS *New Ironsides* wrote that:

“We have lively times at night now, passing it nearly all the time, at quarters with orders to fire at everything we see; so the New Ironsides is not a very nice place for visiting in the evening.”⁹¹

Similarly, Dahlgren wrote: “Last night I went up to the advanced monitor about 9 o'clock. It was an ugly, rainy night, but I found all on the alert. It is indeed dangerous to approach an ironclad, as they fire on the instant.”⁹² The attacks of Confederate submarines such as the *David* and the *Hunley* not only symbolized the changing tides of warfare, but also made it significantly more difficult for Union ships to defend themselves, which in turn made it dangerous for even allies to approach. In addition to improving the defense on its ironclads, the Union also put a bounty on

⁹⁰ Dahlgren, “January 7, 1864,” in “The Sinking of the USS *Housatonic*,” 1.

⁹¹ West, “Lewis H. West,” 2.

⁹² Dahlgren, “January 13, 1864,” in “The Sinking of the USS *Housatonic*,” 3.

Confederate submarines. Dahlgren wrote, "I desire to suggest to the Department the policy of offering a large reward of prize money for the capture or destruction of a "David;" I should say not less than \$20,000 or \$30,000 for each. They are worth more than that to us."⁹³ However, submarines themselves were only half the trouble for the Union. The use of the newly implemented torpedo was what made these ships so destructive.

Torpedos proved to be a catastrophic development in naval warfare. The combination of submarines with these marine mines led to the sinking of around twenty Union gunboats, as well as the damaging of about eight others.⁹⁴ These mines were deployed in a number of ways besides on submarines. According to Dahlgren: "the rebels believe that their batteries will do us much damage if we attack, but rely chiefly on the torpedoes for defense, and apply them in a variety of ways, at the bows of their ironclads, upon their 'Davids,' upon rafts, which carry six of the 60-pounders in a line, and even their small boats are equipped to receive a torpedo."⁹⁵ The wide array of means to deploy these mines made them a versatile weapon for the Confederacy. The Union saw how useful the torpedoes were, and planned to develop some of its own. Dahlgren wrote in a report to Gideon Welles: "There is, no doubt, much to be apprehended from these torpedoes, and I have already suggested to the Department an extensive use of similar means. I again respectfully urge on your consideration the most prompt resort thereto; nothing better could be devised for the security of our own vessels or for an examination of the enemy's position."⁹⁶ The use of torpedoes, or mines, by the Confederacy led to their widespread use on both sides of the War, and helped to usher in the new forms of modern warfare that made the American Civil War stand out in history as the first modern war.

⁹³ Dahlgren, "February 19, 1864," in "The Sinking of the USS *Housatonic*," 7.

⁹⁴ Anderson, "The Naval Strategy of the Civil War," 21.

⁹⁵ Dahlgren, "January 13, 1864," in "The Sinking of the USS *Housatonic*," 4.

⁹⁶ Dahlgren, "January 13, 1864," in "The Sinking of the USS *Housatonic*," 3.

The use of military advancements such as the submarine and the torpedo contributed greatly to the importance of the navy in the American Civil War. Not only did these weapons form one of the most successful and destructive strategies of the Confederacy – sinking and destroying nearly thirty Union ships – they also joined the ironclad in symbolizing a new means of modern warfare. The attack of the CSS *David* on the USS *New Ironsides*, while ultimately unsuccessful, was just an early attempt at the use of torpedo-bearing submarines against the Union. Later designs, such as the CSS *Hunley*, were more successful. Although the *Hunley* became a tomb for three unlucky crews, she also became the first submarine to sink a Union ship. The ability of submarines to take the appearance of floating debris meant that Union ironclads had to implement new safety measures, such as round the clock patrols and a policy for shooting first and asking questions later. Torpedoes used by the Confederacy could be deployed in a variety of ways, and the Union was not far behind in their development. These feats of technology helped shift the tides of war into the highly technical version that so many had warned about with the introduction of the ironclad. Their introduction in the American Civil War revolutionized how naval wars would be fought in the future, and joined the blockade, river warfare, and ironclads in contributing to a war that made the navy something worth talking about.

Conclusion

The navies of both the Union and the Confederacy during the American Civil War deserved much more recognition than they have been given. Without the ability to fight the War using a blockade and internal rivers, the Union would not have been able to win the war as easily as it did. Without the introduction and improvements of technological achievements such as ironclads, submarines and torpedoes, the American Civil War would not have established itself as the first modern war. All of these achievements would not have been possible without a strong and influential navy.

The ability of the blockade to cut off the South from foreign trade and the importation of necessary supplies crippled its economy and led to widespread shortages of goods and resources needed to sustain a prolonged war. The failures of blockade-runners to get through the Union's forces further demonstrated the power of the Union Navy, and added a new threat of sabotage to the war. By gaining control of the rivers and carrying out Winfield Scott's Anaconda Plan, the Union was able to enhance the effects of the blockade, and remove a much needed method of transportation from the Confederacy. The Union boldly faced challenges such as unpredictable river levels and disease, which was approached through the use of an excellent method of transporting supplies and the implementation of the first hospital ship, the *Red Rover*. One of the Union's most valuable successes was the capture of Vicksburg, which granted them full access to the river system and provided a boost in morale and optimism about the Union's war efforts. This victory further demonstrated the importance of the blockade, as the Confederacy surrendered partly due to insufficient supplies that led to the threat of desertion among troops.

The introduction of modern technology during the American Civil War added to the importance of the navy. Ironclads provided a stronger, more powerful method of fighting than wooden gunboats, which paled in comparison. The battle of Hampton Roads showed the power of these monstrous machines, both in their ability to decimate wooden ships, and their strength and ability to hold up under heavy fire. As the first battle between two ironclads, Hampton Roads sparked uncertainty about the future of naval warfare and qualities such as courage. Many issued warnings about the dangerous implications of technological warfare, and lamented what they perceived as the downfall of courage and bravery. However, sailors during the battle demonstrated these qualities in abundance, showing that the only real change was the means of fighting. This change in warfare was further demonstrated by the use of submarines and torpedoes by the Confederacy. The attacks on Union ships such as the USS *New Ironsides* and the USS *Housatonic* showed the power of these new weapons. The ability of submarines to take on the appearance of floating objects such as barrels and logs made them all the more threatening, as Union ships took longer to respond. In reaction, Union ships improved their defenses, making them incredibly dangerous to approach. Ironclads, submarines and torpedoes were examples of how changing technology can forever impact how wars are fought. The effects of these advancements, in addition to the impact of the blockade and rivers on the outcome of the war, prove that the Navy was a crucial aspect of the American Civil War that deserves the attention given to land battles.

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