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Success Amid Frustration: The Naval Experience of the Confederate States of America

April 1862, and finally it had come. The attack that Mallory's navy had frantically prepared for since its birth. A wooden armada floated into New Orleans, raining fire upon the unprepared rebels. The *Mississippi* began its short life upon the river whose name it bore. It "[W]as the greatest vessel in the world," yet mighty as she was to be, she met the torch before firing a single shot. As the great hope of the South burned, its metal cousin, engineless and impotent, fired wildly at the Northern invaders. The two great weapons of the South, the weapons that absolutely had to be ready, were not yet finished. What was to be a fight of iron against timber became instead a lopsided fight of floating lumber.

One year later an iron cigar slipped into the waters of Charleston Harbor, quietly steaming through the night towards its Union foe. It was the *David* against the Northern Goliath, the *New Ironsides*. Its stack puffing out white smoke, the little ship sprinted up to its superior enemy, drawing rifle fire from the giant's panicking crew once they noticed the Confederate torpedo boat. Too late for Goliath. A thundering explosion, a roaring tower of water, and the *New Ironsides* shuddered from the blow. Back to safety went *David*. The federal ship swiveled around, still afloat but badly injured, its crew frantically diving into the cold waters.¹

Most scholars admit that the Confederate Navy made do admirably with what it had, but some focus more on the fact that the rebels were grossly outmatched. The Confederate States Navy was grossly inferior to the Union Navy, but the South's inferiority did not mean it saw no victory. The Union blockade initiated by General Winfield Scott strangled the Confederacy into

virtual lifelessness, but the Rebel defenders were far from helpless. When considering the Southern naval situation, two cities stand out to perfectly portray the dialectical qualities of the little navy's existence. In New Orleans the Confederate naval defense accomplished little against the Union fleet. Yet, as seen in Charleston, when it had the time to realize Navy Secretary S.R. Mallory's strategy of using as technologically advanced methods as possible, the navy proved formidable despite its overwhelming disadvantages. The deficiency in men, money, materials, and time never left the Southern Navy; the navy eventually died because of this deficiency, but at times it learned to live despite shortages. The cases of New Orleans and Charleston display two opposite examples of Confederate naval effectiveness, two cases that show the choking effect of Southern disadvantages but also the ability at times to survive in the face of them.

The main primary source used in this paper is the Official Records of the War of the Rebellion. An extraordinarily valuable set of documents, it provides reports from both Union and Confederate naval officers, orders of the naval secretaries, requests from engineers and contractors, as well as countless first hand accounts of others directly and indirectly involved in the navies. The documents allow one to see straight from the mouths of those involved what the Confederate navy's goals were, where it saw success, and where it failed. Additionally, General G.T. Beauregard, who headed the defense of Charleston, writes a journal article describing what the Confederacy did to defend the attack that he says was anticipated at any moment. A strong advocate of torpedoes and torpedo boats, he provides a first hand account of the effectiveness of these means of defense. Other useful accounts of torpedo defense come from General Dabney H. Maury, who was involved in the defense of Mobile, Alabama, and Lieutenant Hunter Davidson, who was heavily involved in torpedo development. Maury's documents include an assessment of torpedoes' overall importance in defense, an estimate of how many Union ships sank by torpedoes, and also an assessment of the damage torpedoes caused on individual ships. Davidson

writes to explain the development of electrical torpedoes, describing the process by which the Confederacy first started using torpedoes in general and his development of a successful electrical torpedo. Beverly Kennon, the commander of the rebel gunship *Governor Moore* during the attack on New Orleans, describes the fight against Union Admiral David Farragut. For this paper, his writing proves useful in his description of the Confederate ironclad *Louisiana* and its shortcomings.

The main secondary sources used are Raimondo Luraghi's *A History of the Confederate Navy*, and William N. Still's book *Iron Afloat*, as well as two of his journal articles on Confederate ironclads. Luraghi, an American history professor from the University of Genoa, writes a history of the Confederate Navy in general, focusing much attention on what he feels Naval Secretary Stephen Russell Mallory was able to accomplish with few resources and time. He asserts that the Southern Navy showed incredible determination, ending the war without completely being defeated.² Still's works give an overview of the Confederate ironclad strategy as well as the problems in constructing them. He shows that though difficult to build, they could be effective, and that the main problem in using them was that the Confederacy was short on time.³ Historian Milton F. Perry writes *Infernal Machines* mainly to give credit to the Confederate Navy for pioneering the use of submarine mines in warfare.⁴ However, though he describes their innovation effectiveness, he argues that successes came at a time when the outcome of the war was already clear. John Johnson, a former Confederate engineer based in Charleston, writes an analysis of the Southern defense of Charleston from 1863-1865. Claiming that he must suspend his judgment on the subject until more time has passed, he nevertheless concludes that submarine mines were a vital part of the harbor's defense.⁵ Historian Charles Dufour, in *The Night the War was Lost*, describes the naval construction in New Orleans, setting out to prove that Union victory here was "the crucial decision which, three years in advance, pointed the way to Appomattox."⁶

Naval historian Anderson Bern writes a journal article arguing that no real naval strategy as we view it today existed for either side in the Civil War. He makes note of the few successes the Confederacy had with mines, but points out that the Southerners were realists, and their efforts ended time after time in failure.⁷

To analyze the Confederate Navy's failures and successes, one must first examine its strategies. At the beginning of the war the South started essentially from scratch. The newly formed Confederacy held forts along several of its harbors, notably Fort Sumter in Charleston, as well as forts in New Orleans and other important cities. Yet from the beginning of the war reliance on land batteries to fire on invading navies was being challenged. As early as September 24, 1861 the Confederate Captain W.C. Whittle wrote a letter to the Navy Department saying that gunboats "would be invaluable to us now and give a security to our coasts and rivers which nothing else can insure."⁸ By "nothing else" he largely referred to land batteries. When questioned after the war he said, "I do not believe in land batteries. They are fixed batteries, and in that respect perfectly objectionable. I much prefer gunboats as a means of defense."⁹ He further stated that it was his opinion, as well as the opinion of many other officers that steamships could pass by land batteries without being harmed. Captain John K. Mitchell agreed with Whittle on this subject, telling General J.K. Duncan that he thought the Union could pass the forts at New Orleans, though Duncan disagreed.¹⁰ However, Mitchell stated that whether or not they believed land guns adequate to stop a sea invasion, the officers "all agreed that it was better to stand by guns of doubtful character rather than have none for the defense of New Orleans; and the opinion of the officers was to receive these guns rather than have none at all."¹¹ Though there were naval officers who clung to the belief that land batteries, especially with the new rifled artillery, would present a formidable obstacle to the Union Navy, overall it seems that the Confederacy's naval strategists knew something more would be needed for defense. The problem on the Mississippi at

the beginning of the war was that the South had very few gunboats for its defense, so despite knowing that artillery was inadequate the Confederacy persisted in trying to defend the river with land batteries. As Robert Luraghi states, the disaster of the Confederacy was its stubborn dependence on land fortifications while “[acknowledging] that single insignificant tug could nail fast the southern forces by commanding the current.”¹² While they may have employed blind faith to defend the river, Mallory and the Navy Department clearly put their hopes in other means of defense and tried as quickly as possible to put stronger gunboats in the water.

The prime strategy that the navy developed was that of ironclads. From the first ironclad fight at Hampton Roads, the Confederate Naval Department entertained hopes that by building more ironclads such as the *C.S.S. Virginia*, they would not only be able to adequately defend its harbors and inland rivers, but also that they would also be able to sweep away the Union blockade in a series of offensive moves. Many naval officers in the South, including Mallory, had believed prior to the Battle of Hampton Roads that ironclads would grow to dominate naval warfare, and afterwards the Department concentrated its efforts on these ironclad warships as its main defense. The navy’s goal for the land as well as floating batteries in the Mississippi was mainly to delay the Union to the point where ironclads could be launched against the enemy.¹³ Mallory wrote in May of 1861 that he regarded “the possession of an iron-armored ship as a matter of the first necessity...[I]nequality of numbers may be compensated by invulnerability; and thus not only does economy but naval success dictate the wisdom and expediency of fighting with iron against wood.”¹⁴ The inequality in numbers was indeed great, as the United States had purchased essentially every suitable ship that existed in the North and in Canada.¹⁵

Given this inability to acquire existing ships and the fact that the Union already had a navy in addition to the ships it was now buying and outfitting, it is not surprising that the Confederacy decided upon an ironclad strategy. Most of the ships existing in the South were lightly armed

river steamers.¹⁶ The Confederacy could not challenge the Union's numerical superiority, but if it could obtain several ironclad warships capable of resisting Union shot, then it might be able to repel the invaders. By late February of 1862 Mallory reported that there were two ironclads being built in Memphis, and two being built in New Orleans, both of which he believed would be ready for action in fifty days. Initially the navy attempted to purchase ironclad warships in Europe, but when it became apparent there were none available, it began to focus on building them at home.¹⁷ Through the end of the war Mallory pushed to have new ironclads built in Europe, but constant frustration abroad meant all practical hope had to be placed in domestic vessels.

The two ironclads built in New Orleans, the *Mississippi* and the *Louisiana*, were to be extremely formidable and generated great hope for the Naval Department. The *Mississippi*, built by the Tift brothers, was to be the most powerful warship the world had ever seen. Mallory wrote that Hampton Roads "[Convinced him] that Tift's ship, if completed, would raise the blockade of every Gulf port in 10 days."¹⁸ Though lifting the Gulf blockade in ten days seems an overly ambitious goal, the *Mississippi* and *Louisiana* were to be even more powerful than the *Virginia*, which had shown that wooden ships were useless against such an ironclad. Mallory believed that the impending Union attack on New Orleans would come from wooden ships, as indeed it did, and against such ships the Confederacy would more than defend itself with just two ironclads. In 1862 the Confederate Navy still mostly spent its energy in readying wooden boats for warfare, but Mallory and many other officers believed it was the ironclads that would protect the South and enable it to take the offensive.¹⁹

If the decision to rely heavily on ironclads was a logical and forward-thinking decision, it was also an incredibly difficult one to employ. The main problem with using ironclads was that the ironclads first had to be built. In building the two great New Orleans ironclads Mallory wrote, "Spare neither men nor money."²⁰ Yet despite his and other officers' repeated calls for men,

money, and supplies, these were obtained with great difficulty. The industrial dichotomy between North and South came to dominate the naval situation. Though still largely rural like the South, the North was starting to become what is often described as a nation of mechanics. The Confederacy was a very long way off from becoming such a mechanical nation. Naturally this presents a problem to a nation trying to defend itself against an industrial powerhouse, especially a nation attempting to use technologically advanced weapons to gain victory through tactical surprise.

The difficulty in providing men for crews as well as for construction severely crippled the ironclad strategy. Of the New Orleans squadron Captain Mitchell said, “We made every effort to obtain crews for the vessels...Nearly all the vessels on the river as well as on the shore, were more or less short of crews.”²¹ Furthermore, Mallory claimed in February of 1862 that “All efforts at construction...have been crippled by the want of mechanics...Calls for mechanics have been made upon the Army repeatedly, and these have been responded to as far as the interests of that branch of the service would seem to warrant, and yet not half the number required can be obtained.”²² Nowhere is this tragedy of manpower better summed up than when Mallory stated the same year that “The scarcity of mechanics is attributable to the fact that a large portion of those employed in the Confederacy were Northern men or foreigners, who have, in consequence of the war, left country, while our own mechanics are generally in the Army.”²³

Even the men that were recruited for the construction of the mighty gunboats could prove unreliable when they were unsatisfied with their wages. Commodore G.N. Hollins stated that New Orleans “mechanics knocked off work sometimes for two or three days for want of money.”²⁴ This manpower problem inevitably meant that construction projects kept getting pushed back from their estimated completion dates. Throughout the war Mallory’s Naval Department had to live with a second-rate status to that of the army. One can well imagine how

frustrating this problem would have been for the Secretary of the Navy. His strategy was not ill-founded, but it depended on having the necessary men and materials with which to build. The Confederacy had a limited supply of men. Those who were not used for army combat needed to be used for labor. In turn, those who were used for labor were needed in all facets of war production. The army competed with the navy to get the necessary workers, and in this labor competition the Army mostly won. Army commanders were understandably averse to allowing their men to leave ranks for naval labor, though in 1862 Mallory persuaded Davis to allow these transfers to occur.²⁵ William N. Still argues that in 1861 there were enough men to work in the naval yards, but as the ironclad strategy expanded, there were simply not enough skilled mechanics for the technical work that had to be done.²⁶

More detrimental to the ironclad strategy than the supply of men was the problem of materials and means of transportation. Just as many of the mechanics working in the South prior to war had come from the North, the Confederacy's Engineer in Chief, William P. Williamson, lamented that "such material as iron, steel, tin, sheet copper, India rubber packing, etc., and the various mountings and equipments...have heretofore been obtained from the north." He further explained that there was no facility for heavy wrought iron work or a rolling mill for copper or thin iron in the Confederacy in 1862 and that facilities for other types of heavy machine work were being used solely for ordnance work.²⁷ When the war began there were only eleven iron foundries of note in the Confederacy, and none of these facilities were capable of rolling out two-inch iron plates needed for ironclad warships.²⁸ As the war continued ironclads required even thicker armor, generally 5 ¼ inches, to resist the armor-piercing shells of the Union navy. During the war only three sites in the South were developed for rolling out the necessary iron armor sheets.²⁹ In Virginia and Alabama twenty-eight new iron furnaces sprang up, but the Union army captured many others across the Confederate States.³⁰

In addition to obtaining iron for armor, the little navy had trouble finding engines, gunpowder, and other equipment necessary for the ironclads. Building an engine was difficult work, so wherever possible the engines for ironclads and other ships were salvaged from older steamships. Mallory lamented, "No marine engines, such as are required for the ordinary class of sloops of war or frigates, have ever been made in any of the Confederate States, nor have workshops capable of producing them existed in either of them."³¹ Because it was so difficult to obtain engines within the confines of the South, in early 1863 Mallory wrote to James D. Bulloch, his prime agent in England, that he had contracted for 18 engines to be built in Britain, but that he was convinced it would fail.³² Such efforts overseas had failed constantly, leading to a point where Mallory still sought foreign aid, but hardly expected success. Meanwhile the large Confederate-built drive shaft that was to power the *Mississippi* was too large for any railcar existing in the South, so the rebels had to build a new railcar before the part could be shipped.³³ Before the attack on New Orleans Commodore Hollins stated that there was a deficiency of gunpowder in the city.³⁴ Aside from 60,000 pounds of powder available at Norfolk at the beginning of the war, there was hardly any other gunpowder for the navy's guns in 1861 and early 1862.³⁵ Everything was in scarce in the South; both the blockade and the general lack of Southern industry saw to that. If the ironclads in construction had an adequate timber supply, they lacked iron. If they had iron, they had no engines. If they had all of these things, they lacked the necessary workers.

In the Official Records of the Navy there is constant mention of an inability to secure the necessary means and materials for building the great ironclad fleets that Mallory had in mind. Just as the different demands of the war meant a competition for the labor force, these demands created a competition for supplies. The iron plating necessary for the warships was difficult to obtain because the army required so much iron for its operations. What iron and other materiel that were

available for naval use were exceedingly difficult to transport. Just as the land armies took priority in materiel, they took priority in railroad transport of that material. All the vessels built in the South, including the ironclads, demanded a great amount of lumber. The practical problems that arose in transporting lumber to the required facilities meant that the navy was often forced to use inferior wood.³⁶ As Captain Whittle complained that he was ordered to let Union ships carry lumber from Virginia to Northern ports, Mallory's navy had trouble getting its own lumber to the necessary facilities.³⁷ There was no central locale where all supplies necessary for building an ironclad existed; everything came from different directions, and none of it came quickly.³⁸

All of these deficiencies in Southern industry that hurt the navy's ability to realize the its innovative battle plan in turn meant that the Confederacy was constantly delayed in its construction projects. On April 5, 1862 Mallory wrote to the New Orleans contractors, saying, "Work day and night to get the *Louisiana* and the *Mississippi*... ready for action...Not an hour must be lost."³⁹ The Southerners were well aware of their handicaps in constructing the precious ironclads, and they were further aware that with each construction delay the Union was inching closer to victory on the seas. The construction of the *Louisiana* and other ironclads was delayed for various reasons. With the shortage of iron armor plates a vessel might be ready for action in every way except it might wait on the docks for its iron plating. The *Louisiana* was also delayed for quite some time waiting for its propellers; in this case Captain Mitchell claimed that that the work required was more difficult than the engineers had anticipated. Each day they promised that the ship would be ready, but their honest promises were frustrated by the complicated work at hand.⁴⁰ The *Mississippi* was delayed both because of the difficulties in finding adequate workers and in obtaining supplies – in this case mostly timber.⁴¹

Chairman of the Committee on Naval Affairs, C.M. Conrad wrote of the difficulty of building engines in the South, stating that even if the Confederacy had had the capacity to

manufacture engines, to build such an engine would have required a full year (279). Mallory wrote in 1861 that it would take the Confederacy “under the most favorable circumstances, at the present time, from 12 to 18 months” to build a steamship that could compete with the great navies of the world.⁴² Against its more powerful and resilient northern neighbor, time meant everything to the South. The Navy could never know exactly when an attack would come, but at every seaport was a well-founded fear that it was about to come. What good was a powerful ironclad if it was still on the docks when the Yankees steamed into harbor? Speedy construction could mean survival; delay meant death.

It was precisely due to these many difficulties that, when Admiral Farragut’s Union fleet floated into New Orleans in April 1862, the city was unable to defend itself. The Mississippi River was, just as Lincoln considered it to be, the backbone of the Confederacy. Both sides recognized this waterway as vital; both knew they must control it. Confederate Naval officers felt it to be inadequately defended; obviously the attack on New Orleans would be one of Union Naval Secretary Gideon Welles’ prime objectives. Despite the knowledge that an offensive was coming, the city could not be fully prepared for a fight. The number of gunboats prepared to defend the port was comically inadequate, but to get more ships would have meant taking gunboats from other Southern ports, making them more vulnerable to capture.⁴³ Consequently, as Captain Mitchell stated, “[N]o impediment existed to the passage of the enemy’s gunboats...”⁴⁴

Everything depended on getting fully operational ironclads into the water. Tragically, the newly created navy was unable to do this. The *Louisiana* did make it into the water, but it had no engines. Beverly Kennon, commander of the wooden gunboat *Governor Moore*, explained that the *Louisiana*, in addition to being little more than a floating battery, had crews “totally unused to ships and the handling of heavy guns.”⁴⁵ What guns the ironclad did have were poorly mounted due to the panic that struck the Navy just before the fight. The range of some of its guns were

mounted too high, others mounted too low. Corrections were made, but even after working until ten o'clock the night before battle, the work was not finished.⁴⁶ If the poor ship could not even move under its own power, workers wanted to make sure that it could at least fire on Farragut's fleet. Yet poor gun mounting meant that it could not even fire accurately. Union Commander David D. Porter claimed that his navy's shots could not penetrate the *Louisiana's* armor, and that it was only because her engines were not ready that the Union fleet did not suffer a disaster at New Orleans.⁴⁷ A Confederate officer wrote to Mallory that the *Mississippi* "would have been a bull in a china shop among admiral Farragut's light wooden sloops of war."⁴⁸ Farragut himself was painfully aware of what might have happened, saying that *Mississippi* "was to be the terror of the seas, and no doubt she would have been."⁴⁹

The title of Charles Dufour's book, "The Night the War Was Lost," is in many respects highly appropriate. The failure of the ironclads meant that wooden ships such as Kennon's defended the city, wooden converted vessels that were not meant for war in the first place.⁵⁰ The Confederacy had fewer and less powerful ships in New Orleans than its enemy. A few more months would have meant that two of the most powerful warships ever created would be deployed against a fleet of wood. Despite the massive Union victory in New Orleans, opening up the Mississippi proved to be slow work; final control of the great river eluded the Yankees until the summer of 1863. Repelling Farragut at New Orleans would have greatly delayed the Union's strangling grasp, giving the rebel state much-needed breathing room. Mallory's ironclad strategy was founded on a very realistic belief that with squadrons of armored ships his navy could seriously challenge the Union's control. Farragut said of the Louisiana battle, "We were too quick for them."⁵¹ It was the Confederate Navy's problem in a nutshell. There would be other days, but April 1862 showed what every one of the navy's practical shortcomings could amount to.

If New Orleans symbolizes the South's failure to put Mallory's forward-looking strategies into effect, the loss did not mean that the Confederate Navy was unable to use modern tactics to inflict harm on the Union fleets. The ironclad strategy continued, but Mallory's navy gave up the dream of sweeping away the blockade and carrying the war to the North, concentrating instead solely on defending Southern harbors. Mallory pushed to get oceangoing ironclads built in Europe, but it was a strategy that would come to nothing. Furthermore, the many ironclads that began construction in the South in 1862 and later were designed only for river and harbor defense.⁵² It was partly the nature of Southern waterways that necessitated this strategy; Southern rivers and harbors were too shallow for deep-drafted vessels. For an ironclad to survive on the ocean, it needed a greater displacement in order to deal with the swells. Additionally, Mallory began to see that his ironclads would not be able to sweep away the blockade so forcefully as the Navy had previously hoped. Against the wooden ships this may have been possible, but as the United States sent more ironclads of the *Monitor* class southward, it was evident that a more defensive goal was necessary. Opening up the Mississippi took the Union longer than anticipated, so this meant that the Confederacy gained precious time to implement the modern strategy that had failed at New Orleans. Still states that around fifty ironclads were either laid down or contracted for in the South during the war, twenty-two of which were launched before the war ended.⁵³ The difficulties in building these armored ships only increased as time passed. However, the Navy continued to assemble these new defenders, believing that its survival depended on employing the most modern tactics against the modernizing giant to the north.

In addition to these coveted ironclads, the Confederate Navy began to experiment with bolder and more innovative measures that were adopted by the world's navies after the war. In April 1861 the Virginia government called Matthew Maury, a respected marine scientist, to suggest means of protecting the state's waterways. The strategy Maury decided to experiment

with was submarine mines, also known as torpedoes.⁵⁴ Torpedoes had been used in warfare previously, but it was in the Confederacy that these devices became effective tools of war. After demonstrating the power of the electrical torpedoes he developed, Maury took charge of defending the Confederacy in general with torpedoes, receiving funds and staff for further development.⁵⁵ As Maury argued, for a much lower cost and construction time than gunboats, reliable torpedoes could take the place of the armored ships that the South had yet to build.⁵⁶ The Confederates quickly developed other types of torpedoes, two of which were invented by General Gabriel J. Rains. Both his “keg” and “shell” varieties were relatively simple to construct. The keg torpedo, which was little more than a beer keg filled with powder and set to explode by impact, caused more damage to Union ships than any other type.⁵⁷

Both the kegs and the similarly operating shells quickly went into use across the South while the electrical type was mainly contained to the James River. In January 1862 General Grant wrote that there must be 600 torpedoes from Columbus to Memphis, but these were apparently so clearly visible that they provided little obstacle for Northern ships.⁵⁸ Despite their many failures, torpedoes quickly became a highly effective means of defense. The Union ship *Cairo* struck a torpedo at Vicksburg in late 1862, ironically while it was providing support for men searching the waters for torpedoes.⁵⁹ Soon more Union ships began to go down because of the torpedoes, convincing Mallory’s Navy to use them as broadly as possible. Mallory, President Jefferson Davis, and General Robert E. Lee were so impressed with torpedoes that they agreed that a large amount of troops could be transferred from the James River to another theater. The torpedoes, they reasoned, made it difficult for federal vessels to advance upriver, thereby making land army advance impossible.⁶⁰

The amount of powder packed in the typical torpedo produced a magnificent explosion, meaning that ships went down extremely quickly; if the ship did not sink, it was usually crippled

to the point where it would no longer play any significant role in naval operations. As a Federal officer complained, "It makes no difference whether a ship is of wood, or is tin clad, or is iron clad, if she gets over a torpedo it blows the same size hole in the bottom of all alike, which I found on an average to be just twelve feet by eight square."⁶¹ Fear of such explosions quickly struck the Northern Navy. In 1864 the presence of electrical torpedoes built by Hunter Davidson, Maury's successor, slowed a Union advance up the James River "literally to a walk, and gave the Confederates all the warning they needed..."⁶² Officers and scholars disagreed over the exact number of Union ships destroyed by Confederate torpedoes. According to General Dabney H. Maury, the official number was 68 ships; even if the actual amount was lower, there can be no doubt that torpedoes were extremely useful tools to the young navy.⁶³

An extension of torpedo warfare came in the form of torpedo boats, another Confederate innovation that was to become common after the war. The navy would build a small ironclad boat, attach a torpedo to a spar jutting out from the front of the ship, and then ram the torpedo into the enemy's gunboats. In October 1862 Captain C.F. Lee showed General G.T. Beauregard, commander of Charleston operations, plans for such a ship. Because he had little faith in Mallory's ironclads, Beauregard immediately began to advocate building as many of the small assault ships as possible. Upon seeing the plans, he wrote to South Carolina Governor Pickens: "I fear not to put on record now that half a dozen of these torpedo rams, of small comparative cost, would keep this harbor clear of four times the number of the enemy's iron-clad gunboats."⁶⁴ After this first letter agitating for torpedo boat construction, Beauregard continued to press relentlessly for the expansion of the strategy. On October 31, 1862 Beauregard thanked Mallory for providing for the construction of torpedo rams for Charleston, believing that such boats would change naval warfare.⁶⁵ Beauregard was right that the boats were easier and less costly to build than the

mammoth ironclads, but because the Confederacy tried to build three of them at once, The *David's* successful attack did not come until a year after construction began.

Following this attack Beauregard reported that the *David* failed to blow up its target, the Union iron gunboat *New Ironsides*, due to the smallness of the torpedo charge;⁶⁶ still, the blow was great enough to put the *Ironsides* out of action for a year.⁶⁷ Even before *David* demonstrated torpedo rams' practicality, inventor John B. Read asked the Palmetto State's governor to allow for the outfitting of pleasure boats with torpedoes. Even a sailboat armed with a few torpedoes, he felt, could damage the Union ships in a night assault.⁶⁸ Mallory eventually ordered Lieutenant William A. Webb to organize a fleet of torpedo boats – apparently any boat that could carry a torpedo – as a defense should the Union ironclads attack and enter Charleston Harbor.⁶⁹ The Confederacy recognized that one of its best chances for success lay in its torpedoes. If sweeping away a blockade were unrealistic, then the navy would play defense with clever explosives. If even small steamers were difficult to build, then the rebels would arm any boat they had with torpedoes.

While New Orleans represents the Confederate Navy's failure, the situation in Charleston demonstrates that despite the many difficulties it had to overcome, its desire to be a pioneer of modernity could cause great frustration for the Union. John Johnson writes that "The capture of Charleston by a strong force of armored vessels... seems to have been almost the first thing determined on by the United States Navy Department after the fight in Hampton Roads between the *Monitor* and the *Merrimac*."⁷⁰ However, the United States did not gain control of the city until 1865. If the Confederate Navy could not succeed in breaking the blockade off Charleston Harbor, it was wildly successful at defending the harbor itself. Union Rear Admiral J.R. Goldborough wrote in 1864: "The protection of harbors nowadays does not lie in forts...It lies essentially in powerful steam rams, aided, when necessary, by obstructions in passage ways." He claimed that it

was not Charleston's forts that held the federal gunboats out of the harbor, but the torpedo obstructions and ironclad rams.⁷¹ Unable to get ironclads into the water at New Orleans, the navy was able to put out three ironclads at Charleston by the end of the war. In attacking the Union blockade, the gunboats failed; nevertheless, as defenders they were greatly feared. Near the end of the war Mallory wrote that, though the Union had the ability to pass by the forts at night for two years, it was never attempted. In his mind it was only owing to these three ironclads that the federal gunboats never tried to force their way into the harbor.⁷² Beauregard wrote that the *Chicora* and *Palmetto State* ironclads were "of too heavy draft to be of much practical use in the defense of the harbor."⁷³ Yet even with their practical shortcomings, the Charleston ironclads were feared enough to be largely left alone.

Johnson wrote, "To the close of the war the [torpedoes] appeared to be more dreaded by the navy than the batteries which commanded them."⁷⁴ Union sailors knew submarine mines were deadly defenders, and their fear of the torpedoes provided as much of a deterrent against harbor entry as any of the other Confederate defenses did. In a Union gunboat action on April 7, 1864, Beauregard noted, "The approach of the monitors was slow and cautious. They dreaded the rope obstructions which were known to be connected with heavily charged torpedoes."⁷⁵ Their caution was so great that none of the ironclads came within 600 yards of the obstructions.⁷⁶ Earlier that year the Federal monitor *Patapsco* sunk less than a minute after hitting a torpedo; the blow came while covering scouts who were sweeping an entrance to the harbor for mine.⁷⁷ Experiences such as this compelled Union sailors to keep away from torpedo-infested areas. Beauregard stated that, with more persistent shelling, the United States Navy could have rendered Fort Sumter inactive at an early date, but even had the enemy done this, the other harbor defenses provided enough of a physical and psychological deterrent that Charleston stayed in Confederate hands nearly until the end of the war.⁷⁸

Given the Northern advantage in ships at the beginning of the war and its industrial capability of producing even more vessels at a much quicker pace than the South, the Confederate Navy must be viewed not in terms of its sheer loss but also in terms of what it accomplished with the few resources it had. Mallory knew that his navy could not attempt to throw as many boats in the water as its enemy. It consequently became a matter of how best to defend itself with very little. Noting Captain C.W. Parker's depression before an 1862 naval battle, Bern Anderson claims that the Confederate Naval officers were realists, and despite their bravery, they had no hope for success.⁷⁹ Though certain officers may indeed have had little hope of victory, to say that the rebel navy was hopeless does it no justice. Despite heavy losses early in the war, the Confederates became admirable defenders. Nearly everything went wrong for the Confederates at New Orleans. Many things still went awry in Charleston, but the harbor remained well defended until the end of the war. Mallory's promotion of ironclad construction in New Orleans was not borne of a vain hope. The Southerners could not complete the ironclads in Louisiana, but elsewhere they completed many of the gunboats. The Confederates quickly learned that they would not be able to conquer the Northerners through modern innovation, but they had a realistic hope that they could adequately defend with new technologies.

Dabney Maury wrote that if the Confederates had understood and harnessed the power of submarine mines in the beginning of the war, then they could have defended Southern waters against Union attack.⁸⁰ Statements like this cannot be viewed alone, for they lead one to view the Confederate Navy's experience as a collection of what-if situations. What successes might have occurred must be juxtaposed with what successes did occur. Charleston certainly could have been even more strongly defended with the fleet of torpedo boats that Beauregard advocated, but what mattered at Charleston was that the rebels held off Union advance despite all of the South's disadvantages. New Orleans epitomizes the Confederacy's what-ifs never realized, but Charleston

demonstrates that despite all the missed chances, a little innovation and readiness to take risks could go a long way.

¹ Milton F. Perry, *Infernal Machines: The Story of Confederate Submarine and Mine Warfare*, (Baton Rouge: Louisiana State University Press, 1965), 83.

² Raimondo Luraghi, *A History of the Confederate Navy*, (Annapolis: Naval Institute Press, 1996), 348.

³ William N. Still, Jr., *Iron Afloat: the Story of the Confederate Armorclads*, (Nashville, Vanderbilt University Press, 1971).

⁴ Perry, 196.

⁵ John Johnson, *The Defense of Charleston Harbor, Including Fort Sumter and the Adjacent Islands: 1863-1865*, (Germantown, Tennessee: Guild Bindery Press, 1994), 159, 276.

⁶ Charles Dufour, *The Night the War Was Lost*, (Garden City, New York: Doubleday and Company, 1960), 10.

⁷ Bern Anderson, "The Naval Strategy of the Civil War," *Military Affairs* 26, no. 1 (1962): 21.

⁸ Copy of Letter by Commander Wm. C. Whittle, September 24, 1861, *Official Records of the Union and Confederate Navies in the War of the Rebellion*, Series II, 3 vols. (Washington, D.C.: U.S. Government Printing Office, 1894-1917), 1: 446.

⁹ NOR, ser. II, vol. 1, 446.

¹⁰ NOR, ser. II, vol. 1, 458.

¹¹ NOR, ser. II, vol. 1, 469.

¹² Luraghi, 107.

¹³ Luraghi, 127.

¹⁴ NOR, ser. II, vol. 2: 69.

¹⁵ Luraghi, 33.

¹⁶ Anderson, 21.

¹⁷ Iron Afloat, 12.

¹⁸ NOR, ser. II, vol. 1, 467.

¹⁹ Iron Afloat, 70.

²⁰ NOR, ser. II, vol. 1, 449.

²¹ NOR, ser. II, vol. 1, 464.

²² NOR, ser. II, vol. 2, 151.

²³ NOR, ser. II, vol. 2, 243.

²⁴ NOR, ser. II, vol. 1, 477.

²⁵ Iron Afloat, 142.

²⁶ Iron Afloat, 141.

²⁷ NOR, ser. II, vol. 2, 241.

²⁸ William N. Still, Jr., "Facilities for the Construction of War Vessels in the Confederacy," *The Journal of Southern History* 31, no. 3 (1965): 287

²⁹ Facilities, 294.

³⁰ Luraghi, 40.

³¹ NOR, ser. II, vol. 2, 151.

³² NOR, ser. II, vol. 2, 334.

³³ Luraghi, 130.

³⁴ NOR, ser. II, vol. 1, 479.

³⁵ Facilities, 303.

³⁶ Luraghi, 37.

³⁷ NOR, ser. II, vol. 1, 448.

³⁸ Facilities, 303.

³⁹ NOR, ser. II, vol. 1, 449.

⁴⁰ NOR, ser. II, vol. 1, 455.

⁴¹ NOR, ser. II, vol. 1, 483.

⁴² NOR, ser. II, vol. 2, 51.

⁴³ NOR, ser. II, vol. 1, 471.

⁴⁴ NOR, ser. II, vol. 1, 458.

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- ⁴⁵ Beverly Kennon, "Fighting Farragut Below New Orleans," *Century Illustrated Magazine* XXXII, no. 3 (1886): 444.
- ⁴⁶ NOR, ser. II, vol. 1, 456.
- ⁴⁷ David D. Porter, *Incidents and Anecdotes of the Civil War*, 50, in Dufour, 336.
- ⁴⁸ James Morris Morgan, *Recollections of a Rebel Reefer*, 72, in Dufour, 336.
- ⁴⁹ NOR, ser. I, vol. 18, 158.
- ⁵⁰ Kennon, 445.
- ⁵¹ Luraghi, 163.
- ⁵² William N. Still, Jr., "Confederate Naval Strategy: The Ironclad," *The Journal of Southern History* 27, no. 3 (1961): 341.
- ⁵³ Iron Afloat, 227.
- ⁵⁴ Perry, 5.
- ⁵⁵ Perry, 6.
- ⁵⁶ E. Milby Burton, *The Siege of Charleston: 1861-1865*, (Columbia: University of South Carolina Press, 1970), 267.
- ⁵⁷ Perry, 38.
- ⁵⁸ Report of Brigadier General U.S. Grant, January 6, 1862, *Official Records of the Union and Confederate Armies in the War of the Rebellion*, ser. I, 111 vols., (Washington, D.C.: U.S. Government Printing Office, 1894-1917), 7: 534.
- ⁵⁹ AOR, ser. I, vol. 24, 663.
- ⁶⁰ Hunter Davidson, "Electrical Torpedoes as a System of Defense," *Southern Historical Society: Southern Historical Society Papers* 2, no. 1 (1876): 3.
- ⁶¹ Dabney H. Maury, "The Defense of Mobile in 1865," *Southern Historical Society: Southern Historical Society Papers* 3, no. 1 (1877): 11.
- ⁶² Perry, 111.
- ⁶³ Dabney H. Maury, "How the Confederacy Changed Naval Warfare: Ironclads and Torpedoes," *Bedford Magazine*, 7, no. 39 (1891): 369.
- ⁶⁴ AOR, ser. I, vol. 20, 632.
- ⁶⁵ AOR, ser. I, vol. 20, 662.
- ⁶⁶ AOR, ser. I, vol. 46, 731-732.
- ⁶⁷ Perry, 85.
- ⁶⁸ AOR, ser. I, vol. 47, 277.
- ⁶⁹ Captain William Harwar Parker, *Recollections of a Naval Officer: 1841-1865*, (Annapolis: Naval Institute Press, 1985), 332-333.
- ⁷⁰ Johnson, 40.
- ⁷¹ Johnson, 262.
- ⁷² Secretary Mallory to Senate Naval Affairs Chairman Brown, National Archives Record Group 45, in Iron Afloat, 229.
- ⁷³ G.T. Beauregard, "Defense of Charleston, South Carolina; I," *The North American Review* 142, no. 354 (1886): 7.
- ⁷⁴ Johnson, 159.
- ⁷⁵ Beauregard, 14.
- ⁷⁶ Beauregard, 15.
- ⁷⁷ Burton, 313.
- ⁷⁸ General G.T. Bearegard, *Philadelphia Weekly*, in Johnson, 268.
- ⁷⁹ Anderson, 21.
- ⁸⁰ Defense of Mobile, 11