NOT MERELY FOR DEFENSE

THE CREATION OF THE NEW AMERICAN NAVY, 1865-1914

by

LAURENCE WOOD BARTLETT III

Bachelor of Arts, 1973
Texas A&M University
College Station, Texas

Master of Arts, 2003
University of Colorado
Colorado Springs, Colorado

Submitted to the Graduate Faculty of
AddRan College of Liberal Arts
Texas Christian University
In partial fulfillment of the requirements
for the degree of

Doctor of Philosophy

May, 2011

CONTENTS

CHAPTERS

REFERENCE

Chapter One

"A naval superiority should be had": Introduction

The United States today possesses the world's most powerful navy. Moreover, it is arguably more powerful than all the other navies of the world combined.[1] The United States Navy maintains a worldwide presence and projects power from a global web of bases. Yet it was not always so. For the first century of its existence the nation maintained an ambivalent relationship with its navy. While expected to perform heroic deeds in times of national danger, the navy otherwise endured indifference and, at times, outright hostility from the people and government it served. Secure behind their ocean barriers and mindful of George Washington's warning to avoid entangling alliances, most Americans heartily agreed with the national policy of isolationism, saw little need for a navy, and evinced a distinct reluctance to pay for one. In 1882 the United States ranked no better than twelfth among the world's naval powers. Most observers, both at home and abroad, dismissed the navy's obsolete, poorly maintained warships as little more than deathtraps. Yet by 1916 the U.S. Navy stood third behind only Great Britain and Germany and the nation, assuming its place as a world power, had committed to building a navy second to none.

The period from 1882 to 1916 witnessed tremendous change in the navy, the nation's foreign policy, and public attitudes towards both. Naval officers played key roles in affecting those changes. Many officers believed that the navy had reached a crisis point by the mid-1870s. The few dozen ships that remained had reached the end of their

[1] Robert M. Gates, "A Balanced Strategy: Reprogramming the Pentagon for a New Age," *Foreign Affairs* (January/February 2009): 28-40, http://www.foreignaffairs.com/articles/63717/Robert-m-gates/a-balanced-strategy. Gates stated that in terms of tonnage the United States battle fleet was larger than the next thirteen navies combined.

service lives. Unless Congress could be moved to fund replacements, they feared the navy would soon cease to exist. In addition to their poor condition, the navy's ships suffered from increasing obsolescence. A revolution in maritime technology began during the last decades of the nineteenth century but America, which once led the world in maritime technology, had abandoned the race. The United States had pioneered many of the new technologies, but the nation made no effort to keep up with the accelerating rate of technological change. American naval officers viewed the increasing obsolescence of the small American navy when compared to the modern, technologically advanced navies of European states with growing alarm. These new technologies had profound implications, not just for naval strategy and tactics, but for the nation's foreign policy as well. Driven by their concerns, both professional and personal, officers called for the building of a new, larger navy. They simultaneously engaged in a fierce internal debate about missions, strategies, and ship types. From the debate a new strategy of power projection based on a battleship fleet gradually emerged. This technologically dependent strategy, many officers believed, required an imperialistic foreign policy and the acquisition of foreign bases. These officers actively worked to build public support and influence national policy to secure those ends.

America's naval history offered little support to the officers' quest. The country's performance at sea during the Revolutionary War provided few examples to draw upon. The rebellious colonies assembled a motley collection of privateers, state navies, and a small Continental Navy to challenge Great Britain's Royal Navy.[2] This haphazard

[2] Charles O. Paullin, "The Navy of the American Revolution: Its Administration, its Policy and its Achievements" (Ph.D. diss., University of Chicago, 1906), chapters 11-17; Howard I. Chappelle, *The History of the American Sailing Navy: The Ships and Their Development* (New York, NY: Bonanza Books, 1949), 53; James C. Bradford, "The Navies of the American Revolution," in *In Peace and War:*

collection fared about as well as expected against the world's dominant sea power. Attempts to meet the Royal Navy in combat usually ended disastrously. One noted naval historian termed America's fleet actions "strategically insignificant, tactically inept, and politically divisive."[3] The Royal Navy ultimately swept the seas, sinking or capturing most of the American ships and rendering the survivors impotent by blockading them within their ports. Commerce raiding, on the other hand, met with considerable success. American raiders captured needed supplies, drove up shipping and insurance rates in England and weakened popular support for the war among the English population. This success, when juxtaposed with the failure of the Continental Navy's ship-to-ship actions, helped cement commerce raiding as the nation's preferred wartime naval strategy for more than a century. Given the disparity in forces and resources available to the combatants, commerce raiding offered the only viable strategy for the young nation.

While the nation readily acknowledged the commerce raiding lesson, similar lessons about the important role sea power played in the war's opening and closing campaigns seemingly passed unnoticed in the flush of victory. In its opening campaign, the British Army, transported by the Royal Navy, conducted a series of amphibious flanking movements that easily forced General George Washington to abandon New York and inflicted grievous losses on the Continental Army. Washington's great victory at Yorktown similarly rested, in large part, on the ability of the French fleet to seize

---

Interpretations of American Naval History, 1775-1984, ed. Kenneth J. Hagan (Westport: Greenwood Press, 1984), 3-24. Eleven of the thirteen colonies (later states) established some form of naval force during the war. Prior to the creation of the Continental Navy, the Continental Army briefly operated a small squadron.

[3] Kenneth J. Hagan, *This People's Navy: The Making of American Sea Power* (New York, NY: The Free Press, 1991), 6. Hagan displays a noticeable bias in favor of a *guerre de course* strategy. For more balanced assessments of the Continental Navy see Harold and Margaret Sprout, *The Rise of American Naval Power, 1776-1918* (Annapolis, MD: Naval Institute Press, 1990 reprint of the 1966 edition), 24-33; E.B. Potter and Chester W. Nimitz, eds., *Sea Power: A Naval History* (Englewood, NJ: Prentice-Hall, Inc., 1960), 85-86, 97.

temporary control of Chesapeake Bay and prevent the Royal Navy from rescuing General Cornwallis and his army. Unable either to resupply or to evacuate, Cornwallis surrendered, effectively ending the war. In both cases command of the sea laid the foundation for victory on land.

The much maligned Continental Navy suffered dissolution following the war. After disposing of its last naval vessel in 1785 the nation did without a navy for more than a decade. The modern American navy can trace its roots to 1797, when the young nation, tired of ongoing attacks on American shipping and unwilling to continue paying tribute, launched three frigates to combat the Barbary pirates. Though the navy would never again cease to exist, it remained, with the important exception of the Civil War, small and poorly funded until late in the nineteenth century.

The War of 1812 seemed to reinforce the lessons learned in the Revolutionary War. Great Britain still possessed crushing naval superiority. Although the heavy American frigates won a few ship-to-ship duels, there were simply too few of them to affect the outcome. Commerce raiding again seemed to hold the most promise. Indeed, the frigate *Essex* single-handedly destroyed the British whaling fleet in the Pacific, a blow from which it never recovered.[4] Nevertheless, the naval war ended, as had the previous contest, with the American navy's ships sunk, captured, or blockaded.

By the latter half of the nineteenth century the constraints which had so hampered America's naval efforts in its two wars with Great Britain earlier during the nineteenth century no longer applied. The United States had the ability to build a world-class navy

[4] Wade G. Dudley, *Splintering the Wooden Wall: The British Blockade of the United States, 1812-1815* (Annapolis, MD: Naval Institute Press, 2003), 111; E. B. Potter and Chester W. Nimitz, eds., *Sea Power: A Naval History* (Englewood Cliffs, NJ: Prentice-Hall, Inc. 1960), 214.

but lacked the political will to do so. Most citizens saw the chance of war as vanishingly remote. Isolated from European intrigues and following a foreign policy that was neither aggressive nor expansionistic, the United States had little to fear and pursued a strictly defensive naval policy of harbor defense and commerce raiding. Advocates of commerce raiding, the traditional strategy of the weaker naval power, accepted American naval inferiority as a given. This traditional strategic worldview began to change during the 1880s. Advocates of a strong navy could, and did, point to one of the nation's founding fathers for justification. In 1780 George Washington had insisted: "A naval superiority should be had at all events, because on this everything does . . . depend."[5] They also insisted that changes in the nation's strategic situation demanded a more forceful and internationalist foreign policy. Such a policy had to be supported by a navy ready and capable of decisive action in regions important to American interests. The navy, which in 1880 had been small, dispersed, and on the verge of extinction, established "decisive naval superiority" during the 1898 war with Spain allowing the United States to emerge as a world power and claim an empire.

Most students of American history would agree that something momentous happened in 1898. The simple facts are plain: the United States defeated Spain in a short war and, for the first time in its history, acquired substantial non-contiguous territories. No such unanimity exists in the attempts to explain and characterize those events. The debate about the events of 1898 is part of a contentious larger debate about American expansionism and America's role in the world. On a map of North America the United States of 1783 appear as a narrow ribbon draped along the Atlantic seaboard. What drove

[5] Washington, July 15, 1780, Memorandum of Conference, *September 6, 1780 – December 20, 1780*, vol. 20 of *The Writings of George Washington*, John C. Fitzgerald, ed. (Washington, D.C.: Government Printing Office, 1937), 57.

this young, relatively small nation to first span the continent and then seize territories around the globe?

Charles Conant, economist, journalist, and author provided one of the first interpretations in an article written for *The North American Review* in September 1898. In "The Economic Basis for Imperialism" he argued that the United States would soon "enter upon a path marked out for them as children of the Anglo-Saxon race." Industrialization brought about an excess of saved capital which demanded new outlets to prevent social revolution. The laws of self-preservation and survival of the fittest, he concluded, made imperialism inevitable. Conant, writing while America was busily seizing her empire, touched on many of the themes later historians would identify. His justification, with its obvious references to American exceptionalism, Manifest Destiny, social Darwinism, and concerns about class warfare, presents a microcosm of the most prevalent ideas driving late-nineteenth century political discourse. [6]

Charles and Mary Beard in their 1927 work *The Rise of American Civilization* ranked among the first historians to analyze American expansion. The war of 1898, they charge, grew out of America's desire to protect its economic interests in Cuba. They similarly point to the subsequent acquisition of foreign territory as evidence of the business community's influence over foreign policy. [7]

Few scholars initially followed the Beard's economic interpretation. Albert Weinberg, in *Manifest Destiny: A Study of Nationalist Expansion in America*, adopted a

---

[6] Charles A. Conant, "The Economic Basis of Imperialism," *The North American Review* vol. 167, no. 502 (Sept., 1898): 326-340.

[7] Charles A. Beard and Mary R. Beard, *The Rise of American Civilization*, 2 vols. (New York, NY: Macmillan and Company, 1927), 2:369-382.

longer view and argued that expansionism, rationalized in various ways, has been a constant thread throughout U.S. history. The events of 1898 represented just another phase in an ongoing process.[8] In his 1936 synthesis of U.S. diplomatic history Samuel Flagg Bemis disagreed with the Beards and Weinberg. In a period he characterized as full of errors and blunders, Bemis pointed to the acquisition of the Philippines as America's first great foreign policy mistake and called the imperialism of the 1890s a "great aberration." President McKinley, he contends, found it impossible to resist imperialist sentiment fanned by Admiral George Dewey's easy victory over a Spanish squadron in Manila Bay.[9] Julius Pratt similarly challenged the economic interpretation; his *Expansionists of 1898* pointed to intellectual and emotional factors behind expansionism. Some expansionists, he noted, found justification in the emerging "science" of social Darwinism. Nations, they argued, must either expand or stagnate and die. Other individuals, voicing religious and humanitarian concerns, professed their desire to bring the blessings of American civilization to less advanced peoples. Yet another group accepted the emerging doctrine of sea power espoused, most famously, by Captain Alfred Thayer Mahan. The business community, Pratt insisted, initially opposed the war out of fear that it would be bad for trade. A shifting mix of intellectual, religious, economic, and humanitarian influences, he concluded, drove American imperialism.[10]

---

[8] Albert K. Weinberg, *Manifest Destiny: A Study of Nationalist Expansion in American History* (Baltimore, MD: Johns Hopkins Press, 1935).

[9] Samuel Flagg Bemis, *A Diplomatic History of the United States* (New York, NY: Henry Holt and Company, 1936), 463-475.

[10] Julius W. Pratt, *The Expansionists of 1898: The Acquisition of Hawaii and the Spanish Islands* (New York, NY: Peter Smith, 1951reprint of the 1936 edition).

William Appleman Williams returned to the economic interpretation in his influential 1959 book *The Tragedy of American Diplomacy*. Williams traces the roots of American expansion to the decades of the 1880s and 1890s. He theorized that the economic depression of those decades convinced the business community that their, and the nation's, survival depended on access to foreign markets. American industry routinely produced more than the domestic market could consume; without free access to foreign markets America risked economic stagnation and social unrest.[11] Williams' thesis gained support when Walter LaFeber published *The New Empire: An Interpretation of American Expansionism* in 1963. LaFeber rejected the "great aberration" thesis and the contention that empire had somehow been thrust upon America. He noted that America had long been expansionist, but a change occurred after the Civil War. The nation's pre-war expansion had been agrarian driven and continental; post-war the nation looked outward and a search for markets drove expansion.[12]

The Williams-LaFeber interpretation had great appeal during the 1960s and 1970s. The argument that America's foreign policy was designed to create and protect an international order that supported American economic hegemony struck a chord with a generation disillusioned by the Vietnam War and Watergate. Thomas McCormick's *China Market: America's Quest for Informal Empire, 1893-1901*, published in 1967, fits neatly within the paradigm. Concerned about overproduction at home, he contends, a broad array of leaders pursued an informal empire as a deliberate policy. McCormick

[11] William Appleman Williams, *The Tragedy of American Diplomacy* (Cleveland, OH: World Publishing Company, 1959).

[12] Walter LaFeber, *The New Empire: An Interpretation of American Expansion, 1860-1898* (Ithaca, NY: Cornell University Press, 1963).

identifies the Panic of 1893 as the trigger and dismisses contentions that empire came about as the result of unplanned, idealistic, or social Darwinist actions. [13] *America's Outward Thrust: Approaches to Foreign affairs, 1865-1890*, published in 1971 by Milton Plesur also advances an economic thesis. National leaders used a variety of rationalizations such as a sense of national mission to mask what he contends was, at its core, a desire to increase and protect American overseas markets.[14]

A number of characteristics unite all of these interpretations. First, all place great emphasis on internal, domestic factors as the primary determinants of foreign policy. They tend to ignore or downplay the role played by the actions of other nations. A second criticism finds fault with the implied purposefulness of American policymakers. Critics called for a more balanced, multinational approach; an approach that recognized the importance of external factors, the actions of other peoples and governments, and the often reactionary nature of American decision making.

Ernest May typified this alternative approach in *Imperial Democracy: The Emergence of America as a Great Power*. May contends that President McKinley came to office without preconceived ideas about foreign policy. He tried to keep America out of war, but Spain's refusal to grant Cuban independence and its inability to suppress the rebellion placed his government in an untenable position. McKinley could either go to war or accept some compromise solution but the agitated state of the American public opinion made compromise impossible. Arguing that mass hysteria resulted from the

---

[13] Thomas J. McCormick, *China Market: America's Quest for Informal Empire, 1893-1901*, (Chicago, IL: Quadrangle Books, 1967).

[14] Milton Plesur, *America's Outward Thrust: Approaches to Foreign Affairs, 1865-1890* (DeKalb, IL: Northern Illinois University Press, 1971).

collision of domestic issues (which somehow manifested themselves as concern for the Cubans) and Spanish intransigence, May concludes that McKinley simply succumbed to the pressure.[15] May further refined his interpretation in *American Imperialism: A Speculative Essay*. Arguing that the United States traditionally maintained an anti-colonial policy, he stresses the brief, episodic nature of the imperialist surge of 1898 and 1899. Consensus among the policy-making elite temporarily broke down, allowing less mature voices to dominate. Heavily influenced by European and particularly British examples the nation briefly turned to imperialism, and just as quickly turned away.[16] May's emphasis on the role of public opinion and his contention that mass hysteria drove the move to war echoes an earlier work by Richard Hofstadter. Writing in 1952, Hofstadter rejected the economic interpretation and pointed to non-economic, irrational influences. Alienated by social and economic changes, middle class Americans, he contends, experienced a psychic crisis. Their hysteria, driven by domestic concerns, overwhelmed policy making.[17]

James Field launched an attack against most of the historiography of the field with his provocative essay "American Imperialism: The Worst Chapter in Almost Any Book."[18] While challenging virtually every extant interpretation, perhaps his most cogent criticism accused historians of over-emphasizing rational decision-making while

---

[15] Ernest R. May, *Imperial Democracy: The Emergence of America as a Great Power* (New York, NY: Harcourt Brace & World, 1961), 129-130, 143-147, 152, 159.

[16] Ernest R. May, *American Imperialism: A Speculative Essay* (New York, NY: Antheum, 1968).

[17] Richard Hofstadter, "Manifest Destiny and the Philippines," in *America in Crisis: Fourteen Crucial Episodes in American History*, Daniel Aaron, ed. (New York, NY: Alfred A. Knopf, 1952), 173-200.

[18] James A. Field, Jr., "American Imperialism: The Worst Chapter in Almost Any Book," *The American Historical Review*, Vol. 83, No. 3 (Jun., 1978): 644-668.

dismissing the role played by chance. Field also called for a larger, less America-centered view of events. Field's attack sparked a lively counter-attack by Walter LaFeber and Robert Beisner, but has not significantly shifted the debate.[19]

Recent historiography continues to build upon earlier interpretations. John L. Offner, for example, in *An Unwanted War* draws heavily on Ernest May. Stressing the honorable nature of U.S. intentions, Offner concludes that popular sentiment forced McKinley into a war both inevitable and necessary. The irreconcilable political positions of the two nations made war inevitable; the plight of the Cubans made it necessary.[20] David Trask, May's student, and Ivan Musicant, May's mentor, have also offered works in this vein. Trask's *The War with Spain in 1898* agrees on the dominant role popular emotion played while deemphasizing strategic, economic, and ideological concerns. The United States, he insists, neither planned nor anticipated acquiring an empire before the war. America's new possessions, most notably the Philippines, came about as an unintended consequence of the president's strategy of attacking Spain's periphery.[21] Ivan Musicant argues in *Empire by Default*, published on the centennial anniversary of the war, that internal politics drove the foreign policy of both the United States and Spain. Neither nation wanted war but could find no other solution. Similarly, he concludes, the United States had no plans for empire; it came by default as a consequence of victory.[22]

---

[19] Walter LaFeber and Robert L. Beisner, "Comments" *The American Historical Review* Vol. 83, No. 3 (Jun., 1978): 669-678.

[20] John L. Offner, *An Unwanted War: The Diplomacy of the United States and Spain, 1895-1898* (Chapel Hill, NC: University of North Carolina Press, 1992).

[21] David F. Trask, *The War with Spain in 1898* (New York, NY: McMillan, 1981).

[22] Ivan Musicant, *Empire by Default: The Spanish-American War and the Dawn of the American Century (*New York, NY: Henry Holt and Company, 1998).

Louis Pérez Jr. in *The War of 1898* has approached the issue from the Cuban perspective and comes to very different conclusions. His interpretation, which fits squarely within the Realist school, finds that the United States went to war in pursuit of its own national interests. While accepting the altruistic nature of American public opinion, he insists it did not drive policy and did not reflect the views of policy makers. He notes that the United States had desired Cuba since at least the early nineteenth century and intervened only after it became obvious that the Cuban rebels were going to win. Established U.S. policy opposed the transfer of sovereignty over Cuba to any other power, including the Cubans themselves. Policy makers feared a Cuban victory and independence would destroy American strategic and economic dreams.[23]

In *From Colony to Superpower* George Herring provides a comprehensive synthesis of American foreign policy since 1776. Placing the expansionism of 1890s within that larger context he argues that it built on earlier precedents. It was neither a "great aberration" as Bemis insisted nor an "empire by default" as Musicant argued. Nonetheless, it did break with precedent by acquiring colonies with no intention of admitting them to statehood. Herring found that the gloom and anxiety of 1890s produced a mood conducive to war and expansion.[24]

A subset of this debate examines the activities of various individuals and groups. Politicians and parties, businessmen and missionaries, journalists and publishers, anthropologists and social scientists have all had their promoters and detractors. Walter

[23] Louis A. Pérez Jr., *The War of 1898: The United States and Cuba in History and Historiography* (Chapel Hill, NC: The University of North Carolina Press, 1998).

[24] George C. Herring, *From Colony to Superpower: U. S. Foreign Relations since 1776* (New York, NY: Oxford University press, 2008).

Millis and Marcus Wilkerson, for example, focused on the role played by the press. In *The Martial Spirit,* Millis, himself a journalist, emphasizes psychological factors and notes how easily the press whipped the population into a war frenzy the politicians found impossible to ignore. He casts William Hearst and Joseph Pulitzer as the prime villains as each sought increased circulation for their newspapers by printing increasingly lurid stories of alleged Spanish atrocities in Cuba. Wilkerson's *Public Opinion and the Spanish-American War* offers essentially the same argument in a much more balanced and scholarly presentation.[25]

Another grouping, the navy and naval officers, has drawn much less attention. The navy does appear in a number of accounts, but its role typically remains poorly defined. In *The New Empire*, Walter LaFeber listed the creation of the new navy as a factor in American expansionism. In building his argument that expansionism represented an enduring American trait, LaFeber insists that the United States deliberately annexed the Hawaiian and Philippine Islands as stepping stones to the Asian market. *China Market* by Thomas McCormack presents the same argument. Milton Plesur's *America's Outward Thrust* explained expansion as a search for markets. The nation's far-flung commerce needed the protection of an adequate navy which, in turn, needed global bases and fueling stations. The navy, he contends, became the means to national greatness and prosperity; both trailblazer for and protector of commerce. As public debate revealed the navy's weakness, its critical importance to both national security and commercial development became obvious. Interest in the navy, he contends,

[25] Walter Millis, *The Martial Spirit: A Study of Our War with Spain* (Boston, MA: Houghton Mifflin Company, 1931). Marcus M. Wilkerson, *Public Opinion and the Spanish-American War: A Study in War Propaganda* (Baton Rouge, LA: Louisiana State University Press, 1932).

helped create new attitudes and sweep away parochialism.[26] While suggestive, these treatises, and others like them, fail to explain adequately how or why the navy became involved in foreign policy questions. All of these interpretations take the navy's existence as a given. Furthermore, they present its growth in size and power as linear and seemingly inevitable. Several problems arise. First, the navy becomes an essentially passive receptor of others' actions with no voice in its own future. Second, the navy's regeneration was anything but linear and inevitable. A larger problem lies in the tendency to treat the navy as a faceless, monolithic entity rather than as a collection of individuals and power-blocs with varying opinions, viewpoints, and agendas. Officers' views on territorial expansion, for example, ranged from ardent support to fierce opposition. Furthermore, naval officers expressed a wide range of opinions on matters affecting their profession and worked diligently to shape the rebuilding process.

Even those studies that address the role of individual officers have been reduced virtually to considering the influence of one man, Captain Alfred Thayer Mahan.[27] While important, Mahan cannot stand as the sole representative of this important group. He became the best known proponent of American sea power, but others came before him. Additionally, a number of Mahan's contemporaries contend that other officers played a

[26] Plesur, *America's Outward Thrust*, 3, 95-101.

[27] Ernest May's interpretation is typical and stresses Mahan's importance in the policy making process. President Harrison, with no preconceived notions about foreign policy, did not trust Secretary of State Blaine and so sought advice from Secretary of the Navy Tracy. Tracy's advice, he contends, probably came from Mahan. Ernest R. May, *Imperial Democracy: The Emergence of America as a Great Power (New York, NY: Harcourt Brace & World, 1961)*, 8-17; Robert G. Albion, *Makers of Naval Policy, 1798-1947* (Annapolis, MD: Naval Institute Press, 1980), 209. Albion identifies Mahan as the "driving force" behind the changing strategy; Sprout and Sprout, *American Naval Power*, 234-240. The Sprouts also identify Mahan as the key. He is the only naval officer identified by name in the main text.

larger role in the navy's rebirth than did he.[28] Furthermore, a significant number of officers disagreed with his concept of sea power based on an offensive battle fleet. Mahan himself, it may be argued, demurred from the extremes to which some aggressive officers pushed his thesis. One must move beyond the broad studies of American expansionism and focus on naval histories before a more complex picture of the navy and its officers emerges.

Harold and Margaret Sprout produced one of the first studies to examine the new navy. In *The Rise of American Naval Power,* first published in 1939, the Sprouts used Congressional records extensively to illuminate the halting and often contentious process of creating the new navy. Similarly, describing the war with Spain as a "crusade to liberate . . . Cuba," they conclude that the empire acquired as a result, while unplanned, fit Mahan's strategic theory. What differentiates the Sprouts' work from the more generalized studies is their careful analysis of the debates about naval strategy that accompanied naval rehabilitation. They convincingly demonstrate that the legislative decision to build battleships outran strategic theory and few in Congress understood the strategic implications of their votes. While their analysis of the Congressional struggle remains valuable, their overall interpretive framework echoes the larger interpretative framework prevalent when they were writing.[29]

A more modern, but perhaps less satisfying account can be found in Kenneth Hagan's *This People's Navy*, published in 1991. Hagan notes that a series of political,

---

[28] See, for example, Bradley A. Fiske, *From Midshipman to Rear Admiral* (New York, NY: The Century Co., 1919), 67. Fiske insists that admirals Stephen Luce and Henry Taylor deserved most of the credit for determining and demonstrating the direction the navy should take.

[29] Sprout and Sprout, *American Naval Power*, 258-266, 233-246.

technological, and intellectual changes began to transform the navy during the mid-1880s. He deserves credit for recognizing the effect of both international and domestic events on naval policy, but then weakens his argument by concluding with the unsatisfying explanation that the navy re-invented itself "as if sensing a change in the air."[30] Hagan contends that battleships signaled a change in strategy that combined imperialism with enthusiasm for new technology. Advocates of the new navy, he asserts, drove imperialism, citing the need for coaling stations to support the fleet in distant waters.[31]

In *One Hundred Years of Sea Power* George W. Baer focuses on the new navy's rise to dominance since 1890. The shorter timeframe allows Baer to develop his argument more fully than Hagan. Baer credits changes in technology and international affairs combined with the continuing decline in the merchant fleet as the driving forces behind a reevaluation of the navy's purpose. Proponents of the new navy consciously transformed the navy's mission from commerce protection to national security. This effort to change the nation's strategic culture required both popular and professional consensus. Baer insists that Mahan's greatest contribution lay, not in inventing the doctrine of sea power, but in popularizing it. He agrees with Hagan that the need for forward bases drove expansion.[32]

In *Navalism and the Emergence of American Sea Power, 1882-1893* Mark Shulman argues for the primacy of domestic issues, insisting that factors within

---

[30] Hagan, *This People's Navy*, 185.

[31] Hagan, *This People's Navy*, 201.

[32] George W. Baer, *One-Hundred Years of Sea Power: The U.S. Navy 1890-1990* (Stanford, CA: Stanford University Press, 1994), 10-21.

America's internal political and strategic culture resulted in new policies during the 1890s. He indentifies the most important of these as the rise of navalism among individuals in positions of power. Navalists, united by their belief that a larger navy could only benefit the nation, pushed relentlessly for more ships. Domestic politics hold center stage in Shulman's analysis. He notes, for example, that when it became politically possible to build armored cruisers Secretary of the Navy Benjamin Tracy created a need for them. Arguing that navalists had "no dreams of creating a formal empire," he intimates that their insistence that America claim its rightful place in the world led to an aggressive foreign policy that would, nonetheless, lead to acquiring an empire.[33]

Hagan, Baer, and Shulman all agree that the navy underwent a significant transformation during the 1880s and 1890s. Virtually all naval historians concur although they differ on the exact nature and sequence of the transformation. The role played by technology remains a contentious issue. The Sprouts contend that technology ultimately outran strategy and the nation built ships without considering how they might be used. Walter Herrick takes an opposing position and argues in *The American Naval Revolution* that the transformation was one of doctrine, from loosely organized light cruisers and coast defense vessels to a unified battle fleet. The decision to build a battle fleet, he continues, implied the need for overseas bases and colonies.[34] In *The Naval Aristocracy*, Peter Karsten contends that the essential transformation first occurred within the officer corps as the "young turks" challenged the ideological positions of the "old guard." Naval

[33] Mark Russell Shulman, *Navalism and the Emergence of American Sea Power, 1882-1893* (Annapolis, MD: Naval Institute Press, 1995), 1-6,156.

[34] Walter R. Herrick, Jr., *The American Naval Revolution* (Baton Rouge, LA: Louisiana State University Press, 1966), 3, 90.

officers, driven by their desire to "see their profession thrive," single-mindedly pressed for naval growth.[35] Technology assumes the lead role in Robert O'Connell's *Sacred Vessels*. O'Connell argues that steam power initiated a "chain reaction that revolutionized naval warfare." The strategic implications of ships' limited coal capacity similarly set off a "scramble for overseas coaling stations."[36] Benjamin Apt presents a similar argument in "Mahan's Forbears: The Debate over Maritime Strategy." Apt locates the dominant motivations for the shift in maritime strategy within the naval world. Technological changes, particularly in armaments, became political factors in their own right.[37] In his unpublished dissertation "Forging the Sword: Congress and the American Naval Renaissance," Donald J. Sexton links naval rehabilitation to officers seeking new, modern ships and a strategic paradigm shift which repudiated isolationism. Rejecting economic determinism, Sexton credits a shift in the worldview of officers and congressmen with altering the operational premise of the navy and US foreign policy.[38]

In marked contrast to the preceding works, technological change plays almost no role in Robert Seager's, "Ten Years before Mahan: The Unofficial Case for the New Navy." Reflecting broader historiographic trends current when the article appeared in the early-1950s, Seager cites four general concepts that served as core premises for the various arguments driving revival and expansion: commercial, ideological, geographical,

---

[35] Peter Karsten, *The Naval Aristocracy: The Golden Age of Annapolis and the Emergence of Modern American Navalism* (New York, NY: The Free Press, 1972), 386-387.

[36] Robert L. O'Connell, *Sacred Vessels: The Cult of the Battleship and the Rise of the U.S. Navy* (Boulder, CO: Westview Press, 1991), 39-40.

[37] Benjamin L. Apt, "Mahan's Forbears: The Debate over Maritime Strategy, 1868-1883" *Naval War College Review*, Vol. L, No. 3 (Summer, 1997): 86-111.

[38] Donald J. Sexton, "Forging the Sword: Congress and the American Naval Renaissance, 1880-1900." (Ph.D. diss., University of Tennessee, 1976).

and historical. Economic determinism and the search for markets formed the core of the commercial argument. Ideologically, naval advocates used social Darwinist arguments to tie national survival to naval strength. The geographic argument attacked the long-standing conception of the oceans as barriers and insisted that they had become highways. The historical argument prefigured Mahan by demonstrating that great nations always had great navies.[39]

A naval revolution did occur during the latter part of the nineteenth century and its roots lay in technology. The convergence of four technologies doomed the wooden sailing ship and forced a reevaluation of the navy's missions and strategy. Steam power, by freeing ships from the vagaries of the wind, conferred a tremendous tactical advantage that no naval power could ignore. The adoption of armored hulls rendered solid shot and the muzzle-loading, smooth-bore cannons that fired them increasingly ineffective. Similarly, explosive shells fired by breech-loading, rifled cannons turned wooden ships into floating deathtraps. Finally, the switch to iron, and later steel, for hull construction made possible the dramatic growth in ship size. It also removed dependence on increasingly scarce supplies of suitable ship-building timber. Naval officers grappled with the implications of these new technologies. Consensus grew gradually among officers that they had to adopt technologically sophisticated ships for the navy to remain a viable force.[40] How best to integrate the new technologies drove the debate about the navy's roles and missions.

---

[39] Robert Seager II, "Ten Years before Mahan: The Unofficial Case for the New Navy, 1880-1890" *Mississippi Historical Review*, 40 (Dec. 1953): 491-518.

[40] William M. McBride, *Technological Change and the United States Navy, 1865-1945* (Baltimore, MD: The Johns Hopkins Press, 2000), 18; William H. Thiesen, *Industrializing American Shipbuilding: The Transformation of Ship Design and Construction, 1820-1920* (Gainesville, FL: University Press of Florida, 2006), chapter 6.

Eventually the navy and the nation adopted a new naval strategy built around a battle fleet. A necessary corollary to the battle fleet strategy was the possession of naval stations in areas of the world important to U.S. interests. The quest for bases was not entirely new and antedated the offensive battle fleet strategy adopted during the 1890s. Various civilian interests had pushed for territorial aggrandizement from time to time and for various reasons. Perhaps the best known of these is the push by Southern slave holders to acquire Cuba as a fertile place for the expansion of the peculiar institution. Nonetheless, two characteristics of the naval officers' quest were new and unique. First, they typically recommended acquiring title to a plot of land within another sovereign state rather than acquiring the other state in its entirety. The second difference dealt with their motives for the acquisition. According to mercantilist economic policy (still the best way to understand the empires of Spain, France, and England) colonies served two primary purposes. They acted as a source of cheap raw materials for the mother country and served as a market for manufactured goods produced in the mother country. Naval officers almost totally ignored these traditional colonial purposes. Instead, they put forward two new arguments. The first argument adopted a national security approach. Under this rubric the nation needed certain foreign bases to defend itself from attack. This was the primary point raised when arguing for bases in the Caribbean, Central America, and, to a lesser extent, Hawaii. The second argument sought overseas bases not for their intrinsic economic value, but as stepping stones to more important places. This was the primary justification used when urging acquisitions in the Pacific Ocean such as Hawaii, Samoa, the Philippines, and the Chusan Islands off the Chinese coast. These

possessions would ensure access to the lucrative markets in Australia, Japan, and, most importantly, the mythic China market.

The navy's increasing reliance on steam power intensified the quest for bases. The immense tactical advantage steam conferred came with a debilitating strategic disadvantage. Though freed from the vagaries of the wind, steamships found themselves tied by their steaming radii to coal piles. Without the ability to refuel, warships could not venture far from their own coasts. Unless access to coal could be guaranteed, the offensive, power projection strategy developed during the 1890s was doomed to failure. Refueling a single ship during peacetime presented few difficulties. The navy either made arrangements with coal agents in those ports typically visited by American naval vessels to buy coal as needed or prepositioned coal on board store ships. If necessary, captains had the authority to buy coal wherever needed, either from local civilian purveyors or at the bases of other (predominantly British) navies. Problems arose in wartime. As international law indicated, and the Spanish-American War confirmed, coal became a contraband item in times of war. During the Spanish-American War, neutrality laws prevented American naval vessels from securing coal at any neutral port in the world. Furthermore, as the voyage of the Great White Fleet demonstrated during the early twentieth century, refueling a fleet could be a problem even in peacetime. When the American fleet reached Australia, its demand for coal exceeded local supplies, forcing a delayed departure until needed supplies arrived.

Technology had shifted the strategic paradigm; it literally changed the rules of the game. New technology required a new naval strategy and a new national policy. Officers became convinced that the only reliable way to keep a fleet at sea was to acquire foreign

territory for naval stations and coal depots. By the 1880s a first-class navy had to be built of steel and powered by steam. A steam navy for anything other than coastal defense required overseas bases. Naval officers worked to ensure that the nation built a first-class navy and that it acquired the necessary supporting facilities.

Officers enjoyed considerable success in building public support for a large, modern navy. Nonetheless, the navy's quest for bases faced stiff opposition. After the flurry of acquisitions in 1898, the nation acquired no more territory. Part of this opposition came from within the navy itself as bases carried their own strategic liabilities. Frustrated in its quest, the navy explored both alternative technologies and an alternative strategy to resolve its logistical problem. The technologies, the switch from coal to fuel oil, underway replenishment, the fleet logistical train, the floating dry dock and the alternative strategy – the mobile advanced base concept did not reach fruition until World War II but can all be traced to experiments begun during the late-nineteenth and early-twentieth centuries.

Many historians have noted the role of technology in both European and American expansion. Jared Diamond's sweeping *Guns, Germs, and Steel* documents the crucial role superior technology played in European conquest of the new world.[41] Central to the initial European conquests in the Americas were steel, both as weapons and armor, and square-rigged, ocean-going, cannon-armed sailing ships. Western domination rested on advanced technology. In his more narrowly focused *Tools of Empire*, Daniel Headrick argues that in the latter half of the nineteenth century technology also made possible the conquest of much of Africa and India; steam engines, in the form of river

[41] Jared Diamond, *Guns, Germs, and Steel: The Fates of Human Societies* (New York, NY: W. W. Norton & Company, 1999).

steamers and railroads, combined with breech-loading weapons and preventative medicines allowed Europeans to dominate far larger native populations.[42] In a much earlier work, naval engineer Frank Bennett reached much the same conclusion, stating that steam boats made conquering and civilizing the territory watered by the Mississippi River possible.[43]

Technology undoubtedly made imperialism possible. A lesser studied question is whether or not the possession of specific technologies required imperialism. This work argues that American naval officers called on Congress and the nation to adopt modern technologies and build a new steam and steel navy during the last quarter of the nineteenth century. Such a navy, they insisted, could not be merely for defense. The adoption of modern naval technologies by other nations had changed strategic geography and demanded a response. Through the pages of professional journals such as the Naval Institute's *Proceedings*, civilian journals such as *Forum*, *The North American Review*, and *United Service*, speeches, and personal correspondence they hammered out a new mission and a new strategy for the navy. The new strategy envisioned an American battle fleet engaging in an offensive-defense by meeting an enemy fleet far at sea. Officers concluded that the inherent strategic limitations of a coal-fired, steam battle fleet absolutely required the possession foreign coaling stations. U.S. naval officers, generally ambivalent toward overseas expansion prior to the building of the new steam navy, became outspoken proponents of territorial acquisition during the 1880s and 1890s.

---

[42] Daniel R. Headrick, *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century* (New York, NY: Oxford University Press, 1981).

[43] Frank M. Bennett, *The Steam Navy of the United States: A History of the Growth of the Steam Vessel of War in the U. S. Navy, and the Corps of Engineers* (New York, NY: W. T Nicholson Press, 1896, reprint, Westport, CT: Greenwood Press, 1972), 11.

Chapter Two

"An absolute nonentity": A Navy Second to All

After participating in fleet maneuvers off the Florida coast in February 1874, Commodore Foxhall Parker summarized the dismay he and many of his fellow officers felt. "It became painfully apparent to us," he wrote, "that the vessels before us were in no respect worthy of a great nation like our own." Professing love for both his country and his profession, Parker found the very sight of the wooden fleet, armed as it was with short-range smooth-bore cannons, moving at just four and a half knots "painful." "What inferior force could it overtake," he lamented, "or what superior one escape from?"[1] These maneuvers brought home to American naval officers just how far the navy had fallen, and it had yet to reach its nadir. From a Civil War peak of 671 vessels, by 1880 the U.S. Navy, with fewer than forty ships in commission – and none of them "modern," ranked below such minor naval powers as Chile and Peru.[2] One noted historian referred to the navy of the 1880s as a "decayed flotilla of death traps and defenseless antiques," while another argued that until the end of the 1880s, for all practical purposes, the nation had no navy.[3]

---

[1] Commodore Foxhall Parker, "Our Fleet Maneuvers in the Bay of Florida, and the Navy of the Future." *Proceedings of the United States Naval Institute* (hereafter "*Proceedings*") 1, no. 8 (Dec. 1874): 168-169.

[2] Gideon Welles, *Annual Report of the Secretary of the Navy*, December 5, 1864, H.exdoc 1/18, 23; Richard W. Thompson, *Annual Report of Secretary of the Navy*, November 30, 1880, H.exdoc. 1/9, 46th Congress, 3rd Session. Throughout this period, the secretaries' annual reports catalogue the steadily declining number of ships available for service. The official Navy Lists record far more vessels than were in commission (142 in 1877), many of which were incomplete, condemned, or otherwise unserviceable.

[3] LaFeber, *The New Empire*, 58; Seager "Ten Years Before Mahan," 492.

A number of convenient parameters record the navy's decline. Two of these, annual naval appropriations and the number of ships in service, provide an objective, absolute measurement. Other indicators, while still quantitative, require interpretation. These include the age and condition of the navy's ships and comparisons with other navies. The comments made by naval officers and outside observers, both foreign and domestic, offer another tool that, while less precise, adds depth and meaning to the numbers. Finally, some effort must be made to evaluate the navy's ability to accomplish its missions. By all of these measures the United States Navy had ceased to be an effective force by the early 1880s.

The American navy experienced two different types of decline during the decades following the Civil War. First, it faced very rapid reductions in size and funding as the nation shifted from a wartime footing to a peacetime establishment. Second, foreign navies adopted technological advances at a staggering pace, rendering the U.S. Navy's few remaining ships increasingly obsolete. The navy therefore suffered both an absolute quantitative and a relative qualitative decline. Naval officers found the qualitative decline particularly difficult to bear. Most officers accepted the long-held understanding that the United States would never match the great navies of the world ship for ship. Nevertheless, that understanding came with a corollary that the ships the navy did build would be equal to or superior to any comparable vessels in the world. The heavy frigates of the *Constitution* class stand as the chief exemplars of this policy. Additionally, the navy had a proud tradition of technological leadership. The USS *Princeton*, launched in 1843, had been the first screw-propelled warship in the world. During the Civil War, the Union Navy built a blockading fleet composed primarily of wooden-hulled, steam-

powered, screw-driven warships that equaled any in the world. In addition, it had pioneered the turreted warship and the ironclad. The USS *Wampanoag*, designed for commerce raiding, set a world speed record in 1868 that stood for nearly twenty years. It would be three decades before any other American warship could again aspire to "world class" status.[4]

Many sources contributed to the navy's decline. Some, such as a deep distrust of standing militaries and a preference for the citizen soldier (or seaman) of the militia, had their roots deep in American history and tradition. Others, such as war weariness and the pressing need to reduce high wartime budgets, were of a more immediate and practical nature. Still others reflected an appropriate shift in priorities from combat operations to rebuilding and reconstruction. Partisan politics in Congress and a lack of vision within the navy also contributed. Finally, the nation renewed its focus on westward expansion, which had been put on hold during the war. Whatever its causes, naval officers, with their proud institutional memory, found their present situation a source of both embarrassment and motivation. They vowed to return the navy, both in size and quality, to the honored position they believed it deserved and the nation required.

The United States Navy reached the peak of its short existence during the Civil War. From its beginnings in 1797, the Navy had grown in fits and starts, its popularity and funding rising and falling with the perceived level of maritime threats. The navy endured one of its periodic lulls during the decade before the Civil War. Appropriations for the four years immediately preceding the war averaged $12,646,825 per year (fiscal

[4] Geoffrey S. Smith, "Uncertain Passage: The Bureaus Run the Navy, 1842-1861," in *Peace and War*, 99; Lance C. Buhl, "Maintaining 'An American Navy,' 1865-1889," ibid., 146-7; Robert W. Love, Jr., *History of the U.S. Navy* (Harrisburg, PA: Stackpole Books, 1992), 1: 331.

1857 -1860) and Congress appropriated just $10,400,129 in 1860.[5] With the outbreak of war the navy experienced a rapid increase. In his annual report for 1864, Secretary of the Navy Gideon Welles summarized its explosive growth. Since March 1861, he reported, the navy had built 141 steam warships and 61 ironclads. Additionally, approximately 400 civilian vessels had been pressed into service.[6] The navy's register of ships revealed a net increase of 83 more than the previous year, increasing the total number of vessels in the navy to 671. All of the vessels acquired during the war, whether purpose-built for the navy, purchased from civilian owners and converted, or captured and retained possessed steam power. Welles noted that the force had become exclusively a steam navy, even though 112 sailing vessels of all types remained on the Navy List.[7] He clearly envisioned no role for purely sailing ships either in the current conflict or in the post-war navy.

Retrenchment came nearly as swiftly and began before the war ended. The capture of Fort Fisher during January 1865 and the fall of Charleston and Mobile in February closed the last rebel ports on the Atlantic Coast. With the end of the war in sight, Secretary Welles began to reduce the naval forces. On May 1st he issued orders halving the various blockading squadrons. Further cuts at the end of May left just 100 vessels on the coast, down from 471 in January. By December of 1865 that number had been further reduced to 29, while the total number of vessels remaining in commission

[5] Isaac Toucey, *Annual Report of the Secretary of the Navy*, (Dec. 1, 1860), S. exdoc. 1/15, 36th Congress, 2nd Session, 19-20. Secretary Toucey did call for a steady, permanent increase in the Navy and the introduction of steam power. He warned that the present level of funding, and the navy it would support, did not meet the Constitutional mandate to provide and maintain a navy.

[6] Herrick, *American Naval Revolution*, 8.

[7] Welles, *Annual Report* – 1864, 23-24, 28.

stood at 117.[8] Only eight months after Appomattox the Navy Department had sold, scrapped, or placed in reserve more than 550 vessels.

Naval appropriations reveal a similar decline. Appropriations peaked at $140 million for the year ending June 30, 1865.[9] Due to the rapid force reductions Welles ordered, $23 million of those funds remained unexpended at year's end. For the year ending June 1866, the Navy Department had submitted estimates of some $112 million, while Congressional appropriations totaled almost $120 million. In his budget estimate for the year ending June 1867, Welles requested less than $24 million; due to the surplus appropriations available from the prior two years several bureaus had submitted no estimate for the coming year.[10] For the remainder of his tenure as Navy Secretary, Welles remained committed to reducing the size and expense of the navy. Again citing unexpended appropriations, he submitted estimates of $23.5 million for the year ending June 1868. Additionally, he returned $65 million to the Treasury Department on September 30, 1867.[11] Several considerations drove his decision. Funds from two sources made up the $65 million: unexpended appropriations from prior years and the proceeds from the sale of surplus vessels, equipment, and stores. By law, the proceeds from the sale of national property reverted to the general fund of the Treasury, not to the Navy Department budget. Furthermore, since unexpended appropriations did not automatically expire at the end of the fiscal year, they distorted the budgetary picture. Pointing out that

[8] Gideon Welles, *Annual Report of Secretary of the Navy* (Dec. 4, 1865), H.exdoc. 1/25, 39th Congress, 1st Session, 8-10.

[9] Welles, *Annual Report* – 1865, 31.

[10] Welles, *Annual Report* – 1865, 31-32.

[11] Gideon Welles, *Annual Report of Secretary of the Navy*, (Dec. 2, 1867). H.exdoc. 1/17, 40th Congress, 2nd Session, 26.

several bureaus, notably Construction & Repair, Steam Engineering, Ordnance, and Provisions & Clothing, had submitted no estimates since the end of the war, Welles reminded Congress that the department's budget estimates for 1867 and 1868 were unrealistically low since they reflected only part of the cost of maintaining the navy. By returning the surplus, he hoped that his estimates and Congress' appropriations might more accurately reflect the true annual expenses of the navy. With the surplus now returned, his estimates for the year ending June 1869 surged to $47.3 million.[12]

The number of ships in active service reflected the declining budgets. By the end of 1868, 206 vessels of all types remained on the Navy List. The number actually in commission stood at eighty-one with just thirty-five of those in squadron service.[13] Despite these dramatic reductions, Welles insisted "at no previous period in our history have the power and prestige of the American navy and name been more honored and respected."[14] He did admit that meeting the nation's expectations "with our limited navy, numbering in men and ships less than one-fourth the effective force of any one of the principal maritime powers," had required "great activity and vigilance."[15] Juxtaposing this statement with the preceding report on the navy's dwindling size, one suspects a degree of hyperbole. Nonetheless, Welles had sound reasons for making such a claim. At the conclusion of the war, the United States possessed a large fleet, most of which was relatively new. Welles could choose those vessels in the best material condition and those

[12] Welles, *Annual Report* – 1867, 26.

[13] Gideon Welles, *Annual Report of Secretary of the Navy*, (Dec. 7, 1868). H.exdoc. 1/16, 40th Congress, 3rd Session, 5-6.

[14] Welles, *Annual Report* – 1868, 6.

[15] Welles, *Annual Report* – 1868, 6.

best suited to peace time needs to retain in active service. Additionally, the unexpended wartime appropriations essentially freed him from the most onerous strictures of the budgetary process (at least until he returned the $65 million near the end of 1867). With those monies, the navy could repair, fuel, and provision its remaining ships as necessary. Furthermore, the technological revolution that would radically reshape the world's navies had barely begun and the ships Welles deployed fully met the international standards of the day.[16] Welles could also count on other nations recognizing that those few dozen American ships plying the world's sea lanes represented the latent power of the United States so convincingly demonstrated in the recent war. Although much reduced from its wartime peak, the navy list still included most of the purpose-built warships, vessels that could be activated should a crisis threaten. The navy's officers and men also had recent wartime experience. True, there had been only one ship-to-ship encounter, and most of the navy's experience involved riverine operations, amphibious assaults, and tedious blockade duty, but it still differed qualitatively from peacetime service. The British, with their long history of blockade duty, especially understood and appreciated the resources and stamina such service required.

[16] Modern navies of the time were primarily composed of wooden vessels that employed steam power in an auxiliary role and were armed with smooth bore, muzzle-loading cannons. The Royal Navy launched the world's first true ironclad, *HMS Warrior*, in 1861. Built to counter the French *Gloire*, *Warrior* was an evolution of the very large wooden frigates *Mersey* and *Orlando*, which themselves had been built to counter the American *Merrimac* class frigates. Too large and expensive for cruising and scouting, the traditional frigate roles, *Warrior* and her wooden progenitors lacked a clear tactical function. Nevertheless, *Gloire* and *Warrior* marked the beginning of an arms race in which France and Great Britain quickly abandoned the wooden ship of the line. See Andrew Lambert, *Warrior: The World's First Ironclad, Then and Now* (Annapolis, MD: Naval Institute Press, 1987), chapter 1 and James Phinney Baxter III, *The Introduction of the Ironclad Warship* (Annapolis, MD: Naval Institute Press, 2001 reprint of the 1933 edition), 140-142; Howard Fuller, *Clad in Iron: The American Civil War and the Challenge to British Naval Power* (Westport, CT: Praeger, 2008), xvii, 3-12.

While Welles had some justification for his optimistic report in 1868, his successor, George M. Robeson, found only cause for alarm.[17] First, he did not have the luxury of large, unexpended appropriations that could be used to fill out austere post-war budgets. Congress refused to fund even the radically reduced budget estimates the Navy Department submitted. In his last report, Secretary Welles had asked for $47.3 million for the year ending June 1869; Congress appropriated just $17.3 million.[18] Secretary Robeson faced similarly low appropriations. During his eight year tenure as President Grant's Navy Secretary, Robeson's annual budget estimates averaged approximately $21 million, while Congressional appropriations for the same period averaged less than $18.5 million.[19] Appalled when Congress appropriated just $12.9 million for fiscal year 1876, Robeson pointedly noted that appropriations for the years 1856-1859, when the navy had been smaller and relied primarily on wind power, had averaged $14.7 million.[20]

Secretary Robeson's annual reports stand in marked contrast to the upbeat reports Secretary Welles had submitted. Welles, submitting his last report in 1868, had bragged about the power and prestige of the American navy; Robeson, in his first report, submitted in December 1869, warned "our small fleet on these stations…was too small in number, and too weak in character, force, and condition to perform the service required

[17] Adolph Borie actually succeeded Welles but served only three months and was little more than a figurehead. He had minimal impact on the navy and naval policy and for purposes of this discussion can be ignored. Robert G. Albion, "Adolf Borie" in Paolo E. Coletta, ed. *American Secretaries of the Navy*, vol. I *1775-1913* (Annapolis, MD: Naval Institute Press, 1980), 363-364.

[18] Welles, *Annual Report* – 1868, 27.

[19] George M. Robeson, *Annual Report of the Secretary of Navy*, 1870 – 1876.

[20] George M. Robeson, *Annual Report of Secretary of the Navy*, (Nov. 29, 1876). H.exdoc. 1/10, 44th Congress, 2nd Session, 23-24.

by the ideas of the government or the expectations of our people."[21] With this statement, Robeson laid out four themes that would virtually become the mantra of those calling for a naval revival.

Secretary Robeson first addressed the navy's size. The bloated Navy List, the official roster of all the navy's ships, he contended, masked the true size of the navy. Lest anyone draw false comfort from the seemingly substantial register of 203 ships, he reminded his readers that this total included forty-six laid up ironclads, all of which would need extensive repairs before they could be put in service, twenty-two incomplete vessels, still on the stocks in various states of decay and upon which all work had been suspended, and sixty-six other vessels either laid up, condemned, or otherwise unfit for service. America's scattered squadrons numbered but forty-three ships compared to 191 British and more than 150 French ships patrolling the same areas.[22] The annual reports made by the Secretaries of the Navy during this period reveal their increasing frustration with Congress' refusal to address adequately the navy's needs. Secretary Robeson pointedly remarked that one of the sailing ships still on the Navy List in 1875 had been on the stocks for fifty-plus years.[23] The gradual decline in the number of ships in service

[21] Robeson, *Annual Report* – 1869, 5.

[22] Robeson, *Annual Report* – 1869, 4-6.

[23] George M. Robeson**,** *Annual Report of Secretary of the Navy*, (Nov. 29, 1875). H.exdoc. 1/11, 44th Congress, 1st Session, 3; Donald L. Canney, *Sailing Warships of the US Navy* (Annapolis, MD: Naval Institute Press, 2001), 191-192. The ship referred to was the *New Orleans*, a very large ship-of-the-line intended for service on the Great Lakes. Laid down in October 1814 and never completed, the navy finally sold the incomplete hull for scrap in 1883.

continued and by 1877 the number of vessels serving in the various squadrons had fallen below thirty and reached its lowest point, twenty-one, in 1884.[24]

Secretaries based their recurring call for more ships on the traditional peace time missions of the navy, the most important of which included the protection of U.S. citizens and their interests abroad. Secretary William Hunt, in his report for 1881, gave a textbook statement of the navy's primary peace time mission when he reminded Congress that citizens abroad looked to the navy for protection of their lives, property, honor, and interests. He also regretfully acknowledged that in many instances "it has proved impossible to respond to these calls from the want of a sufficient number of vessels. These things ought not to be."[25] While admitting that the navy did not need to be large, and should not be, he insisted that it should be "sufficiently powerful to assure the navigator that in whatsoever sea he shall sail his ship he is protected by the stars and stripes of his country."[26] As Secretary Hunt so bluntly stated, in 1881 the navy could not reliably provide that protection.

The Navy Department had long divided the world's oceans into cruising stations and assigned a squadron to each station. The vessels attached to each squadron patrolled the sea lanes, calling at the various ports where Americans had interests, and responding to requests for assistance. A few examples illustrate the problems the navy faced. The South Atlantic Station encompassed the East coast of South America and extended eastward into the mid-Atlantic Ocean. Between 1871 and 1884 the South Atlantic

[24] See the Annual Reports of the Secretary of Navy for the years 1877-1884. These numbers do not include ships on special assignment, tugs and small yard vessels, or ironclads in partial commission.

[25] William H. Hunt, *Annual Report of Secretary of the Navy*, (Nov. 28, 1881). H.exdoc. 1/9, 47th Congress, 1st Session, 3.

[26] Hunt, *Annual Report* – 1881, 3.

squadron never had more than four ships assigned, with two the usual number; in 1884 the "squadron" could claim but one vessel. The Pacific Station included the entire west coast of the Americas from Antarctica to the Arctic and extended westward to about the middle of the Pacific Ocean. To patrol this vast area the Navy Department typically assigned four or five ships; the squadron never had more than seven vessels.[27] Clearly, anything more than the occasional isolated incident would quickly exceed the navy's capacity to respond.

The type of ships available for service exacerbated the problems caused by the navy's small size. Many senior officers argued that American ships did not suit their assigned missions. The ironclads, mostly double-turreted monitors suitable only for harbor defense, had no peacetime role; most remained out of commission and in reserve throughout this period. All agreed that the navy's remaining sailing ships had no role in a modern navy. That left the cruisers, a ship type that derives its name from its mission -- vessels attached to the various squadrons that cruised the oceans of the world on independent patrols, showing the flag and protecting American interests. In peacetime these wooden ships combining sail power and steam power acted essentially as maritime police. Although encompassing a wide variety of designs and a number of different classes, these vessels can be divided into two broad categories: those built before the Civil War and those built during the war. The very different conditions encountered

[27] Secretary of the Navy, *Annual Report(s)*, 1871-1884. The secretaries' annual reports for this period almost invariably provide a list of vessels assigned to each squadron. From time to time the Navy Department broke the Pacific Station into two parts, North Pacific and South Pacific. This seems to have been done to ease administrative matters and typically did not affect the total number of ships assigned. Robert Erwin Johnson, *Thence Round Cape Horn: The Story of United States Naval Forces on Pacific Station, 1818-1923* (New York, NY: Arno Press, 1980), 5-7, 14, 135; Sprout and Sprout, *American Naval Power*, 195-196; Potter and Nimitz, *Sea Power*, 226.

during war time service fostered significant changes in the characteristics of the war-built ships.

After a period of experimentation during the early 1840s, the United States Navy truly began the transition to steam power in 1847. Experience during the Mexican war proved the value of steam power, led to the expansion of the steam navy, and brought an end to experimentation with "doubtful novelties."[28] The navy's mission dictated the type of ships built. Designed to cruise the world's oceans on independent patrols, these ships protected American citizens and their interests around the globe. Cruises, typically lasting three years, took the vessels to the far corners of the world. The mission dictated that the ships have great range. Though steam power showed great promise, as an immature technology it lacked both efficiency and reliability. Three-masted and ship-rigged, the cruisers were primarily sailing ships with auxiliary steam power. Depending on the arrangement of their armament, the navy classified them either as frigates or sloops. By 1854 the screw propeller had supplanted the paddle wheel, although a few of the older paddle wheel-equipped ships remained in service. The ships built before the war benefitted from careful construction and the use of live oak, America's premier ship-building wood, for their structural timbers. Conservative in design, sturdy and generally reliable, most served until the end of the wooden navy.[29]

---

[28] George Bancroft, *Annual Report of the Secretary of the Navy*, (Dec. 1, 1845). H.doc 2/7, 29th Congress, 1st Session, 649; Donald L. Canney. *The Old Steam Navy, Volume One: Frigates, Sloops, and Gunboats, 1815-1885* (Annapolis, MD: Naval Institute Press, 1990), chapter 2. These "novelties" included several variations on paddles wheels (notably Lieutenant William Hunter's horizontal paddle wheels and Keller's submerged wheels) and various engine designs, including a rotary steam engine.

[29] Canney, *Old Steam Navy*, I, chapters 3 and 4. The exceptions were the five very large steam frigates of the *Merrimac* class authorized in 1854. Over 300 feet in length, these ships tested the limits of wooden construction. While good sailers, they were underpowered, slow under steam, and prone to mechanical problems. Further, their very deep draft (in excess of 23 feet) limited their usefulness in coastal waters. Nevertheless, all but the *Merrimac* served well in to the 1870s.

The ships built during the war present a different picture. A changing mission again dictated ship characteristics. Blockade duty off the U.S. coast against a foe possessing no sea power required smaller, shallower draught ships able to work close inshore. The nearness of friendly bases reduced the need to carry large quantities of stores and coal. Smaller, more maneuverable ships resulted, designed to be faster under steam than their blue-water predecessors. Nonetheless, Confederate blockade runners, built for speed, proved difficult to intercept.[30] Consequently, captains on blockade duty constantly called for more speed and the Navy Department responded. As the Civil War progressed, sail power on all ships grew steadily smaller to improve steaming performance. Speed under steam became the primary determinant of success for the blockading vessels and masts, spars, and rigging noticeably slowed the Union ships.[31] Each successive class of ships built during the war grew larger, faster, and carried less sail than its predecessor. By the end of the conflict, naval construction focused on steamships with auxiliary sail power, a complete reversal of pre-war practice.[32]

The post-war complaints against the cruisers changed over time. Vice Admiral David D. Porter, and the Secretaries of the Navy he advised, complained that the navy relied too heavily on steam power. As budgets fell after the war's end operating economy replaced speed as the dominant requirement. Starting in 1869, the navy re-rigged its ships to increase their sail power. The pre-war vessels saw their full ship-rig restored. The war-built ships underwent radical changes to their sail plans. As built, the *Kansas* class

---

[30] Potter and Nimitz, *Sea Power*, 255.

[31] Sprout and Sprout, *American Naval Power,* 197; Canney, *Old Steam Navy*, I:123, 173-178. The masts and rigging created serious wind resistance when steaming, especially into the wind. The reduction in top weight also improved stability and reduced rolling, making the ships better gun platforms.

[32] Sprout and Sprout, *American Naval Power*,192.

gunboats, for example, were two-masted top sail schooners and lacked bowsprits. During the war they lost their topsails and had their schooner rig reduced. During the 1870s they received three masts, bowsprits, and full ship rigs.[33] In addition, those vessels equipped with four-bladed propellers had them replaced with two bladed ones to improve sailing efficiency. Four-bladed propellers increased efficiency when steaming but, even when uncoupled and allowed to freewheel, slowed a ship under sail. Two-bladed propellers, on the other hand, could be stopped vertically where they were almost completely masked by the stern post, or even hauled out of the water into a well built into the stern.[34] The Navy Department also issued orders strictly limiting coal usage. These orders forbade captains to use steam when sail would suffice and required them to report to the department any use of coal and their reasons for doing so. Should those reasons be deemed insufficient, the department warned its captains, they should not be surprised to see the cost of the coal deducted from their pay. [35] The navy's senior line officers during this period are often portrayed as hide-bound reactionaries, tied to the past, who relegated the navy to the "Dark Ages."[36] While there is some truth to the allegation, it does a disservice to Admiral Porter in particular and ignores the very difficult financial situation

[33] Canney, *Old Steam Navy*, I:104. Canney's technically oriented text provides numerous photographs and illustrations documenting the wartime reduction in sailing rig and its post-war resurgence.

[34] Robeson, *Annual Report* – 1869, 8; Potter and Nimitz, *Sea Power*, 339; Sprout and Sprout, *American Naval Power*, 196-197.

[35] Adolph E. Borie, General Order No. 131, June 18, 1869. M.S. Thompson, compiler. *General Orders and Circulars Issued by the Navy Department from 1863 to 1887* (Washington, D.C.: Government Printing Office, 1887), 83-84; Nimitz and Potter, *Sea Power*, 339-340. Borie, a political appointee with neither naval nor administrative experience, served as Secretary of the Navy for three months. Historians agree that he was merely a figurehead, that Admiral David D. Porter ran the department and issued these orders over Borie's signature. Albion, "Adolf Borie" in *American Secretaries of the Navy*, vol. I, 363-364.

[36] Frank M. Bennett, *The Monitor and the Navy under Steam* (Boston, MA: Houghton, Mifflin and Company, 1900), 24; Sprout and Sprout, *American Naval Power*, 207-210; Herrick, *American Naval Revolution* , 10; Albion, *Makers of Naval Policy*, 200.

he faced. The immediate post-war need was to reestablish the cruising squadrons at the lowest possible cost. The Navy Department did this by essentially recreating the pre-war navy where sail reigned supreme and steam power assumed a subordinate role.

Beginning under Secretary William H. Hunt and continuing under Secretary William C. Chandler during the early 1880s, the argument changed. These two men marked the return of able administrators to the office of the secretary after a long succession of "apathetic" and corrupt occupants.[37] Whereas Admiral Porter sought to create a cruising navy along the lines of the pre-Civil War fleet, Hunt and Chandler argued that the American navy had to adopt modern technologies. By this time European navies had begun to deploy iron-hulled cruisers armed with breech-loading, rifled cannons which, while still carrying sails, increasingly emphasized steam power. In his report for 1882, Secretary Chandler warned Congress that the nation's "reputation, honor, and prosperity require that such naval vessels as it possesses should be the best that human ingenuity can devise and modern artificers can construct. Our present vessels are not such, and cannot be made such."[38] Technology had passed them by. No amount of modification could bring these obsolete, wooden relics up to the standard of foreign navies.[39]

Secretary Chandler's comments extended to the armament of the navy's ships as well. While the leading maritime nations increasingly armed their vessels with breech-

---

[37] Sprout and Sprout, *American Naval Power*, 212-213; Herrick, *Naval Revolution*, 10; Robert G. Albion, "Borie," "George M. Robeson," "Richard W. Thompson," "Nathan Goff. Jr.," in Coletta, *American Secretaries*, 363-366, 369-378, 381-384, 387. Richard W. Thompson, secretary under Rutherford B. Hayes, supposedly expressed great surprise upon learning that the navy's ships were hollow.

[38] William E. Chandler, *Annual Report of Secretary of the Navy*, (Nov. 29, 1882). H.exdoc. 1/9, 47th Congress, 2nd Session, 6.

[39] Sprout and Sprout, *American Naval Power*, 199-210; Potter and Nimitz, *Sea Power*, 338-340; Herrick, *Naval Revolution*, 25.

loading, rifled cannons, American ships relied almost exclusively on muzzle-loading, smooth-bore weapons. Machined from steel forgings, the guns of European navies were far superior to the cast iron museum pieces on American ships. The rifled cannons of the European navies also fired explosive shells which could quickly destroy even the strongest wooden ship. Furthermore, the United States did not have a single industrial plant capable of making the steel forgings modern weapons required. Additionally, American warships carried relatively few weapons. Most carried between four and eight broadside guns and one or two very large (typically 9" or 11") Dahlgren cannons mounted on the centerline in pivot mounts. Civil War experience had proven the large pivot mounts to be virtually unusable in anything but smooth water. This was, again, a reflection of their Civil War mission of chasing blockade runners. A show of force, the proverbial "shot across the bows," was typically all that had been required to force the surrender of the blockade runner. Accuracy and rate of fire had not been tested. Few in number and antiquated in design, the guns on American vessels compared increasingly unfavorably to those of America's chief competitors.[40]

The pressing Civil War need for ships introduced another complication. The navy quickly exhausted its stocks of live oak timber, most of which grew only in the southern, seceded states. This shortage forced the use of less durables woods. The lack of proper curing exacerbated the problem. Shipbuilders normally allowed timber to "cure," or dry out, under cover for several years before building with it. Uncured timber lacked dimensional stability and tended to rot quickly. Wartime building schedules nevertheless

[40] J. D. S. Kelly, "A Lay Sermon – Armored Vessels," *United Service, A Quarterly Review of Military Affairs* 1, no. 2 (Apr. 1879): 267-270; Edward Simpson, "The Wants of the Navy – Cannon," *United Service* 2, no. 5 (May 1880): 647-656; ibid., no. 6 (Jun. 1880): 729-737; ibid. 3, no 1 (Jul. 1880): 41; Canney, *Old Steam Navy* I:165; Sprout and Sprout, *American Naval Power*, 199-200; Potter and Nimitz, *Sea Power*, 339-340.

forced shipwrights to use "green," unseasoned timber. The ships built with green wood required frequent, expensive repairs and within a few years most of the war-built ships had been extensively rebuilt. In 1872 Secretary Robeson had warned about the shortcomings of these ships, arguing that rebuilding them was "the most expensive way of maintaining a navy, since constantly increasing expenditure is met with constantly decreasing results." "[T]he limit of our old resources is rapidly being reached," he continued, "and … without new material our active force on the several stations must rapidly decrease, until our cruising navy will in a few years pass almost entirely away."[41] Congress responded by authorizing eight new ships in 1873, the only new vessels authorized between 1864 and 1882. Built of wood and iron, ship rigged with auxiliary steam power, these were essentially nothing but new copies of pre-war technology. Despite the arrival of these new ships in 1875, the overall condition of the navy continued to deteriorate. Secretary William Hunt began his 1881 report with an urgent call for action. "The condition of our navy," he warned, "imperatively demands the prompt and earnest attention of Congress. Unless some action be had in its behalf it must soon dwindle to insignificance."[42] The complaints of the secretaries had grown increasingly dire since Welles' upbeat report of 1868. By making this statement the first line of his annual report, Secretary Hunt ensured that it would attract the widest possible notice. He had, in effect, issued an ultimatum to Congress: act or the navy will die.

As the number of ships in commission slowly fell, and as those ships grew increasingly obsolescent, the condition of the American navy became a subject of

[41] Robeson, *Annual Report* – 1872, 5-6.

[42] William H. Hunt, *Annual Report of Secretary of the Navy*, (Nov. 28, 1881). H.exdoc. 1/9, 47th Congress, 1st Session, 3.

international comment. A British journal in 1875 offered this damning assessment: "There never was such a hapless, broken down, tattered, forlorn apology for a navy as that possessed by the United States."[43] British writers recognized that the poor state of the American navy placed increased responsibility on the British navy. As noted by U.S. Rear Admiral Daniel Ammen, "on the high seas the navies of the world form a common police."[44] Since the United States had allowed its navy to fall into a state approaching nonexistence, claimed a paper presented to the Royal United Service Institution, "the duty of maintaining order on the seas, and protecting the rights of neutrals … devolves on the [British] squadrons we maintain in the Pacific."[45] American officers faced ridicule and embarrassment when officers of foreign navies visited their ships. In his memoirs, Rear Admiral Alfred Mahan recalled such a moment while serving as captain of the *Wachusset*, one of the navy's "old warhorses," on the Pacific station during the 1880s. Mahan remembered the look of bewilderment, changing to one of amusement, on the face of a visiting French admiral as he gazed about Mahan's ship. Referring to his ship as "*l'ancien systême"* (the ancient system), the French officer dismissed it as an "historical monument," not a fighting ship.[46] As one American officer concluded, after the Civil

[43] Albion, *Makers of Naval Policy*, 200.

[44] Rear Admiral Daniel Ammen, "The Purposes of a Navy and the Best Methods of Rendering it Efficient," *Proceedings* 5, (Feb. 1879): 120.

[45] Quoted in: Ensign W. I. Chambers, "The Reconstruction and Increase of the Navy," *Proceedings* 11, no. 1 (April, 1885): 10.

[46] Alfred Thayer Mahan, *From Sail to Steam: Recollections of a Naval Life* (New York, NY: Harper & Brothers Publishers, 1907), 197.

War, while immense changes occurred elsewhere, the United States Navy, not even at a standstill, slowly sank to become an "absolute nonentity."[47]

Between 1868 and 1883 the United States Navy endured decline and decay. Far from the public mind, the navy languished, poorly funded and seemingly forgotten. The few ships still in active service represented the technology of the 1850s. Budgetary pressures forced them to rely primarily on sail power; coal was too expensive for ordinary usage. Built of wood when the navies of the world were switching to iron and steel, the American ships needed lavish repairs to stay afloat. Their antiquated smooth-bore guns suitable only to impress "savages," the navy's ships were hopelessly overmatched against even third rank naval powers.

That the navy found itself in this state was not all that unusual. In many ways the navy's experience reflected the typical American response to wars and their aftermaths. After every war in its history the United States has radically reduced the size of its military forces. Prior to 1945 that reduction amounted to virtual disarmament. Emotion, economics, and politics have driven the reductions. Americans, until the mid-twentieth century, have always exhibited a deep distrust of standing military forces. Historically, monarchs used armies as tools to repress their subjects. In a classic definition of a sovereign state, armies represent the means of coercion.[48] The twentieth century U.S.

---

[47] French Ensor Chadwick, *The American Navy* (Garden City, NY: Doubleday, Page& Company, 1915), 249.

[48] Thomas Hobbes, *The Leviathan* (Amherst, NY: Prometheus Books, 1988), 90-96. Originally published in 1651 following the chaos of the English civil war, Hobbes' *Leviathan* presented a case for the absolute authority of the state. In this construction, to be sovereign meant to have absolute control over the means of justice, taxation, and coercion. The sovereign state made and enforced laws, set and collected taxes, and used the army (along with police forces) to compel obedience. See also Euan Cameron. ed. *Early Modern Europe: An Oxford History* (New York, NY: Oxford University Press, 2001), xxvi-xxx.

Army during peacetime amounted to little more than a constabulary force banished to the nation's frontiers where it posed little danger to individual liberty.

Navies, while less directly a tool of repression, presented different challenges. Since their power ended at the water's edge, or at the range of their guns, warships seemed a poor tool for exerting internal control. In its character as a sovereign extension of the nation, nonetheless, many believed that the mere existence of a navy would inevitably entangle the United States in foreign conflicts.[49] Once the capability to interfere existed, naval opponents argued, the temptation to do so would prove irresistible. Furthermore, an American national ship present in an area of unrest might become involved despite the best efforts of its commander. Even though present at the scene of conflict in a non-combat role, an American vessel might still be fired upon accidentally, an action that would demand an American response.[50]

Additionally, navies have always been the most expensive arm of national power to build and maintain. As such, they always present tempting targets for those trying to reduce government expenditures. These factors typically combine to ensure that the United States remained woefully unprepared for war. Once war began, the nation armed

---

[49] "The Foreign Policy of the United States, *The Michigan Farmer* 33, no. 26 -June 25, 1898): 496; "An Unfortunate Contract," *Harper's Weekly* (Aug. 8, 1892): 819; Carl Shurz, "Hawaii and Sea Power," *Harper's Weekly* (Nov. 27, 1897): 1167; Baer, *One Hundred Years of Sea Power,* 19; Herring, *From Colony to Superpower,* 322-323.

[50] This situation nearly occurred during the War of the Pacific between Peru and Chile. In March and April of 1880 George W. Brown, captain of the USS *Alaska* reported on Chilean bombardments of Peruvian forts and vessels at Callao while his vessel was in port. In bombarding the forts, the Chileans fired over the *Alaska*. George W. Brown to R. W Thompson, March 10, 1880 and April 26, 1880, *Letters Received by the Secretary of the Navy from Captains* (*Captains' Letters*), RG 80, Microfilm series M125, Roll 380, National Archives and Records Administration, Washington D.C. items 123 and 232. Similarly James H. Gillis of the *Lackawanna* advised the Navy Department that he expected the Peruvians to ask "vessels comprising the neutral squadron" at Chimboté to leave as Chilean torpedo boats were using them for cover. James H. Gillis to Thompson, Nov. 27, 1880, *Captains' Letters*, M125, Roll 380, item 128.

itself at great expense and with much waste. As soon as peace returned, the government slashed military spending and the armed forces stagnated. Such had been the fate of both the army and the navy at the close of the Civil War. Retired Rear Admiral Bradley Fiske, who served during and after the Civil War, called this pattern the natural "swing of the pendulum."[51]

The desire to reduce painfully high wartime budgets complimented the traditional distrust of standing militaries. Wartime budgets grew to be ten times their pre-war average. At the conclusion of hostilities Congress worked quickly and diligently to return spending to pre-war levels. A series of economic downturns, which sharply reduced government revenues beginning with the Panic of 1873, added a sense of urgency. The panic, which began in Austria before spreading to the rest of Europe and the United States, lasted for six years. This proved to be the longest and most severe economic crisis in U.S. history to that time. Between 1867 and 1879 wholesale prices fell forty-five percent. As revenues fell, Congress adopted a policy of severe retrenchment. [52]

The navy inadvertently helped in this effort. Great technological ferment and experimentation occurred during the latter decades of the nineteenth century. Each new technology had its fervent advocates among the officer corps. Should new ships be of wood, iron or steel, or iron sheathed in wood? What relative importance should be given to speed, coal endurance, and sail power? Torpedo boats, submarines, rams, and dynamite cruisers all found supporters ready to extol their virtues. To the officers of a small navy these new technologies offered a force multiplier to offset a foe's numerical

[51] Fiske, *From Midshipman to Rear Admiral*, 71.

[52] Rendig Fels, "American Business Cycles, 1865-1879," *The American Economic Review* 41, no. 3 (June 1951): 327-330.

advantage. Officers differed as well on such basic issues as the navy's war strategy. Since the navy could not decide what it needed, Congress proved reluctant to fund its confusion. Secretary William Hunt recognized that the cacophony of ideas coming from naval officers was at least partly to blame for Congress' continued refusal to adequately fund the navy. Hoping to resolve the problem in 1881, he created an advisory board charged with developing a consensus report on the navy's needs.[53] As comments made by Lieutenant Commander F. M. Barber in 1886 reveal, Hunt's efforts failed. "[I]t is utterly impossible," Barber complained, "to reconcile the ideas of different naval officers as to the size, rig, number, or types of vessels which we require, and that there is really no safe rule for a Congressional committee to be guided by in recommending the adoption of any types of ships, or the appropriation of money to pay for them."[54] As Barber's comments revealed, naval officers also recognized that their inability to speak with a unified voice had serious negative consequences for the navy.

The nation and Congress had other reasons for neglecting the navy. Following the most destructive and bloody war in its young history, the nation appropriately focused on the daunting tasks of rebuilding the shattered South, reintegrating it politically and economically into the nation and reconstructing the social structure to address the over four million former slaves.[55] The nation also looked west. Following the withdrawal of most of the regular army during 1861, Indian wars flared across the western plains.

---

[53] William H. Hunt, *Annual Report of Secretary of the Navy*, (Nov. 28, 1881). H.exdoc. 1/9, 47th Congress, 1st Session, 5.

[54] F. M. Barber "A Practical Method for Arriving at the Number, Size, type, Rig, and Cost of the Vessels of Which the U.S. Navy Should Consist in Time of Peace" *Proceedings of the United States Naval Institute* 12, No. 3 (1886): 417-422.

[55] Sprout and Sprout, *American Naval Power*, 205-207; Potter and Nimitz, *Sea Power*, 339; Herrick, *Naval Revolution*, 13.

Restoring peace on the frontier and developing the "vast and little known" inland empire absorbed much of the nation's attention for the next fifteen years.[56]

Partisan politics also played an important role in the navy's decline. Prior to the election of 1884, at which time both major parties committed themselves to naval rehabilitation, the party outside power worked to prevent the party in power from taking any credit for naval revival. Democrats consistently fought Republican George Robeson and once in control of the House in 1875 they launched a series of investigations into alleged corruption in the Navy Department. Republicans returned the favor once they were in the minority, obstructing Democrats' efforts to reform and renew the navy. A careful analysis of Congressional voting patterns reveals that naval appropriation bills passed or failed based almost totally on party-line votes.[57]

The almost complete absence of any credible foreign threat allowed the nation to disarm. The Emperor Maximilian's defeat by Mexican nationalists had removed French influence on the U. S. - Mexico border. A series of treaties with Great Britain had resolved border issues with Canada. With its land borders secure, the nation could retreat into its customary isolationism. Geography favored the United States with a measure of "free" security. Neither of its continental neighbors posed a threat. The vastness of the Atlantic Ocean separated it from the powerful European states. No nation possessed a large enough navy to mount an across ocean invasion and keep it supplied. While coastal

[56] Johnson, *Thence Round Cape Horn*, 124; John D. McDermott's *Circle of Fire: The Indian War of 1865* offers an excellent study of this part of the plains wars. Robert Utley's *The Indian Frontier*, chapter 3 and Russell Weigley's *The American Way of War*, chapter 8 also contain useful discussions of frontier problems during the Civil War. Consult any of the standard texts on U.S. history for an overview of the period.

[57] Sexton, "Forging the Sword, 22, 33. Sexton provides a very useful, carefully researched analysis of the legislative battles behind the creation of "new" navy.

cities might be vulnerable to raids, the nation was so vast that there seemed to be no strategic center, the destruction of which could force the nation to capitulate. Indeed, the British had burned Washington D. C. during the War of 1812 to little effect. The Civil War reinforced the lesson. It took four bloody years for the industrialized North, with its massive army and huge navy, to defeat the agrarian South. No foreign power could hope to match that effort. Balance of power politics in Europe prevented any of the European powers from considering such a monumental task in any case. This fortuitous combination of vast size, ocean barriers, immense military potential, and intra-European rivalries convinced many Americans that conquest by a foreign power remained impossible.[58]

Naval officers did not share this sanguine view. As the navy's capabilities declined, they began to doubt its ability to carry out its missions in either peace or war. The traditional peacetime mission, broadly defined, consisted primarily of protecting and advancing American commerce. Officers had deeply internalized the understanding that "commerce follows the flag." Their wooden-hulled cruisers, armed with smooth-bore cannons and proceeding primarily under sail proved well-adapted to the mission. As long as they faced only "savages," the navy's Civil War antiques remained a perfectly viable force. Nonetheless, as the ships grew older and fewer in number officers expressed growing concern.[59]

---

[58] Sprout and Sprout, *American Naval Power*, 206; Potter and Nimitz, *Sea Power*, 339; Millett, Allan R. and Peter Maslowski. *For the Common Defense: A Military History of the United States of America* (New York, NY: The Free Press, 1994), 249.

[59] Frederick Collins, "Naval Affairs," *Proceedings* 5 (Feb. 1879): 160-161, 165; Charles Belknap, "The Naval Policy of the United States," *Proceedings* 6, no. 14 (1880): 376-377, 383; Chambers, "The Reconstruction and Increase of the Navy,"): 7; Buhl, "Maintaining an 'American Navy'", 150-165; Seager, "Ten Years Before Mahan," 493.

The officers' greatest concerns centered on their wartime missions of coastal defense and commerce raiding. The Civil War era monitors had no sea-going capability. They had been designed for use in the smooth waters of a protected harbor, either to prevent an attack or raise a close blockade. The new long range guns in modern warships would allow an adversary to lie miles off the coast and either shell a port or impose a distant blockade. Monitors stood impotent before either threat. Commerce raiding faced similar challenges. Commerce raiders depend on speed for both success and survival. They had to be fast enough to catch their prey and faster than the warships sent to catch them. The post-war changes made in the interests of economy slowed the cruisers; as Commodore Parker lamented, they could neither catch nor escape.[60]

Technology had changed the rules of the game in other ways as well. Steam power shrank distances; instead of barriers, officers argued, the oceans had become highways. In the days of sail, it could take a month or more for a ship to sail across the Atlantic. Worried officers warned that a modern steam-powered warship could be bombarding cities on America's eastern seaboard within a week of leaving its European base. The advent of steel construction, armor, and modern cannons rendered America's tradition of improvised defenses unworkable. Modern warships could not be improvised, their construction took years. Should a war break out, the nation would not have time to

[60] T. B. M. Mason, "Two Lessons from the Future," *Proceedings* 2, no. 4 (Apr. 1876): 57-76; Collins, "Naval Affairs," *Proceedings* 5 (Feb. 1879): 164-165; E. W. Very, "The Type (I) Armored Vessel, (II) Cruiser, Best Suited to the Present Needs of the United States," *Proceedings* 7, no. 5 (1881): 45; Seaton Schroeder, "The Type (I) Armored Vessel, (II) Cruiser, Best Suited to the Present Needs of the United States," *Proceedings* 7, no. 5 (1881): 96-99; Parker, "Our Fleet Maneuvers," 168-169; Richard Wainwright, "Our Coast Defenses from a Naval Standpoint," *United Service* 2, no. 1 (Jul. 1889): 46-50; Sprout and Sprout, *American Naval Power*, 199.

build a navy; the war would be fought, they insisted, with those ships on hand at its beginning.[61]

A number of events during the 1870s and 1880s lent weight to the officers' concerns. Each of these events created a war scare in the United States and forced the navy's officers to compare dispassionately the capabilities of their own vessels to those of potential adversaries. Whatever their merits as peacetime cruisers, they concluded, the navy's vessels scarcely deserved to be called "warships."

The *Virginius* Affair of 1873 served as a wake-up call for the navy. Cuba, one of the last outposts of the dying Spanish empire, suffered periodic revolts; the first had broken out in 1868. Many United States citizens, drawing comparisons to their own revolution, sympathized with the revolutionaries. The *Virginius*, a vessel of dubious American registry, had been running guns to the revolutionaries since 1870, a fact known to the Spanish authorities. American diplomats knew of the ship and its past activities as well. On at least one occasion an American gunboat, the USS *Kansas*, under orders from the local US consul, had escorted the *Virginius* out of the port of Aspinwall, Columbia to prevent her capture by the Spanish navy.[62] In October 1873, the *Virginius* took on board three hundred men, a large quantity of arms and ammunition and sailed for Cuba. The overworked ship's luck ran out and after a desperate chase she was captured by the Spanish corvette *Tornado* off the coast of Cuba on October 30, 1873 and taken into

---

[61] Kelly, "A Lay Sermon," 273-274; Jacob W. Miller, "The Need for a Coast Defense Vessel," *United Service* 5, no. 3 (Sep. 1881): 355-365; N. B. Clark, "Discussion," *Proceedings* 7, no. 18 (1881): 456; W. B. Franklin, "National Defense," *The North American Review* 137, no. 325 (Dec. 1883): 599-602; Caspar F. Goodrich, "Our National Defenses," *Century Illustrated Magazine* 30, no. 1 (May 1885): 172-174; *Report of the Naval Policy Board*, (1890) S. exdoc 43, 51st Congress, 1st Session, 4; J. B. Murdock, "Our Need of Fighting Ships," *Proceedings* 27, no. 2 (Jun. 1901): 247-248;

[62] S.A. Hurlbut to Captain Edward White, April 23, 1872, *Papers Relating to the Foreign Relations of the United States, 1872* (Washington, D.C.: Government Printing Office, 1873), 157-158.

Santiago, arriving November 1. The Spanish authorities charged her captain and crew with piracy. American Vice-Consul Emil Schmitt protested their arrest and tried unsuccessfully to intervene on their behalf. The Spanish executed the four rebel leaders, one of whom claimed to be a U.S. citizen, almost immediately. A sham trial on the night of November 6 found the crew guilty and sentenced them to death. The United States again lodged an ineffectual diplomatic protest. British Vice-Consul Theodore Brooks also got involved as at least sixteen crew members claimed British citizenship. Though the Spanish authorities ignored his protests as well, Brooks had an ace up his sleeve. The British government had ordered Captain Sir Lambton Lorraine to take his ship, HMS *Niobe*, to Santiago and prevent further executions. Knowing of *Niobe's* imminent arrival, the Spanish executed the captain and thirty-six sailors on November 7. Twelve more men faced the firing squad early on November 8. *Niobe* arrived at 1:00 PM that day and Lorraine personally warned the Spanish authorities that he would fire on the town should any more executions take place; none did. The incident graphically illustrated the close relationship between diplomacy and naval strength.[63]

By the time the U.S. government in Washington knew of the affair, most of *Virginius*' crew had already been shot. There remained the seizure of an (ostensibly) American ship on the high seas, desecration of the American flag, the release of the surviving captives, and reparations for the deaths of American citizens. Following a Cabinet meeting on November 14, President Ulysses S. Grant ordered Secretary of the Navy George Robeson to assemble a fleet off Key West as a show of strength. The navy

[63] The *Virginius* Affair has been studied extensively. The standard account is Richard H. Bradford, *The Virginius Affair* (Boulder, CO: Colorado Associated University Press, 1980). A short but useful account is Ron Soodalter, "To the Brink in Cuba 1873," *Military History* 26, no. 4 (October 2009): 62-67.

managed to scrape together a motley collection of twenty-five ships. Fortunately for the navy and the nation, Secretary of State Hamilton Fish crafted a diplomatic solution to the crisis by the end of November. Commodore Parker's lament, that opened this chapter, captured the navy's reaction. Others commented on the navy's poor condition as well. A *New York Times* story on November 13 noted that the navy had many ships it "would not care to put to sea."[64] *The Nation* complained in December that the government had issued an ultimatum to Spain without possessing the means to enforce it. The government had threatened to fight a "maritime power of considerable force [Spain] without having anything that can be called a navy." The great wooden vessels, "paraded with so much pride," it warned, were "almost useless for military purposes. They belong to a class of ships which other governments have sold or are using for firewood."[65] Had war with Spain occurred in 1873 rather than in 1898, the outcome would likely have been much different. Spain in 1873 possessed a powerful, modern navy markedly superior to anything the United States could muster.

The War of the Pacific between Peru and Chile, which erupted in 1879 and lasted for five years, further highlighted American weakness. While neither nation possessed a large navy, both had something the United States lacked – sea-going ironclads. Peru had two armored ships, *Independencia* and *Huáscar*, both built in England during the mid-1860s. Chile had two armored ships as well, *Almirante Cochrane* and *Blanco Encalada*, also English built. Both less than five years old, the Chilean vessels possessed superior

[64] *New York Times*, November 13, 1873, quoted in Bradford, *The Virginius Affair*, 69.

[65] "How Should We Fight Spain?" *The Nation* 17, no. 440: 364-365.

speed and firepower compared to the Peruvian ships.[66] A steady stream of reports from the commanders of vessels of the South Pacific Squadron kept the Navy Department apprised of events.[67] As neutrals, officers of the United States Navy worked to enforce neutral rights and protect the citizens of neutral countries. They could do so only at the sufferance of the superior Chilean navy. Chile established a naval blockade of Peruvian ports, forcing the U.S. Navy to shift the Pacific Squadron's store ship from Callao, Peru to Chimbote, Peru, a move Captain George Brown of the USS *Alaska* warned would only work if Chile did not extend its blockade.[68] In September 1880, the Chilean navy seized a small American flagged steamer that had put into a Peruvian port for repairs. The Chileans briefly detained the ship's captain and despite official American protests kept the vessel.[69] The American navy could do little about such insults, as the Pacific Squadron had but five ships assigned in 1880 and only one in the theater of war at any given time. The *Alaska* patrolled the area until being replaced by the USS *Lackawanna* during July 1880. Built of wood and armed with muzzle-loading, smooth-bore cannons, both ships were fast approaching the end of their service lives. Though handsome vessels,

[66] Donald E. Worcester, "Naval Strategy in the War of the Pacific," *Journal of Inter-American Studies* 5, no. 1 (Jan. 1963): 34.

[67] Between March 1880 and July 1882 Secretary R. W. Thompson received twenty-seven reports on the war situation. These reports, some quite lengthy, covered a wide range of topics and included information on both land and naval campaigns, the diplomatic situation, the danger to neutral citizens, and the European naval presence. See "Letters Received by the Secretary of the Navy from Captains (Captain's Letters), Record Group 45, National Archives and Records Administration. These letters are contained in microfilm series M125, rolls 402-409.

[68] Captain George Brown to R. W. Thompson, June 10, 1880, *Captain's Letters*, NARA, RG 45, M125, Roll 403, Item number illegible.

[69] Captain James H. Gillis to Thompson, November 9, 1880. *Captain's Letters*, NARA, RG 45, M125, Roll 404, Item 103.

neither of these sloops could be considered an effective warship by the 1880s.[70] A story, probably apocryphal, but current during the War of the Pacific illustrated the low esteem in which foreigners held the U.S. Navy. A senior Chilean naval officer, tired of American efforts to mediate between Peru and Chile, asserted that as soon as he had destroyed the Peruvians, he would destroy the U.S. Pacific squadron and, if necessary, the whole U.S. Navy. While the exact conversation may never have occurred, the two Chilean armored warships were clearly superior to anything in the U.S. inventory. The United States Navy's weakened condition negated American diplomatic efforts and rendered it unable to enforce neutral rights.[71]

The ships representing the major European navies further reinforced the obsolescence of the American vessels. The British, French, and German navies had each sent an ironclad to observe. A wooden corvette accompanied the French ironclad and the Italians also sent a wooden corvette. The British squadron eventually numbered four ships.[72] The American navy could only manage to keep one antiquated wooden sloop on station while the major European navies each sent a modern ironclad. The presence of these powerful European warships reflected European interest and capability in what Americans considered their sphere of influence. American naval officers called attention to alleged European efforts to expand their influence. Commenting on editorials in the Chilean press urging the government to hold the occupied portions of Peru indefinitely,

---

[70] *Dictionary of American Fighting Ships* (Hereafter *DANFS*), http://www.history.navy.mil/danfs/index.html. See also Canney, *The Old Steam Navy* I: 95-102, 124-125.

[71] Johnson. *Thence Round Cape Horn*, 137.

[72] Captain George Brown to R. W. Thompson, April 14, 1880, *Captain's Letters*, RG 45, M125, Roll 402, Item 222; Captain George E. Belknap to William Hunt, August 25, 1881, ibid., Roll 406, Item 242.

Captain George Belknap expressed his opinion that the effort had the secret support of the European powers and "would be a blow directly in the face of American interests, which of right ought to be paramount on this coast."[73] American naval officers feared the relative weakness of the American vessels when compared to their European counterparts jeopardized their ability to carry out the navy's traditional commerce promotion mission.

In 1873 the United States faced the possibility of war with Spain over the *Virginius* Affair. The War of the Pacific during the early 1880s revealed American naval weakness, not only compared to European navies, but to Chilean sea power as well. A confrontation over the small, South Pacific island chain of Samoa during the late 1880s gave the nation the opportunity to compare its navy to Germany's.

The United States had long been interested in the islands. First visited by the American Exploring Expedition under Lieutenant Charles Wilkes in 1838, the islands sat conveniently astride the sea lane to Australia, about halfway between Hawaii and Sydney. Their value as a potential naval base became apparent during the Civil War as the U.S. Navy pursued the Confederate raider *Shenandoah*. The Grant administration tried to acquire the right to build a coaling station in the islands following the war. Following two failed efforts, the American government succeeded on its third attempt in 1874. The treaty gave the United States the non-exclusive right to build a coaling station at Pago Pago on the island of Tutuila. One clause in the treaty obligated the United States to mediate in disputes between the various tribes and between the natives and the European powers. Exploiting complex tribal rivalries, Great Britain and Germany in 1879 each secured treaty rights to build coaling stations in the islands as well. The diplomatic

[73] Captain George E. Belknap to W. H. Hunt, September 29, 1881, *Captain's Letters*, RG 45, M125,Roll 407, Item 58; Belknap to Hunt, August 11, 1881, ibid. Roll 406, Item 224.

situation deteriorated as each nation sought to protect its interests. By 1887, the British and German governments demanded a partition of the islands while the Americans insisted they remain unified and independent. Germany dispatched a small squadron composed of the SMS *Olga*, SMS *Adler*, and SMS *Eber* to the islands as a show of force. A coup in 1888, believed to have been engineered by Germany, overthrew the pro-American king. Several German sailors died in the ensuing violence and the German ships shelled native villages in retaliation. The United States responded by assembling a squadron of its own. The *Vandalia*, *Nipsic*, and *Trenton* of the Asiatic Squadron rendezvoused at Apia harbor in February 1889. As tensions mounted, The British corvette HMS *Calliope* arrived to observe.

These seven ships offer a snapshot of the vessels the three navies dispatched to distant stations. Due to the distances involved and the uncertainties of coal supplies, all seven carried three masts and extensive sailing rigs. The German warships had all been commissioned between 1881 and 1887. The oldest of these, the corvette *Olga* (1881) and the gunboat *Adler* (1885), had composite hulls with iron frames and wooden planks. The little gunboat *Eber* (1887) had an iron hull. The *Eber* and the *Adler* could steam at 11 knots while the larger and more powerful *Olga* could reach 14 knots. The most impressive aspect of the German ships was their armament; all carried modern Krupp breech loading rifles. *Eber* mounted three, *Adler* four, and the *Olga* carried eight 6" rifles. The American ships, the oldest present, reflected both their age and backward state of American naval technology. *Vandalia* and *Nipsic*, both the product of "great repairs," were essentially new ships with old names. The name *Vandalia* originally belonged to a sloop-of-war commissioned in 1828. That ship had been broken up in 1871 at the same

time construction began on a new sloop to be commissioned in 1876, also named *Vandalia*. The new *Vandalia* had a wood hull mounting six 9" smooth-bore, muzzle-loading Dahlgren cannons and two 60 pdr. Parrot breech-loading rifles of Civil War design. She could steam at 12 knots. The *Nipsic*, originally a *Kansas* class gunboat commissioned in 1864, emerged from her "repair" as an *Enterprise* class gunboat some fifty percent larger than her original design. Also wooden hulled, and capable of just 10 knots, *Nipsic* carried four 9" Dahlgren smooth-bore, muzzle-loaders and one 8" muzzle-loading rifle converted from an 11" Dahlgren smooth-bore. *Trenton*, largest of the new ships authorized in 1873, had been commissioned in 1877. Still wooden hulled, and capable of no more than 12.6 knots, she carried ten 8" muzzle-loading rifles converted from 11" Dahlgren smooth-bores. The most modern and powerful warship present, the British corvette *Calliope*, had been commissioned in 1887. Her composite iron and steel hull, sheathed with wood and coppered below the waterline, mounted four 6" rifles in sponsons and twelve 5" rifles in broadside mounts. Her powerful engines gave her a speed of 14.5 knots. Should fighting break out, the American ships, though generally comparable in speed and hull construction, stood no chance against the Germans' decidedly superior armament.[74]

In an effort to defuse the situation, German Chancellor Otto von Bismarck invited the United States and Great Britain to a conference in Berlin to settle the Samoan question. On March 15 a great typhoon struck Samoa while the delegates met in Berlin.

[74] "Six War Vessels Sunk, *The New York Times*, March 30, 1889; <www.history.navy.mil/photos/sh-form/germany/gersh-el/eber.htm>; <www.history.navy.mil/photos/sh-form/germany/gersh-a/adler.htm>; <www.history.navy.mil/photos/sh-form/germany/gersh-o/olga.htm>; Canney, *The Old Steam Navy* I: 153-154, 103-108, 156, 159-160; Lincoln P. Paine, *Warships of the World to 1900* (New York, NY: Houghton Mifflin Company, 2000), 29.

All the ships dragged their anchors as the typhoon lashed the harbor. Thrown on the reef, Germany's *Eber* broke up and sank with virtually all hands. *Adler* wound up on the reef on her beam ends, a total loss. The *Trenton* and *Vandalia* also sank with heavy loss of life. The captains of the *Nipsic* and the *Olga* saved their ships by running them on the beach. Only the *Calliope* survived relatively unscathed. A combination of powerful engines and superb seamanship allowed the British ship to claw its way out of the harbor and ride out the storm at sea. The loss of six ships and the great loss of life lent needed perspective. The three nations decided they had no vital national interests at stake and quickly negotiated a tripartite treaty in which they shared oversight of the islands.[75]

By the 1880s the United States Navy possessed a third rate force at best. Suffering from legislative neglect and starved for funding, the navy had all but disappeared. The ships posted to distant stations could do little more than overawe local thugs and had little usefulness beyond showing the flag. Built of wood when other navies were switching to iron and steel, the navy's ships needed frequent, costly overhauls. The overarching need for economy led the Navy Department to issue orders strictly limiting the use of steam, forcing commanders to rely primarily on sail power. Arguably American ships' armament comprised their most serious shortcoming. The navy had a few muzzle-loading rifled cannons converted from smooth-bores but most ships carried a variety of cast iron, muzzle-loading, smooth-bore cannons. Other navies increasingly armed their vessels with steel, breech loading, rifled guns that surpassed the Americans' guns in range, accuracy, and destructive power. A dispassionate assessment of the American Navy circa 1880 would certainly justify the conclusion that the U.S. indeed possessed a navy second to all.

[75] Love, *History of the U.S. Navy*, 1:358-361; Hagan, *This People's Navy*, 193-194; Herrick, *American Naval Revolution*, 57-58.

Chapter Three

"What are we going to do with a navy anyway?": The Purpose of a Navy

Ships, in common with all mechanical devices, have a limited operational lifespan. As they age, ships typically experience increasing rates of mechanical failure requiring ever more frequent and increasingly expensive repairs. Attempts to extend a vessel's service life beyond its designed limits often entail staggeringly expensive "heroic" measures of dubious utility. Such was the situation the United States Navy faced during the decades following the Civil War. By the 1880s most of the navy's ships had simply worn out and needed to be replaced. Virtually all naval officers and a significant number of Congressmen agreed on this fact.

As the navy and the nation began to contemplate the rebuilding process they first had to decide what type of navy would best serve the nation's interests. On this issue consensus broke down. As one news editor pointedly wondered "what are we going to do with a navy anyway?"[1] In a perfectly rational world national strategy (or foreign policy) defines naval strategy, naval strategy defines missions, and missions dictate ship characteristics. Unfortunately, politics rarely confines itself to rationality and politics permeated the debates about rebuilding the navy. Fierce arguments raged within the officer corps and throughout Congress about every aspect of naval rehabilitation. Officers argued about the number of ships needed, how they should be deployed and manned, and to what extent the navy should incorporate new technologies. To these arguments Congress added partisan bickering and debates about the navy's cost.

[1] *Saint Louis Globe-Democrat*, August 15, 1881, 4.

Of these issues, the technological question seemed the most vexing. While missions might dictate ship characteristics, technological changes in turn carried implications for both missions and strategies. What began as an attempt simply to replace outmoded, worn out ships became a wide-ranging discussion that challenged existing beliefs about the navy's missions and, ultimately, America's role in the world. Out of the fierce debates about missions, strategies, technologies, and ship types emerged a new strategic paradigm of sea control based on a concentrated battleship fleet.

The immediate response to the need for new ships, both within the navy and in Congress, called for building new ships similar to those being replaced. Hence the ships authorized in 1873 resembled to a great degree the wooden cruisers built before the war. New ships built to an old idea, they were, nonetheless, perfectly adequate additions to the peacetime cruising navy as envisioned during the 1870s. The design of the eight ships of the 1873 program took into account their intended peacetime missions, the nation's strategic situation, and the international geopolitical outlook. Speaking against a naval appropriations bill in 1873, Representative William S. Holman (Indiana) expressed the widely held view that "We are in the midst of a very profound peace, with a reasonable certainty that there will never again be a great naval engagement."[2] Such sentiments not only militated against increased funding for the navy but stifled any meaningful examination of national and naval strategy.[3]

---

[2] William S. Holman, February 24, 1873, *The Congressional Globe*, 42nd Congress, 3rd Session, 1667.

[3] Sprout and Sprout, *American Naval Power*, 200, 204; Potter and Nimitz, *Sea Power*, 343; Buhl, "An American Navy," in Hagan, *Peace and War*, 151-158; Canney, *Old Steam Navy*, I: 154-161. Canney provides a technical analysis of these ships.

The United States did not choose its initial maritime strategy, but rather had one thrust upon it. When the colonies declared their independence in July 1776, England possessed the largest and most powerful navy in the world. The young nation lacked the time, the resources, and the ability to build a navy capable of challenging the Royal Navy's command of the sea. By default the nation's leaders turned to commerce raiding, the traditional offensive strategy of the weaker maritime power. Commerce raiding is a form of economic warfare. By attacking merchant shipping it hopes to create shortages in the target country, drive up the price of goods in the country so attacked, and increase maritime insurance rates. The expected results include a reduction in the opponent's ability to wage war and increased opposition to the war among his citizens. The nascent United States accomplished all of these goals during the Revolutionary War. American commerce raiders, both privateers and naval vessels, captured more than 600 British merchantmen during the war, many carried supplies such as powder and shot that when turned over to the Continental Army, proved invaluable. Shipping and insurance rates in England did rise, while popular support for the war in England fell.[4] On the heels of this success and perhaps recognizing that it lacked both the financial resources and the political will to match England's navy, or that of any European power, the new nation informally adopted commerce raiding as its offensive maritime strategy in case of war.

The Revolutionary War demonstrated the need for a defensive strategy as well. The Royal Navy had ranged up and down the American coast at will, seizing American merchant vessels and blockading American harbors. Britain's navy also played a crucial

[4] Bradford, "Navies of the American Revolution," in Hagan, *Peace and War*, 5-6; Sprout and Sprout, *American Naval Power*, 28-29; Dudley, *Wooden Wall*, 28, 127-129, 136-142, 177; Hagan, *This People's Navy*, 17.

role in the seizures of New York, Philadelphia, and Charleston. The Americans found no answers to these challenges during the war. Attempts to break the blockade and meet the British ship-to-ship failed miserably. Reacting to the unique situations it faced, the chronically cash-strapped Continental Congress embraced four principals that would guide America's naval policy not only during the war but until the late nineteenth century. These included an overriding emphasis on economy, a concomitant aversion to fleets, a preference for attacking merchant shipping, and a reluctance to attack strong enemy forces.[5]

As with its wartime strategy, outside events determined the navy's first peacetime missions. Following the Revolutionary War, England closed its vast trade network to American commerce and made it known that American ships no longer enjoyed the protection of the British flag. Searching for new markets to replace the lost trade, American merchantmen began appearing in the Mediterranean, Indian, and Pacific Oceans. Noting that the Stars and Stripes flew only above merchantmen and never warships, pirates began attacking American ships. The greatest threat lay in the Mediterranean where pirates operating out of ports on Africa's northern coast took an increasingly heavy toll of the unprotected American shipping. The American government, since it lacked any military forces, initially sought a diplomatic solution and negotiated treaties that involved annual tribute payments in return for safe passage – a

[5] Hagan, *This People's Navy*, 1-3. For a detailed analysis of the naval aspects of the American Revolution see any of the standard histories of the U.S. Navy. Bradford's "Navies of the American Revolution" in Hagan, *Peace and War* offers a succinct and very useful account. Harold & Margaret Sprout's extensively documented classic *The Rise of American Naval Power* remains virtually required reading. The Continental Congress did authorize the construction of three 74-gun ships-of-the-line. Due to a lack of funds, only one was completed and Congress gave that ship to France to replace a French 74 lost at Boston in 1782. Canney, *Sailing Warships*, 22.

classic protection racket. Not until Algerian pirates began attacking ships in the Eastern Atlantic did the American government finally respond militarily.[6]

The 'Act to provide a Naval Armament' signed by the president on 27 March 1794 authorized the construction of six frigates to deal with the Algerine crisis. This act established the protection of American commerce as the first, and indeed the paramount, peacetime function of the navy. The act also included a clause to suspend construction should a diplomatic agreement be reached with the Algerians. The parties reached such an agreement in March 1796 after the United States agreed to a large cash payment, ongoing tribute payments, and the gift of a frigate to the dey of Algiers. President Washington nonetheless urged Congress to allow construction of the ships to proceed. Congress agreed to fund the completion and launching of three ships, the frigates *Constitution, United States*, and *Constellation*, the first ships of the United States Navy.[7]

Although the pirate threat had temporarily subsided, the young navy immediately found itself forced to adopt another peacetime mission – enforcing neutral rights. England and France, each with a shifting cast of allies, were at war. Free of "entangling alliances," America insisted that as a neutral it had the right to trade with both sides. Since the United States lacked the military power to enforce its demands, both sides continued to stop, search, and seize American ships. The British also seized American

[6] Frank Lambert, *The Barbary Wars: American Independence in the Atlantic World* (New York, NY: Hill and Wang, 2005), 42-43, 54-65, 73-78.

[7] Craig L. Symonds, *Navalists and Antinavilists: The Naval Policy Debate in the United States, 1785-1827* (Newark, DE: University of Delaware Press, 1980), 27-30; G. Terry Sharrer, "The Search for a Naval Policy, 1783-1812," in Kenneth J. Hagan, ed., *In Peace and War*, 30-33, 39-40; Potter and Nimitz, *Sea Power*, 187-190; For a very readable popular history see Ian W. Toll, *Six Frigates: The Epic History of the Founding of the U.S. Navy* (New York, NY: W.W. Norton & Company, Inc., 2006), Part Two.

sailors and impressed them into the Royal Navy. These continued outrages led to the Quasi-War with France in 1798 and war with Great Britain in 1812.[8]

Between the Quasi-War and the War of 1812, the Barbary pirates again became an issue by demanding increased tribute payments. The United States dispatched a small squadron to the Mediterranean in 1801 hoping that the mere presence of American warships would suffice to protect American merchant ships. Thus began a distant station policy of power projection that became the mainstay of American peacetime naval operations until 1898 and, it can be argued, still influences naval deployments today. By the time the squadron arrived, Tripoli had declared war upon the United States. Between 1801 and 1807 the navy engaged in a drawn out campaign to suppress the pirates. As the squadron's objective, as stated in the written orders issued by acting-Secretary of the Navy Samuel Smith, remained the protection of American commerce, the Barbary Wars can be interpreted as an extreme example of the navy's police function. Thus by 1812 both the navy's core peacetime missions and its peacetime strategy had been established. Commerce protection and enforcement of neutral rights stood as the primary missions. The distant station strategy dispersed the navy in small squadrons to areas where America's interests were threatened. Operationally, the navy acted as a police force to, as Secretary Smith directed, "protect our commerce & chastise [the pirates] insolence."[9]

---

[8] Michael A. Palmer, *Stoddert's War: Naval Operations During the Quasi-War with France, 1798-1801* (Columbia, SC: University of South Carolina Press, 1987), 3-6; Dudley, *Wooden Wall*, 1-2; Sharrar, "Search for Policy," in Hagan, *Peace and War*, 41-44; Potter and Nimitz, *Sea Power*, 207-209; Alfred Thayer Mahan, *Sea Power in Its Relation to the War of 1812*, 2 vols.(London: Sampson Low, Marston, & Company, Limited, 1905), I:2.

[9] Samuel Smith to Commodore Richard Dale, 20 May, 1801. Quoted in Hagan, *This People's Navy*, 56; Lambert, *Barbary Wars*, 124-155; Potter and Nimitz, *Sea Power*, 195-206; Symonds, *Navalists and Antinavalists*, 90-96;

The War of 1812 further entrenched commerce raiding and harbor defense as the navy's primary wartime missions. Two categories of vessels developed to fulfill the commerce raiding mission. During the war England maintained normal commercial traffic with Canada and her possessions in the Caribbean as well as logistical support for her forces in the American theater. As this traffic neared the American coast it came within range of small, very fast raiders of limited endurance. Privateers, civilian vessels operating under Letters of Marque, came to dominate this short-range, close-in raiding mission. The other aspect of the commerce raiding mission involved interdicting England's world-wide commerce. Some American privateers did engage in operations in the Atlantic, but due to the mission requirements, long-range interdiction became primarily the domain of national vessels. This long-range mission demanded a reasonable amount of combat power, relatively high speed, and great endurance. Operating far from friendly harbors for months at a time, the commerce raider could expect to be hunted and therefore had to be able to fight ships similar to itself with some chance of success. The successful raider also had to be fast; without speed it could neither catch its prey nor escape its pursuers. Success and safety also depended on the ability to disappear in the ocean's vastness. While a raider could call at neutral ports for supplies, to do so gave away its location. Enemy shipping could then avoid the area while enemy warships converged on the raider.[10] The navy preferred frigates and sloops-of-war for the long-range interdiction task. The primary difference between the two types lay in the

[10] This is the fate that befell the American frigate *Essex* during the War of 1812. After an extremely successful cruise that destroyed the British whaling fleet in the South Pacific, David Porter, *Essex's* captain, decided to call at Valparaiso, Chile. Elements of the Royal Navy trapped him there and defeated the *Essex* when he attempted to escape. Dudley, *Wooden Walls*, 111; Mahan, *Sea Power*, I: 244-252.

arrangement of their armament. Otherwise, while frigates tended to be larger and more heavily armed than sloops, both carried three-masts and full ship rig.[11]

Overawed by the size of the Royal Navy (1,042 ships in 1812)[12] Congress insisted on a defensive strategy that tied most of the American navy to the coast. Within this restricted theater of operations the navy ordered its captains not only to attack British shipping but also protect American coastal trade by disrupting the Royal Navy's distant blockade of America's ports. Most naval officers, while happy to attack British warships, disagreed with the coast defense strategy. They believed that attacks on British commerce around the world would yield more decisive results and, by forcing the Royal Navy to search for the American raiders, would draw British warships away from the coast, thereby allowing American merchant vessels easier ingress and egress. During the War of 1812, as during the Revolutionary War, effective harbor defense proved elusive. President Thomas Jefferson tried to provide for harbor defense with his 1805 decision to build small gunboats. He hoped the diminutive vessels would provide effective harbor defense at low cost. Instead they proved to be almost completely ineffective both before and during the War of 1812.[13]

Between the War of 1812 and the Civil War the navy acquired additional peacetime functions. In addition to protecting American commerce, many in government believed the navy should be used to expand commerce, particularly in the non-European

---

[11] Dudley, *Wooden Wall*, 82, 138-142; Nathan Miller, *The U.S. Navy: A History* (Annapolis, MD: Naval Institute Press, 1997), 71; Mahan, *Sea Power*, I:284;

[12] Hagan, *This People's Navy*, 78.

[13] Hagan, *This People's Navy*, 68-70, 77-78; For a detailed discussion of the gunboat program see Spencer C. Tucker, *The Jeffersonian Gunboat Navy* (Columbia, SC: University of South Carolina Press, 1993) and Gene A. Smith, *"For the Purposes of Defense": The Politics of the Jeffersonian Gunboat Program* (Newark, DE: University of Delaware Press, 1995).

areas of the world. This belief grew out of a conviction that the nation would benefit from increased international trade, cultural relationships with foreign lands, and scientific investigations. President Millard Fillmore insisted that it was the "duty of government" to promote commerce, thereby ensuring national economic development. In the middle decades of the nineteenth century the government outfitted a number of naval expeditions designed to encourage commerce, expand the boundaries of scientific knowledge, and enhance American prestige.[14]

Lieutenant Charles Wilkes' controversial 1838 South Pacific Exploring Expedition represented one of the earliest of these missions; Navy Department orders directed him to chart the Pacific and the South Seas and "extend the empire of commerce and science." Lieutenant William Herndon's 1851 overland exploration of the Amazon Basin, Commander Cadwallader Ringgold's 1852 expedition to China, and Lieutenant Thomas Jefferson Page's exploration of the La Plata River system in South America from 1853 to 1855 represent other attempts to fuse commerce and science. Commodore Matthew C. Perry's 1854 mission to "open" Japan has undoubtedly garnered the most attention, winning for Perry a spot in the annals of American naval history.[15]

---

[14] Geoffrey Sutton Smith, "The Navy before Darwinism: Science, Exploration, and Diplomacy in Antebellum America," *American Quarterly* 28, no. 1 (Spring 1976): 43; Millard Fillmore, December 2, 1850, "First Message," in Fred L. Israel, ed. *The State of the Union Messages of the Presidents of the United States*, vol. I, *1790-1860*, (New York, NY: Chelsea House Publishers, 1967), 797.

[15] Secretary of the Navy J.K. Paulding to Lt. Charles Wilkes, August 11, 1838. Cited in John P. Harrison, "Science and Politics: Origins and Objectives of Mid-Nineteenth Century Government Expeditions to Latin America," *The Hispanic American Historical Review* vol. 35, no. 2 (May, 1955), 179-80. Harrison's article provides a detailed examination of the motives behind the mid-nineteenth century expeditions. For details of the Page expedition see Gene A. Smith and Larry Bartlett, '"A Most Unprovoked, Unwarrantable, and Dastardly Attack": James Buchanan, Paraguay, and the Water Witch Incident of 1855' *The Northern Mariner* 19, no. 3 (July 2009): 269-290. John H. Schroeder, *Mathew Calbraith Perry: Antebellum Sailor and Diplomat* (Annapolis, MD: Naval institute Press, 2001), 154-248; Nathaniel Philbick, *Sea of Glory: America's Voyage of Discovery, The U.S. Exploring Expedition, 1838-1842* (New York, NY: Viking, 2003). Controversy swirled around Wilkes' selection as commander of the expedition. Captain Thomas ap Catesby Jones had been originally chosen. The delay and aggravation

Thus, on the eve of the Civil War the navy's primary missions in both peace and war had been well developed. In peacetime the navy protected American interests around the globe, acted as a maritime police force, sought out new markets, worked to improve the safety of navigation, enforced neutral rights, and sought to expand scientific knowledge, all while defending national honor and "showing the flag." During wartime, commerce raiding remained the primary offensive strategy until the end of the "old navy." Coast and harbor defense stood as the defensive missions although the navy had no suitable harbor defense vessels.

The Civil War stands out as the great aberration in the nation's early naval strategy. The Federal navy found itself thrust into new roles. Union war strategy forced the navy to take the offensive by blockading and then capturing Southern ports, staging raids in littoral waters, and mounting riverine campaigns in support of army operations. The Confederate States followed the traditional strategies of commerce raiding and harbor defense but introduced a new ship-type, the ironclad, in the harbor defense role. The concern created by the Southern ironclads and the apparent victory of the USS *Monitor* over the CSS *Virginia* created monitor mania. The North began construction of sixty turreted, monitor-type vessels during the war and had thirty-six in service by war's end. Loathe to dispose of its only armored ships in the lean post-war years, the navy retained some of the newest monitors for the harbor defense role and modified others to undertake coastal defense. Fourteen of these served until the dawn of the twentieth

---

caused by Secretary of the Navy Mahlon Dickerson's opposition to the journey eventually forced Jones to ask to be relieved. When no other senior officer would accept the command, Dickerson appointed Wilkes, a lieutenant of but two years' seniority. For a detailed review of the controversy see: Gene A. Smith, *Thomas ap Catesby Jones: Commodore of Manifest Destiny* (Annapolis, MD: Naval Institute Press, 2000), 71-90 and John H. Schroeder, *Shaping a Maritime Empire: The Commercial and Diplomatic Role of the American Navy, 1829-1861* (Westport, CT: Greenwood Press, 1985), 40-70.

century and five more, totally rebuilt as new ships, remained on the Navy List until the 1920s.[16]

The navy quickly resumed its traditional peacetime roles following the conclusion of the Civil War. Most naval officers during the decade immediately following the war fully embraced the decision. Commodore Foxhall A. Parker, writing in 1874, reconfirmed the navy's peacetime functions as maintaining national dignity at home and abroad, protecting commerce on the high seas, and protecting U.S. citizens in foreign lands.[17] While few naval officers of the period would disagree with any of the items on his list, many would nonetheless suggest that he had neglected important tasks. "Protection of commerce" had been, since the 1850s, redefined and greatly expanded to include protecting American lives, property, and trade overseas; identifying and opening new markets; and negotiating diplomatic agreements. Commodore Robert W. Shufeldt, an influential officer, helped launch the naval renaissance during the 1870-80s. The key as he saw it was to revive the pre-Civil War naval-commercial alliance. He eloquently articulated the long-standing belief that the navy and merchant marine enjoyed a symbiotic relationship. As a naval strategist, Shufeldt adhered to the classic formulation that the peacetime navy should restrict itself to protecting the nation's commerce abroad, and its shores at home. Rear Admiral Daniel Ammen affirmed and extended Shufeldt's

[16] Miller, *U.S. Navy*, 110-142; Sprout and Sprout, *American Naval Power*, 178-193; Potter and Nimitz, *Sea Power*, 244-327; Blake Dunnavent, *Brown Water Warfare: The U.S. Navy in Riverine Warfare and the Emergence of a Tactical Doctrine. 1775-1970* (Gainesville, FL: University Press of Florida, 2003), 59-78; Gene A. Smith, *Iron and Heavy Guns: Duel Between the Monitor and the Merrimac* (Fort Worth, TX: Ryan Place Publishers, 1996), 56-91; William C. Davis, *Duel Between the First Ironclads* (Garden City, NY: Doubleday & Company, Inc., 1975), 76-137; Donald L. Canney, *The Old Steam Navy: vol. II The Ironclads, 1842-1885* (Annapolis, MD: Naval institute Press, 1993), 75, 138-139.

[17] Parker. "Our Fleet Maneuvers," *Proceedings*: 171-2; Schroeder, *Shaping a Maritime Empire*, 3; David Long, *Gold Braid and Foreign Relations: Diplomatic Activities of U.S. Naval Officers, 1783-1883* (Annapolis: Naval Institute Press, 1988), 396, 411.

contention when he argued in 1879 that in time of peace the navies of the world formed a "common police" to protect life and property from the depredations of uncivilized peoples. In addition, the U.S. Navy should work to expand commerce, conduct surveys to make navigation safe, and provide a show of force in protection of commerce, "such" he exclaimed, "has been its purpose, such will be its purpose as long as it exists."[18]

By the 1880s, officers had further expanded their understanding of "protecting commerce" to include active participation in the promotion of commerce. The writings, reports, and operations of naval officers of the 1880s clearly manifest the premise that national greatness related directly to commercial vigor. The comments of Lieutenant Charles Belknap, making his case for a strong navy, are typical. Arguing that "navies are the police force of the world at large," he insisted that "commercial and naval supremacy are coexistent."[19] He identified the inability of the U.S. Navy to protect American commerce during the Civil War as the chief reason for the merchant marine's precipitous decline. The convergence between American commercial expectations and the naval mandate became almost total; naval officers, politicians, and common citizens agreed that fostering commerce in the non-European areas of the world represented the predominant mission of the navy. "The notion that 'commerce follows the flag' so dominated American thought about the navy's mission that one cannot make sense out of peacetime operations of the navy at any point in the nineteenth century without reference to it."[20] This commercial understanding of the navy's peacetime mission endorsed cruisers as the

[18] Robert W. Shufeldt, *The Relation of the Navy to the Commerce of the United States* (Washington, DC: John L. Gink, Printer, 1878); Ammen, "The Purposes of a Navy," *Proceedings:* 120.

[19] Belknap. "The Naval Policy of the United States," *Proceedings:* 376-7.

[20] Buhl, "Maintaining an 'American Navy,'" in *Peace and War*, 161.

favored ship type and espoused a policy that dispersed those ships, singly or in small squadrons, on distant stations.[21]

As the United States Navy dwindled in size and capability during the years after the Civil War, concerned officers began to speak out. The United States Naval Institute and its publication, *Proceedings*, became one of their primary platforms. Founded in 1873 to advance "professional and scientific knowledge in the Navy," the institute rapidly evolved into a forum beyond the control of the Navy Department where officers could debate the navy's future. The institute's meetings and publications also established neutral ground outside the hierarchical structure of the navy that encouraged the free flow of ideas; here a fresh-faced lieutenant could openly disagree with an admiral. The condition of the navy, how to remedy its deficiencies, and the incorporation of new technologies emerged as the most frequently discussed issues. Congressional decisions directly affected naval officers. They knew, therefore, that their hopes for rebuilding the navy depended in large measure on their ability to develop a coherent and compelling rationale for increased funding. Nonetheless, beyond the need to replace the navy's ships and increase the navy's size, the officers initially found little common ground. [22]

The debate as recorded in *Proceedings* and other publications grew exceedingly complex and resists easy characterization. Commodore Foxhall Parker fired the opening salvos with a paper published in 1874; the publication of Captain Alfred Thayer Mahan's

---

[21] Hagan, *Gunboat Diplomacy*, 190-1; Geoffrey S. Smith, "Uncertain Passage: The Bureaus Run the Navy, 1842-1861," in *Peace and War*, 83; Shulman, *Navalism*, 1.

[22] Miller, *U.S. Navy*, 148; Kenneth J. Hagan, *American Gunboat Diplomacy and the Old Navy, 1877-1889* (Westport, CT: Greenwood Press, 1973), 13, 43; Herrick, *American Naval Revolution*, 21-22; Buhl, "Maintaining an American Navy," 149; Love, *History of the U.S. Navy*, I: 330; Hagan, *This People's Navy*, 183-184; Apt, "Mahan's Forebears," 93. The Institute's purpose is stated in Article 2 of its constitution, which was printed as part of the front matter of each volume.

The Influence of Sea Power on History essentially ended the debate during the 1890s.[23] During the intervening years pragmatists and idealists, traditionalists and non-traditionalists, large navy men and small navy men, technophobes and technophiles espoused widely divergent viewpoints. Furthermore, any given officer might be pragmatic on one issue and idealistic on another, in favor of one technological advance but resistant to another, and so on. The appropriate role of new, rapidly changing technologies complicated and increasingly drove the debate, which eventually challenged the navy's accepted missions in both peace and war. Technology offered both dazzling possibilities and frustrating challenges. While it made some previously impossible goals seem suddenly attainable other previously manageable missions appeared to be completely invalidated. Furthermore, technology seemed to be driving a wedge between ships built for war and those built for peace. Since no nation could afford two navies, planners had to prioritize one set of missions over the other and, ultimately, determine the navy's essential purpose.[24]

Naval officers began the internal debate by calling for new ships and more ships. Officers' plea for new ships rested on a solid basis as by any measure the navy's ships had worn out. The call for more ships is somewhat more complex. Officers cared deeply about both the service and their careers and thus had both professional and personal reasons for wanting more ships. They based their public arguments for more ships

---

[23] Parker, "Fleet Maneuvers," *Proceedings*, 163-176; Alfred Thayer Mahan, *The Influence of Sea Power upon History, 1660-1783* (Boston, MA: Little, Brown, and Company, 1939). Mahan's seminal work was first published in 1890.

[24] Miller, *U.S. Navy*, 148-149; Herrick, *Naval Revolution*, 21; Baer, *One Hundred Years of Sea Power*, 11-16; O'Connell, *Sacred Vessels*, 119; Apt, "Mahan's Forebears," 94-99. Karsten, *Naval Aristocracy*, 328; John M. Ellicott, "The Composition of the Fleet," *Proceedings* 22, no. 3 (1896): 538-560. Lieutenant Ellicott's essay and the accompanying discussion provide an excellent example of the divergent opinions still in play at the relatively late date of 1896.

entirely on their professional assessments of the navy's needs. Based on their analysis of the navy's missions officers developed recommendations on the type and number of ships needed. In private, officers worried about their careers. Simply put, the navy had far too many officers. In 1882 the Secretary of the Navy reported that there were fifty-nine officers for every ship and one officer for every five seamen.[25] At any one time approximately one third of these officers would be ashore at half pay awaiting orders. Even those officers with assignments often had little to do. Rear Admiral Bradley Fiske recalled his service at the New York Navy Yard in 1878 as a young ensign. With the navy "almost comatose," Fiske and the two other ensigns with the same assignment had little to do and spent their days "reading newspapers and playing mumblety-peg." Furthermore, the navy's policy of promoting strictly by seniority condemned officers to spending the most productive years of their careers in subordinate positions. While still a lieutenant in 1891, Fiske, trying to decide whether or not to resign from the navy, calculated his career prospects. He estimated that he would remain a lieutenant until about age fifty, then a lieutenant-commander from fifty to fifty-nine, a commander from fifty-nine to sixty-one, and finally captain to rear-admiral to retirement at sixty-two.[26] Fiske's experience was typical for officers in peacetime; promotions all but ceased during the 1870s and 1880s. Nevertheless, as long as an officer did not commit some egregious offense, he could count on eventually retiring as a rear-admiral, perhaps without ever having had a command. Personal characteristics such as initiative, leadership ability, and

[25] William E. Chandler, *Annual Report of Secretary of the Navy*, (Nov. 29, 1882). H.exdoc. 1/9, 47th Congress, 2nd Session, 8.

[26] Fiske, *From Midshipman to Rear Admiral*, 47, 162.

competence counted not at all.[27] Many younger officers called for merit based promotions, arguing that by the time they reached command rank the long years spent as subordinates had crushed the drive and initiative commanders needed. Lieutenant A. P. Mantus spoke for many of his contemporaries when, in 1881, he complained "Individuality is crushed, no opportunity is given for the development of latent powers of command, and self-reliance dies a natural death."[28] Obviously, a larger navy would provide enhanced career opportunities. The extent to which career anxieties influenced officers' professional assessments of the navy's needs cannot be determined precisely, but the tendency to conflate personal and professional concerns should not be ignored when evaluating officers' calls to increase the size of the navy.

Beyond the need for more, newer ships, officers hotly debated the types best suited to the navy's needs and to what extent the new technologies should impact ship design. Until the 1880s strategic thinking still revolved around the navy's traditional missions with the peacetime missions apparently taking precedence. After all, peace would be the nation's normal state and a ship would seldom, if ever, be called upon to perform its wartime functions. Even most officers shared the "absolute conviction," as Bradley Fiske confided in his memoirs, that the United States would never go to war again.[29] The logical consequence of this attitude was the belief that the active ships of the

---

[27] Karsten, *Naval Aristocracy*, 280-281.

[28] A. P. Mantus. "Wasted Energy in the Navy," *United Service* 5 (Nov. 1881): 638.

[29] Fiske, *From Midshipman to Rear Admiral*, 133. Fiske made this comment in reference to his October 1890 attempts to sell his newly developed range finder to European navies. The difficulty in precisely determining range was one of the key obstacles to accurate long range gunfire; its solution offered a tremendous tactical advantage. Looking back, Fiske expressed his amazement that he had sought to sell that advantage and that the navy had permitted him to do so. He could only explain those decisions by noting the widely-held belief that the United States would never again go to war and hence had no need for the tactical advantage his invention promised.

navy should be optimized for their peacetime missions. Nevertheless, the rapid pace of technological change occurring in the last quarter of the nineteenth century could not be ignored. The navies of the world engaged in a dramatic technological arms race.[30]

The wooden sailing ships of the "old navy" represented a mature technology. Centuries of use had honed the wooden sailing ship to perfection. Improvements in a mature technology tend to be small and incremental. The sailing warships of the mid-nineteenth century were lineal descendents of the British ships that had defeated the Spanish Armada in 1588. Where differences existed, they tended to be differences in degree, not in kind. The ships, though much larger and carrying more guns, utilized the same basic construction and the skills required to operate them remained essentially unchanged.[31]

As a new and immature technology the steam and steel ironclads presented a very different picture. Rapid, dramatic advances and technological blind alleys characterize immature technologies. One of the many challenges involved with a new technology is recognizing the advances from the blind alleys. Often the difference becomes obvious only in retrospect. Most of the European nations embarked on rapid building programs involving high degrees of experimentation. Some of the experiments, such as Cowper

[30] H. P. Willmott, *The Last Century of Sea Power:* Vol. I, *From Port Arthur to Chanak, 1894-1922* (Bloomington, IN: Indiana University Press, 2009), 54-61; Jan Rüger, *The Great Naval Game: Britain and Germany in the Age of Empire* (New York, NY: Cambridge University Press, 2007), 198-244; Potter and Nimitz, *Sea Power*, 331-338;Theodore Ropp, *The Development of a Modern navy: French naval Policy 1871-1904*, ed. Stephen S. Roberts (Annapolis, MD: Naval Institute Press, 1987), 5-16; Arthur J. Marder, *The Anatomy of British Sea Power in the Pre-Dreadnought Era, 1880-1905* (Hamden, CT: Archon Books, 1964), 13-14; Robert K. Massie, *Dreadnought: Britain, Germany, and the Coming of the Great War* (New York, NY: Ballantine Books, 1991), 150-188, 433-497, 609-625.

[31] Thiesen, *Shipbuilding*, 16, 44-46; Potter and Nimitz, *Sea Power*, 243.

Cole's HMS *Captain*, proved to be disastrous failures.[32] The rate of advance was such that even successful ships built at great cost frequently became obsolete almost immediately, sometimes before they entered service. As they grappled with the tactical and strategic uncertainties engendered by both the possibilities and limitations of the new technologies, Europe's navies acquired a bewildering array of disparate ships. An argument can be made that the United States displayed remarkable judgment by sitting out the early stages of the race.[33]

Traditionalists, pragmatists, and technophobes made common cause in resisting the allure of the new technologies and refused to equate "new" with "better."[34] For a variety of reasons this group expressed reluctance to embrace the latest advances. Rear Admiral Caspar F. Goodrich, in explaining this stance, recorded how "averse the old navy was to any and every innovation."[35] A reaction in favor of the old and familiar and against the new and unfamiliar explains, in part, their reluctance. This was the realm of the traditionalists and the technophobes, who offered a multitude of arguments in favor of

---

[32] Coles, a Royal Navy captain, invented a rotating turret following his experience in the Crimean War. His basic concept proved superior to that of John Ericsson's *Monitor* and became the basis of all modern turrets. Unfortunately, Coles also fancied himself a ship designer. Using political pressure, he prevailed upon the admiralty to allow him to build a ship combining turrets and full sail rig. The HMS *Captain* with three masts, twin turrets and very low freeboard capsized and sank with the loss of 473 of the 490 men aboard. Captain Coles was among the dead. David K. Brown, "The Era of Uncertainty, 1863-1878," in *Steam, Steel & Shellfire: The Steam Warship, 1815-1905,* ed. Robert Gardiner (Edison, NJ: Chartwell Books, Inc., 2001), 78-80.

[33] J.D.C. Atkins (TN), June 28, 1882, *Congressional Record*, 47th Congress, 1st Session, 5453; Franklin, "National Defense," 600-602; Miller, *U.S. Navy*, 144; Howard J. Fuller, *Clad in Iron: The American Civil War and the Challenge to British Naval Power* (Westport, CT: Praeger, 2008), 263-285. Fuller presents a detailed analysis of the challenge-response nature of technological advances. See also Herrick, *Naval Revolution*, 17; Buhl, "Maintaining an 'American Navy,'" 148-149; Apt, "Mahan's Forebears," 89-90; Ropp, *Modern Navy*, 8; Andrew Lambert, "Introduction," *Steam, Steel & Shellfire*, 7; Richard Hill, *War at Sea in the Ironclad Age* (London: Cassell & Co., 2000), 24-67.

[34] McBride, *Technological Change*, 4.

[35] Caspar F. Goodrich, *Rope Yarns from the Old Navy* (New York, NY: The Naval Historical Society, 1931), 23.

the old, familiar technologies. Members of this group contrasted the grace and beauty of a full rigged ship under sail with the dirty, noisy, smelly steamships. The group further argued that a steamship offered "no school for seamen," and again contrasted the constant activity that characterized a sailing ship and the need to understand the sea and the wind with men "lounging through the watches" on a steamer; one suspects that the stokers shoveling coal into the furnaces would dispute this characterization.[36] Some historians have argued that this was really a question of identity. Officers, they argued, based their identity in large part on the technologies they mastered.[37] The efficient operation of a sailing vessel required years of experience. With no opportunity to display courage and coolness under fire, the ability to handle a ship smartly under all conditions became the measure of professional competence; indeed, Mahan's opponents attempted to discredit his ideas by calling him an "indifferent sailor."[38] The introduction of steam power removed mastery of the ship's motive power from the direct control of the ship's officers and placed it in the hands of the engineers. This question of identity offers a useful tool to interpret the ongoing line-staff controversy after the Civil War. Within that framework, the controversy reflected the line officers' attempt to reaffirm their identity and superiority in the naval hierarchy.

---

[36] George M. Robeson, Annual Report of Secretary of the Navy, (Dec. 1, 1869), 6. These remarks, although contained in the secretary's portion of the report, accurately reflected the views of many senior officers. Robeson's report for 1869 also included the "Report of the Board on Steam Machinery Afloat" (the so-called Goldsborough Board) which devoted fourteen of its sixty-seven pages to an extended condemnation of the *Wampanoag* and the ideas behind her construction. This was one of the opening salvoes in the line officers' attack on the engineers.

[37] Elting E. Morrison, *Men, Machines, and Modern Times* (Cambridge, MA: The M.I.T. Press, 1960), 37-41; McBride, *Technological Change*, 5-10; Lance C. Buhl, "Mariners and machines: Resistance to Technological Change in the American Navy, 1865-1869," *The Journal of American History* 61, no. 3 (Dec. 1974): 704.

[38] Miller, *U.S. Navy*, 145; Karsten, *Naval Aristocracy*, 327.

The navy's traditional peacetime cruising missions and the commerce raiding strategy of wartime added to the ambivalence officers expressed towards new technologies. Both missions required similar ships. The new advances in construction, armament, and motive power seemed to have limited applicability in these missions. Attacking unarmed, or at best lightly armed, merchant vessels, suppressing pirates, and over-awing local tribal leaders required little in the way of modern armaments. Similarly, the need for extreme endurance in both peace and war militated against undue reliance on steam power. Since it lacked overseas coaling stations, the navy anticipated that its ships would cruise under sail and fight under steam. These officers envisioned an active navy composed primarily of medium-sized cruisers with a few larger cruisers to act as flagships. The cruisers should be iron-framed and wooden planked, thereby gaining the best of both construction materials. They called for a balance between sail and steam power. The ships should be good sailers and fast under steam. Since steam would be seldom used, they preferred simple, powerful single-expansion engines over the complex and expensive compound engines then coming into use. Given their strategic viewpoint, these officers raised valid points and made reasonable recommendations.[39]

The most applicable realm for the new technologies appeared to be in harbor and coastal defense roles. Technology might make a credible naval defense possible at last. Rams, torpedo boats, and artillery vessels appeared as the favored solutions. For this mission all of the arguments were reversed. Since they would be operating in close proximity to their bases, endurance, reparability, and habitability ceased to be major

[39] Ammen, "Purposes of a Navy," 128-9; Very, "Type of Vessel," 51-55; Schroeder, "Type of Vessel," 95-105; Barber, "A Practical Method," 419-421; Henry H. Gorringe, "The Navy," *The North American Review* 134, no. 306 (May 1881): 499-500. Apt, "Mahan's Forbears," 91-93.

factors. Speed and maneuverability, especially for rams and torpedo boats, became the overriding requirements and favored steam propulsion. The designs put forward for such ships envisioned them as pure steamers. The inherent strength advantage of iron construction made the ram concept feasible. All of these were relatively small and inexpensive vessels, and offered the hope that a small navy could use them to offset the large armored warships then entering service with the major powers. This defensive scheme fits within the modern definition of asymmetric warfare where the weaker power favors hit and run attacks rather than pitched battles.[40]

A new argument began emerged during the 1880s. The United States merchant fleet had seriously declined during the Civil War. The impact of Confederate commerce raiders on the American merchant fleet extended far beyond the actual number of ships lost. The threat they posed forced the transfer of northern cargoes and ships to neutral flags with England as the primary beneficiary. The Navy Department's decision to commandeer more than 400 civilian vessels during the war compounded the problem. Former Secretary of the Navy John D. Long, comparing the 100,000 tons destroyed by the *Alabama* to the 1.8 million tons impressed by the Navy Department, named impressments as the primary reason for the merchant marines' decline. America's carrying trade, whose sails had whitened the world's oceans, had been reduced to a trickle by war's end. Since all acknowledged commerce protection as the navy's

[40] David D. Porter, "Torpedo Warfare," *The North American Review* 127, no. 264 (Sep.-Oct. 1878): 214-233; R.M.G. Brown, "The Type of Vessels Required by the Navy," *United Service* 4, no. 6 (Jun. 1881): 763-770; Miller, "Coast Defense Vessel," 360-365; Edward Simpson, "The Navy and Its Prospects for Rehabilitation," *Proceedings* 12, no. 1 (1886): 14-15; William B. Hoff, "A View of Our Naval Policy and a Discussion of Its Factors," *Proceedings* 12, no. 2 (1886): 127-130; Ellicott, "The Composition of the Fleet," *Proceedings*: 538-539.

paramount peacetime function, without a merchant fleet to protect, the navy had no mission. The loss of its core mission threatened the navy's existence.[41]

Officers responded to the threat along two markedly different lines of reasoning. Traditionalists did not challenge the navy's accepted commerce protection mission. Since little American commerce remained, the obvious solution lay in restoring the nation's merchant marine. Naval officers believed strongly that a symbiotic relationship existed between the navy and the merchant marine. In an open letter to Congress Commodore Shufeldt noted the important role of the merchant marine in providing officers and men for the navy during the Civil War and wondered where the United States would find seamen to man its ships in a future war. Just as the merchant marine provide a manpower reserve in wartime, in peacetime the "Navy… is the pioneer of commerce."[42] Commodore George M. Ransom succinctly summarized this position in 1880 charging that "Without commerce the navy would not be needed; without a navy commerce could not exist."[43] Proponents of this argument called on Congress to revive the moribund carry trade, usually through subsidies for carrying the mail. The ships so subsidized, proponents argued, should be built to a set of standards that would allow for their rapid conversion into armed merchant cruisers in case of war.[44]

---

[41] Herrick, *Naval Revolution*, 8-9. John D. Long, *The New American Navy* (New York, NY: The Outlook Company, 1903), I: 4.

[42] Shufledt *The Relation of the Navy to the Commerce of the United States*, 6

[43] George M. Ransom, "The Naval Policy of the United States," *United Service* 2, no. 2 (Feb. 1880): 208.

[44] Brown, "Commercial and Naval Policy," 603-610; John Roach, "Shall Americans Build Ship?" *The North American Review* 132, no. 294 (May 1881): 469-471; John A. Grier, "Fostering the Merchant Marine of the United States is Not Robbery, but a National Necessity," *United Service* 10, no. 2 (Feb. 1884): 226-228; Edward F. Qualtrough, "Our Naval Necessities," *Overland Monthly and Out West Magazine* 12, no. 76 (Apr. 1889): 423-429;Nelson Dingley, Jr., "How to Restore American Shipping," *The*

A second set of arguments approached the problem from a totally different perspective. Members of this camp reasoned that since the declining merchant marine invalidated the traditional mission, the navy needed to find a new mission. These arguments did not spring fully formed, but developed slowly over time. In truth, most officers gave little thought to strategic issues until well into the 1880s. The Naval Institutes' *Proceedings* did not even publish an article that specifically addressed naval policy or strategy until 1880.[45] Since Congress proved steadfastly opposed to any significant government effort to revive the merchant fleet, officers had to find a new peacetime mission for the navy. They increasingly put forward arguments based on national security (an extension of the existing harbor/coast defense mission) and the deterrent value of a strong navy. This argument implied a change not only in peacetime missions, but wartime strategy as well. It assumed that American warships would engage the warships of an enemy rather than attacking his commerce. A force-on-force strategy demanded that the U.S. build ships that could engage an enemy with a reasonable chance of success.[46]

These ideas were not totally new, since the hoary harbor and coast protection missions necessarily implied ship-to-ship combat. Nevertheless, the renewed emphasis on concentrating the American ships and using them as a tactical unit represented a marked departure from historical American practice. Officers also insisted on preparing for these

---

North American Review 148, no. 391 (Jun. 1889): 691-694; Buhl, "Maintaining an 'American Navy,'" 161-165; Karsten, *Naval Aristocracy*, 303, 308.

[45] Belknap, "Naval Policy," *Proceedings*: 375-391. This was the first article that overtly addressed naval strategy.

[46] Stephen B. Luce, "Our Future Navy," *The North American Review* 149, no. 392 (Jul. 1889): 55; Mahan, *From Sail to Steam*, 271; Baer, *One Hundred Years*, 10-16; Sexton, *Forging the Sword*, 5;198-201; Karsten, *Naval Aristocracy*, 310-317; Potter and Nimitz, *Sea Power*, 341-343; Apt, "Mahan's Forbears," 87-101.

missions during peacetime at the expense of traditional peacetime missions. While the essence of these ideas had precedents in earlier practice, they evolved over time into an entirely new strategic doctrine for the United States Navy. By 1890 the navy had articulated a power projection strategy based on battleships that envisioned meeting and defeating an enemy battle fleet at sea.[47]

The internal debate within the navy began in the 1870s and two publications, the Naval Institute's *Proceedings* and *United Service: A Quarterly Journal of Military Affairs,* became the officers' forum. The Naval Institute even sponsored an annual competition to promote discussion on specific subjects. Members had the opportunity to comment on the papers presented at the institute's meetings and those comments were also printed. Similarly, articles published in *United Service* would occasionally draw a rebuttal. The essays, articles, and comments reveal the disparity of opinions within the navy and the often heated debates as officers sought ways to regenerate the navy.

In 1874 Commodore Foxhall Parker revealed his conventional understanding of naval policy when he reaffirmed the navy's purpose as "mainten[ing] our national dignity at home and abroad, [and] protect[ing] our commerce upon the high seas and our citizens in foreign lands." To accomplish these missions he concluded that "a sea-going fleet is absolutely necessary for us – not a large fleet like that of England, but one which shall be complete in itself, and serve as a safe nucleus to rally round when the hour of trial comes." Parker's references to a fleet require clarification. Fleet has two possible meanings when used in a naval context. It may either refer to the entire naval force of a country or to a number of ships grouped operationally under one command. Any

[47] Potter and Nimitz, *Sea Power*, 341-345; Sprout and Sprout, *Naval Power*, 226-247; Baer, *One Hundred Years*, 11-16; Miller, *U.S. Navy*, 153.

references to "a fleet" must be placed in context to determine which definition the writer used. Parker's article used both. When bemoaning the poor performance of the fleet gathered off the Florida coast he wrote of a tactical, operational grouping while the above reference to the fleet as a nucleus clearly implies the larger definition. Although he complained about the poor performance of the American vessels and called for new ships, Parker did not deviate from traditional naval policy and strategy. His approach suggested adapting technology to existing strategy rather than question the strategy; technology might change the ships radically, but not their missions. In describing the future navy, Parker divided its ships into two categories: fighting ships and commerce raiders "of the *Alabama* and *Shenandoah* type." This embodied a critical distinction as it clearly removed cruisers from the "fighting ships" category; they would engage enemy warships only as a last resort. Although admitting its necessity, Parker devotes just one and a half sentences to commerce raiding in his seventeen page paper. He focused primarily on the deficiencies of the navy as a fighting force and how he believed they should be remedied. He defined "fighting ships" as those engaged on the harbor and coast defense missions; for those tasks he preferred rams, torpedo boats, and artillery vessels. The commerce protection role would still require conventional cruisers. Parker's essay stands as a classic statement of the navy's "old school" position.[48]

Few of the articles appearing in either journal throughout the 1870s and mid-1880s challenged Parker's basic assertions. The primary themes remained the navy's poor condition, the reasons for that condition, and various proposed remedies. In all cases the authors subordinated new technologies to the old missions. Their debates on the

[48] Parker, "Our Fleet Maneuvers," *Proceedings*: 171-172. Parker's comments about the fleet maneuvers off Florida open chapter two.

relative merits of various technologies remained narrowly focused. Most officers appear to have believed the coast defense mission offered the greatest scope for the new technologies. The navy had failed miserably at both harbor and coastal defense during its two wars with England. The introduction of ironclads, particularly the *Monitor*, during the Civil War seemed to have solved the harbor defense problem. The navy retained a sizable contingent of these once-revolutionary vessels in reserve even though serious questions about their effectiveness would be raised during the 1880s. Officers appear to have envisioned a modern version of the defensive system championed by President Thomas Jefferson during the early 1800s. Jefferson had prescribed an integrated system of fortifications, mobile land batteries, floating batteries, and gunboats for harbor and coastal defense with a small, complimentary deep-water force to harass the enemy.[49] Where the gunboats had proven ineffective, officers contended that *Monitor*-type ironclads, fixed fortifications, floating batteries, and torpedoes (fixed mines) could provide the integrated defense needed to render harbors impregnable. No one mentioned that the presence of all of these elements had failed to prevent a Union squadron from seizing Mobile Bay during the Civil War, although most tacitly addressed the issue by adding another layer to harbor defenses.[50] In essence, coastal defense became an adjunct of harbor defense. Rams, torpedo boats, and gun vessels of various descriptions would guard the approaches to America's major ports. Rear-Admiral Porter placed great faith in torpedoes, predicting that "the perfect torpedo-vessel will in the future . . . decide naval

[49] Smith, *For the Purposes of Defense*, 11-14.

[50] Potter and Nimitz, *Sea Power*, 317-321; Dana M. Wegner, "The Union Navy," in *Peace and War*, 121-122.

battles."[51] Rear-Admiral Daniel Ammen, on the other hand, touted the value of rams and predicted that they would replace the large ironclads such as the Europeans were building.[52] In 1879 Lieutenant Frederick Collins summarized the conventional understanding of the navy's strategy and missions with a call for swift commerce raiders, monitors for harbor defense, with rams and, once perfected, torpedo boats for coastal defense.[53]

In 1880 Lieutenant Charles Belknap addressed naval policy in an article that also introduced important new elements to the argument. He enumerated four essential wartime functions of the navy. First in importance came the protection of the coast and harbors; the paired tasks of protecting one's own commerce while destroying the enemy's occupied the number two spot; the destruction of enemy warships came in at number three. Finally he listed carrying the war to the enemy as a mission. Belknap envisioned a dramatically enlarged offensive role for the navy. Although it ranked only third on his list, identifying the destruction of enemy warships as a deliberate goal offered a marked departure from existing strategy. While American frigates had patrolled the Atlantic seaboard during the War of 1812 and engaged British frigates, they had done so as part of the coastal protection mission. In contrast, Belknap argued the merits of destroying enemy warships independent of any other mission. Taking the war to the enemy stands as his greatest departure from accepted policy and strategy. Belknap called for a powerful maritime strike force that could seize and hold an enclave in the enemy's territory in

[51] Porter, "Torpedo Warfare," 231.

[52] Ammen, "The Purposes of a Navy," 129-130. Ammen became one of the ram's greatest proponents and, with the help of an engineering firm, designed one. See William G. Gibbons, "The Marine Ram, as Designed by Rear-Admiral Daniel Ammen, U.S.N.," *Proceedings* 8, no. 20 (1882): 209-220.

[53] Collins, "Naval Affairs," *Proceedings*, 170-171.

order to force the enemy to pay an indemnity. He admitted that the selection of a seagoing armored man-of-war for the offensive role would be a major challenge. Adding to the navy's tasks, he included defense of the Monroe Doctrine as a mission. Reframing the peacetime mission of the navy as well, Belknap introduced the deterrent value of a navy, arguing that an adequate navy would have prevented both the Quasi-War of 1798 and the War of 1812.[54] Lieutenant R.M.G. Brown made similar arguments in an 1881 article for *United Service*. He, too, raised defense of the Monroe Doctrine as a naval mission and echoed Belknap's stance on deterrence by commenting that "nothing insures peace like being able and ready to fight."[55] These groundbreaking articles drew little comment, perhaps indicating the extent to which the underlying concepts had already penetrated the officer corps.[56]

Two submissions to the Naval Institute's 1881 essay contest illustrate the continuing diversity of opinions. Lieutenant E. W. Very's prize-winning essay addressing the needs of the navy stands in marked contrast to Belknap's contribution. Lieutenant Very hewed to the traditional policy and focused almost exclusively on commerce protection and commerce raiding as the "main method of carrying on a war." Unlike Belknap, he rejected force-on-force as a viable strategy. He did acknowledge that the

---

[54] Belknap, "Naval Policy of the United States," 375-391.

[55] R.M.G. Brown, "The Commercial and Naval Policy of the United States," *United Service* (May, 1881): 609.

[56] Gene A. Smith, "Thomas ap Catesby Jones and the First Implementation of the Monroe Doctrine," *Southern California Quarterly* 76, no. 2 (Summer 1994): Smith argues that Jones' seizure of Monterrey, California in October 1842 represented the first use of the doctrine. Smith further contends that Jones specifically cited the doctrine as justification and his actions fit the "prevalent mood of the day, the orders he received, and the actions the government took." Smith further notes the difficulty in determining whether Jones truly believed the doctrine or used it to cover his over-exuberance. 141, 147-149. It is similarly difficult to determine the sincerity of the naval officers who pointed to Monroe's famous dictum during the 1870s and 80s.

navy would need a "passive force of the heavier armored element," essentially single-turreted monitors, for harbor defense. He further recommended that the navy's armored strength be dispersed along the coast to defend specific ports, just as President Jefferson had done with his gunboats more than seventy years earlier.[57] Dispersion served a number of purposes. It did provide a measure of armed force to the ports so protected. The monitors also served as visible symbols of the nation's power and reflected its concern for its citizens. Lieutenant Very devoted a great deal of time to a discussion of the various situations, ranging from perfect peace to war, which might call for a navy and what duties those situations imposed. Concluding that the nation's normal condition would be either amity or neutrality, he asserted that the standing navy should be optimized for those missions. Accordingly, he recommended cruisers very much like those of the 1873 program.

Lieutenant Seaton Schroeder, responding to the same essay prompt, arrived at a different answer and became one of the first to openly question the old "oceans as a barriers" argument. Several nations, he noted, possessed convenient bases near the American coast which would allow their heavy ironclads to either blockade or attack American ports. Schroeder argued that fixed harbor defenses, rams, and torpedo boats would be ineffective. Instead the navy must possess sea-going armored vessels capable of meeting the threat. He proposed a double turreted breastwork monitor that could go anywhere in any weather. Schroeder's answer to the cruiser question focused on a ship's duties during war; any vessel capable of performing the wartime tasks could also perform

[57] Very, "The Type of Vessel," *Proceedings*: 46, 54-76; Smith, *Purposes of Defense*, 30, 33, 85. The gunboats served political as well as military ends. Jefferson built political support by distributing contracts for their construction across eleven of the seventeen states and the District of Columbia. He distributed the boats themselves in harbors up and down the eastern seaboard and the Gulf Coast.

the peacetime duties. He dismissed the commerce raiding mission as ineffective and insisted that destroying the enemy's cruisers represented a cruiser's true objective.[58]

These essays from 1874, 1880, and 1881 encapsulate virtually all of the salient points of the strategy debates of the 1880s. The old school, represented by Commodore Parker, Admirals Porter and Ammen, and Lieutenants Very and Collins, envisioned a modernized navy fulfilling the same roles the navy had always had. While technology would certainly impact ship design and tactics, they did not believe it would change maritime policy or strategy. Adherents of this position wanted to use modern technologies to enhance the navy's ability to fulfill its traditional missions. The peace navy would remain small and dispersed on distant stations. During peacetime the navy would continue to show the flag, advance American commercial interests, and protect American citizens. Should war break out, the navy's blue water vessels would attack enemy commerce while protecting America's. Rams, torpedo boats, and dynamite vessels, they argued, would present a daunting harbor defense challenge to any attacker. Commerce raiding remained the centerpiece of naval strategy and, other than modern armament, technology seemed to have little applicability. The old school called for wooden-hulled auxiliary steamers with full sail power. Peacetime economic constraints and the nations' lack of foreign bases for wartime use, they concluded, forced continued reliance on sail power.[59]

---

[58] Schroeder, "The Type of Vessel," 86, 94-96.

[59] Parker, "Fleet Maneuvers," 170-176. Parker pronounced himself as against armor and ironclads, ambivalent on the question of smooth-bore versus rifled guns, and in favor sail as an auxiliary. This last position brought strong opposition from Lieutenant McLean and Commander McNair. Ammen, "Purpose of a Navy," 120-127. Ammen gave a classic statement of the navy's peacetime missions. He favored iron-framed, wooden-sheathed ships. He was the ram's greatest advocate. Very, "Type of Vessel," 45-83. Very insisted that peace would be the nation's normal condition and the navy's ships should be optimized for those roles. The result would be medium sized cruisers with full sail power and great coal capacity since

Lieutenants Belknap and Schroeder, conversely, insisted that technology had changed the nature of the threat and American strategy would have to change as well. Introducing arguments that others would build upon, they insisted that technology had invalidated the navy's old missions while imposing new ones. They both emphasized the need to meet an enemy fleet at sea while dismissing commerce raiding as indecisive. As Lieutenant Schroeder asserted, "The successful depredations of twenty *Alabamas* would not have delayed the fall of Richmond by one day."[60] The differences between the strategic philosophies of the opposing camps can best be seen in their conception of the navy's targets. The old school saw the enemy's commerce as the navy's primary target while the nascent new school insisted that the enemy's fleet represented the navy's only legitimate target.

Assistant Naval Constructor F. T. Bowles touched on two other emerging themes in his article on the new steel cruisers authorized in 1882. While he primarily focused on technical descriptions of the ships then under construction, Bowles felt compelled to offer a few broader comments. Admitting that building cruisers addressed the most pressing need, he added "it should not be forgotten that in order to take rank as a naval power, or to hold the sea against a naval power of the fourth rank…we must have *armored* sea-going vessels." The idea of "taking rank" as a naval power suggests an appeal to national pride. Great nations, he implied, have great navies. National pride would be one of the major themes the navalists used to build public support for a larger navy. Similarly,

---

the U.S. lacked bases. He totally rejected a force-on-force strategy in favor of commerce raiding. He preferred monitor-type vessels for coastal defense and urged their dispersion along the coast. Collins, "Naval Affairs," 169-175. Collins also called for commerce raiders with full sail power and as much coal as could be carried without sacrificing other qualities. He preferred monitors for harbor defense and rams for coastal defense. Herrick, *Naval Revolution*, 27.

[60] Schroeder, "Type of Vessel," 94.

Bowles' comment about "holding the sea" foreshadowed Mahan's sea control doctrine. By emphasizing his belief in the need for armored ships, Bowles unequivocally stated his position on one of the key technological debates.[61]

The Civil War battle between the *Monitor* and the *Virginia* sparked an arms race between the offensive power of the gun and the defensive power of armor. In that battle and earlier European experience between armored floating batteries and shore fortifications during the Crimean War, armor proved superior. Similarly armed and armored opponents could batter each other for hours without achieving a decisive result. Armaments manufactures sought a remedy by designing evermore powerful guns while armor manufacturers continually developed thicker, tougher armor. The advantage shifted back and forth. The early advantage established by armor during the 1860s, coupled with two successful uses of the ram in combat, drove the interest in rams and torpedo boats.[62] Yet guns achieved such a significant advantage during the late 1870s that the French and Italian navies temporarily abandoned armored battleships. A more reasoned response, eventually adopted by all modern navies, limited protection to vital

[61] F. T. Bowles, "Our New Cruisers," *Proceedings* 9, No. 4 (Sept., 1883): 622. Italics in original.

[62] In March 1862 the Confederate ironclad *Virginia* rammed and sank the sloop *Cumberland* in Hampton Roads. At the Battle of Lissa in July 1866 the Austrian flagship *Ferdinand Max* rammed and sank the Italian battleship *Re d'Italia*. Rational analysis of these two victories got lost in ram fever. The *Cumberland* was anchored at the time of the attack. Additionally, the collision tore off the *Virginia's* ram and started serious leaks in her hull. At Lissa the Italian ship had also conveniently stopped with her rudder shot away before being struck. Two "friendly fire" incidents in the Royal Navy helped sustain faith in the ram as a terrible engine of war. The *Iron Duke* sank her sister ship *Vanguard* in 1872 when both ships maneuvered incautiously in a fog. In 1893, while executing a patently dangerous tactical evolution as part of the Mediterranean fleet, the *Camperdown* sank the fleet flagship *Victoria* in broad daylight with the loss of 357 lives. Smith, *Iron and Heavy Guns*, 66-68; Hill, *War at Sea in the Ironclad Age*, 31-35; Andrew Lambert, "Iron Hulls and Armour Plate," in *Steam, Steel & Shellfire*, ed. Robert Gardiner (Edison, NJ: Chartwell Books Inc., 2001), 58.

areas of the ship.[63] Continuing uncertainty about the advantages and disadvantages of armor protection played a major role in debates about the type of ships the U. S. Navy should acquire.[64]

Ensign W. I. Chambers inadvertently captured that uncertainty an 1885 *Proceedings* article. Replete with both technical and strategic dead ends, his article describes a wide variety of armored ships. He called for heavily armed and armored coast defense ships and recommended they be parceled out along the coast, one per harbor, much as had been done with Jefferson's gunboats. Arguing that an enemy would use warships to convoy its merchant vessels in wartime, he also found a need for "first-class battleships" in the commerce raiding role. Finally, in what can only be described as a fanciful idea, he called for subsidized merchant vessels that could be converted to battleships in time of war. Despite his technological and strategic confusion, Chambers highlighted another important element in the evolving debate when he decried the policy of maintaining a peace navy and asserted that the primary objective of the peacetime navy was to prepare for war. Commenting on Chambers' paper, Lieutenant T. B. Mason

[63] The subject of guns, armor, and protection schemes is exceedingly complex, involving not only technical issues but strategy, tactics, and, for lack of a better term, what might be called national character. Most navies eventually adopted some form of the "all or nothing" armor scheme. Critical areas (engine rooms, boiler rooms, magazines, etc.) received armor designed to defeat shells of the same caliber as the ship's own main armament. Other areas received no armor at all. For informative technical discussions see Norman Friedman, *U.S. Battleships: An Illustrated Design History* (Annapolis, MD: Naval Institute Press, 1984), 11-14; Gardiner, *Steam, Steel & Shellfire*, chapter 10; Ropp, *Development of a Modern Navy*, chapters 11 and 13; Potter and Nimitz, *Sea Power*, 331-334.

[64] John Rodgers, Discussion," *Proceedings* 5, (Feb. 1879): 178-179. Admiral Rodgers insisted "The logical end of armor has been reached. It encumbers but will not protect. The time is not far off when armor will be thrown away." Belknap, "Naval Policy," 386-387. Lieutenant Belknap took an opposing position and insisted that the "most important question" would be selecting and building an "offensive, sea-going, armored man-of-war."

added emphasis by declaring "Our people must be made to understand that a navy is for war."[65]

Thus, by 1885 virtually all of the key concepts of what would become the sea command strategy were already in play within the naval community. Officers had begun to argue for a change in wartime strategy from commerce raiding to fleet actions. Commerce raiding, they insisted, had never proven decisive. Similarly, harbor and coast defense had proven impossible during all of America's wars. Destroying the enemy's fleet at sea, alternatively, would confer sea control, thereby removing the threat to America's coastline and commerce. Officers had also begun to identify national prestige with the size and strength of the navy. This concept seemed a logical extension of the laments about the navy's embarrassing condition during the 1870s. Finally, officers suggested that the navy's peacetime mission needed revision. Speed negated distance; American cities could be under attack within a week of the outbreak of war. Given that reality, officers asserted, preparedness represented the navy's paramount peacetime duty. Preparation for war had the added benefit of serving as a deterrent and making war less likely. Growing imperial competition in Europe, officers also feared, might result in challenges to the Monroe Doctrine. The mere introduction of these ideas, nonetheless, did not guarantee their acceptance. The debates about missions, strategies, and ship types continued well into the 1890s. What the navy needed was a compelling, overarching vision that would unify the disparate elements into a coherent rationale.

[65] Chambers, "Reconstruction and Increase of the Navy," 7, 20-21, 54-55; Lieutenant T. B. Mason, "comments," ibid.: 71; Potter and Nimitz, *Sea Power*, 341-343; Baer, *One Hundred Years*, 11; Sprout and Sprout, *Naval Power*, 231-234; Karsten, *Naval Aristocracy*, 300-317.

One of the seminal events, and perhaps the decisive turning point, in the debate came with the publication of Alfred Thayer Mahan's *The Influence of Sea Power on History* in 1890. In 1884 Rear Admiral Stephen B. Luce recruited then-Captain Mahan to teach courses on naval history and strategy at the recently established Naval War College.[66] Largely forgotten today, Luce stood as one of the leading naval intellectuals of his day. Founder of the Naval War College, Luce hoped the study of the science of war would "bring order out of the strategic confusion of the 1880's." Mahan eagerly accepted the challenge. He arrived at Newport, Rhode Island, site of the college, in 1885. During the next five years he developed and refined his concept of sea power while trying to answer two central questions: "What is a navy for?" and "How should it be used?"[67] He published the results of his labors in 1890 and initially found his most receptive audiences abroad. Britain's Royal Navy had been the centerpiece of his study and his assertion that England's dominant international position rested on the strength of the Royal Navy assured a him warm reception in that nation. Kaiser Wilhelm II of Germany, which had just started to build a modern navy, fully embraced Mahan's ideas and made his book required reading for all German naval officers. The Japanese also adopted Mahan's sea power thesis and became, arguably, the ultimate Mahanians. Broad foreign acclaim helped Mahan win an audience in the United States.[68]

---

[66] Ronald Spector, *Professors of War: The Naval War College and the Development of the Naval Profession* (Newport, RI: Naval War College Press, 1977), 29-31.

[67] Spector, *Professors of War*, 42-43.

[68] Mahan and his work have been written about extensively, cf. William E. Livezy, *Mahan on Seapower* (Norman, OK: University of Oklahoma Press, 1947). John B. Hattendorf, eds., *The Influence of History on Mahan: The Proceedings of a Conference Marking the Centenary of Alfred Thayer Mahan's The influence of Sea Power on History, 1660-1783* (Newport, RI: Naval War College Press, 1991); Robert Seager II and Doris D. Maguire, eds, *The Letters and Papers of Alfred Thayer Mahan*, 3 vols. (Annapolis, MD: Naval Institute Press, 1975); Robert Seager II, *Alfred Thayer Mahan: The Man and His Letters*

Mahan's greatest contribution lay not in the ideas he espoused, which were already extant, but in their presentation. Mahan made command of the sea his central tenet. With it, all other naval missions became easy; without it, all other tasks were doomed to failure. Command of the sea could only be won, he argued, by battleships concentrated in a fleet meeting and defeating an enemy's fleet in a decisive battle far out to sea. Building such a fleet would require public consent and a national commitment. His book, by joining naval policy, maritime strategy, and technology into a coherent whole that laymen could readily understand, became a powerful propaganda tool in building that commitment. Among his most important converts was Secretary of the Navy Benjamin F. Tracy, who would be instrumental in turning Mahan's ideas into national policy.[69] Mahan helped give the navy a new mission, that of a distant shield, and a way to explain it.

The publication of Mahan's book marked the beginning of the end of the navy's internal debates. Nevertheless, building professional consensus in a time of rapid technological change took time. The navy, for example, launched its first, and only, experimental ram in 1893, long after the advent of rapid fire guns had invalidated the ram concept.[70] Similarly, faith in the commerce raiding strategy persisted well into the 1890s. The navy commissioned in 1894 two extreme commerce raiders, the *Columbia* and the

---

(Annapolis, MD: Naval Institute Press, 1977); Peter Karsten, "The Nature of 'Influence': Roosevelt, Mahan and the Concept of Sea Power," *American Quarterly* 23, no. 4 (Oct. 1971): 585-600; Walter LaFeber, "Notes on the 'Mercantilistic Imperialism' of Alfred Thayer Mahan," *The Mississippi Valley Historical Review* 48, no. 4 (Mar. 1962): 674-685. Mahan's second book, *The Influence of Sea Power on the French Revolution* was even more popular in England. Hill, *War at Sea*, 93;

[69] Walter R. Herrick, "Benjamin F. Tracy," in Coletta, *Secretaries of the Navy*, 417; Albion, *Makers of Policy*, 11, 209-211; 77, Herrick, *Naval Revolution*, 11, 43; Baer, *One Hundred Years*, 11-18.

[70] *The Dictionary of American Fighting Ships*, hereafter *DANFS*, http://www.history.navy.mil/danfs/k2/katahdin-ii.htm

Minneapolis. Fast but very lightly armed, these ships' most remarkable feature was their endurance; they could circle the globe without refueling.[71] When Lieutenant John Ellicott suggested the navy build thirty coast defense monitors and twenty commerce destroyers of the *Columbia* type, Lieutenant Commander Caspar Goodrich disgustedly replied "We want *no* coast defense vessels of *any* particular type," and expressed his "surprise" to "find at this day, among naval officers, an advocate of commerce raiding."[72] Goodrich by this point represented the majority position among naval officers. Goodrich, and those who shared his disdain for commerce raiding, misread Mahan. Mahan did indeed prove, by historical example, that commerce raiding, while "worrying" was not "deadly," and had always been inconclusive. He did, nevertheless, insist that commerce raiding was a "most important secondary operation" and that destroying a large convoy was second only to destroying a large fleet of warships. Mahan actually developed a more nuanced strategic theory than is generally credited. In his conception the battle fleet and commerce raiders played complimentary roles. The existence of the battle fleet made commerce raiding possible, without it, an enemy could devote all its efforts to hunting down the raiders. Similarly, the presence of commerce raiders forced an enemy to divert warships

[71] Norman Friedman, *U. S. Cruisers, an Illustrated Design History* (Annapolis, MD: Naval Institute Press, 1984), 36-40, 463.

[72] John M. Ellicott, "The Composition of the Fleet," *Proceedings* 22, no. 3 (1896): 542-545; Lieutenant Commander C. F. Goodrich, "Comments," ibid.: 554; Schroeder, "Type of Vessel," 94; John F. Meigs, "An Essay on the Tactics of the Gun as Discoverable from Type Warships," *Proceedings* 14 (1888): 655-698; Richard Wainwright, "Discussion," *Proceedings* 22, no. 3 (1896): 550; Asa Walker, "With Reference to the Size of Fighting Ships," *Proceedings* 26, no. 3 (Sep. 1900): 515-520; Murdock, "Our Need of Fighting Ships," 255-259; Luce, "Our Future Navy," 54-60; Charles H. Stockton, "The Reconstruction of the United States Navy," *Overland Monthly and Out West Magazine* 16, no. 94 (Oct. 1890): 385-386. Lieutenant Ellicott proposed a huge navy; even he admitted that battleships should be given priority if appropriations fell short of requests. Spector, *Professors of War*, 43-49; Herrick, *Naval Revolution*, 62-63;

to commerce protection, thereby weakening his own battle fleet.[73] In its efforts to counter English sea power the French navy developed a remarkably similar strategy by the end of the nineteenth century, although their primary emphasis remained *guerre de course* (commerce raiding).[74]

The navy's attention increasingly turned to building battleships which could operate together as a fleet. The United States authorized its first true battleships in 1890 when Congress approved funds for three "sea-going, coast-line" battleships. In his annual report for 1889, Tracy had asked for eight battleships, but Congressman Charles H. Boutelle of Maine, who shepherded Tracy's program through the House, cut it to three and coined the clever "sea-going, coast-line" phrase as a way to defuse isolationist opposition. The navy and the nation never looked back.[75]

By the 1890s the essential character of the debate had changed. Debates about missions and strategy gradually subsided. Discussions about the size of battleships and the number needed came to dominate. Reflecting the changing strategic emphasis, the mantra that had so dominated the 1880s that "commercial and naval supremacy were coexistent," had by 1905 morphed into the assertion that "national greatness and naval greatness co-exist."[76] Discussions about the size of navy needed underwent a similar,

---

[73] Mahan, *The Influence of Sea Power upon Histor*), 89-91, 115-116, 200, 203.

[74] Ropp, *Development of a Modern Navy*, 19, 330-334. Ropp traces the origins of French naval policy to 1869 and Captain Baron Louis-Antoine-Richild Grivel, father of France's *Jeune Ecole* (young school). Grivel clearly understood the fundamental nature of "command of the sea" though he did not use that term.

[75] Benjamin F. Tracy, *Annual Report of Secretary of the Navy*, (Nov. 30, 1889). H.exdoc. 1/10, 51st Congress, 1st Session, 8-12; Benjamin F. Tracy, *Annual Report of Secretary of the Navy*, (Nov. 26, 1890). H.exdoc. 1/10, 51st Congress, 2nd Session, 11, 14-15; Albion, *Makers of Naval*, 210.

[76] Belknap, "Naval Policy," 376; Bradley A. Fiske, "American Naval Policy," *Proceedings* 31, no. 1 (March 1905): 3.

subtle shift. Addressing the fleet size issue in 1886, Commander William Hoff asked "what foreign cruising navy is needed to protect each dollar of American capital floating foreign; what naval protection is required to make that coin breed fastest?"[77] Commander Bradley Fiske had a shorter answer. He argued that the navy should be stronger than that of an enemy and concluded that the United States need a navy larger than Britain's.[78] The changing phraseology reflected the changing strategic emphasis. A fleet proportional to the nation's maritime interests made sense when policing the seas and guarding against insults from semi-civilized barbarians had been the navy's primary functions. It became totally irrational when the goal became national defense against other maritime powers. Early discussions had tied fleet size to the nation's maritime interests. Later advocates tied fleet size to those of possible foes.

The old emphasis on commerce never fully disappeared but officers reinterpreted its relationship to naval power. Lieutenant Commander Richard Wainwright, on the eve of war with Spain, demonstrated the enduring power of the classic understanding when he argued "We cannot become a great manufacturing state or dispose of our surplus farming products . . . unless we increase our commerce. We cannot greatly increase our commerce unless we increase our merchant marine. We cannot increase our . . . merchant marine without increasing . . . the need for a naval force."[79] The opposing interpretation recast commerce as a source of competition and inevitable conflict. This interpretation virtually ignored the carrying trade and focused instead on access to markets as the key

[77] Hoff, "A View of Our Naval Policy," *Proceedings*: 121.

[78] Fiske, "American Naval Policy," 8-10. Fiske later modified this position somewhat by calling for a navy equal to Britain's. Bradley A. Fiske, "Naval Power," *Proceedings* 37, no. 3 (Sept. 1911): 735.

[79] Richard Wainwright, "Our Naval Power," *Proceedings* 24, no. 1, (Mar. 1898): 72.

ingredient. Officers, employing a neo-mercantilist outlook, saw trade competition as a zero-sum game; American gains must come at the expense of other competitors. The United States they contended, in common with the Western European nations, produced far more than domestic markets could consume rendering financial stability, social tranquility, and indeed national survival dependent upon ever-expanding foreign markets. Darwinian, survival-of-the-fittest arguments populated the discourse.[80]

The two decades from 1880 to 1900 proved to be pivotal in the reinvention of the U. S. Navy. Technological advances, changes in the international political situation, and the continuing decline of the U. S. carrying trade forced a thorough reexamination of the navy's purpose. Shell firing cannons turned wooden warships into deathtraps. Survival dictated the switch to iron and steel construction. Iron and steel made possible a dramatic growth in ship size. Growth of the steel industry also permitted the building of fleets. The advent of steam power created the need for distant coaling stations and helped ignite a new round of European expansionism. Imperial competition between Great Britain, France, and Germany for coaling stations around the world upset the European balance of power upon which the long peace of the nineteenth century rested. American naval officers watched the proliferation of European coaling stations with growing alarm. Distance no longer conferred invulnerability and rendered the policy of isolation unsustainable. Faced with new challenges and equipped with new arguments the navy increasingly emphasized a new mission – national security, and a new strategy – distant shield. The defense of vital national interests, most notably the Monroe Doctrine and the

[80] Ransom, "The Naval Policy of the United States," 206-207; Wainwright, "Our Naval Power," 42; Murdock, "Our Need for Fighting Ships," 252-259; Fiske, "Naval Power," 704-735.

proposed isthmian canal, fell under the national security rubric. The primary peacetime mission became deterrence based on preparedness.[81]

[81] Baer, *One Hundred Years*, 9-16; *Sexton, Forging the Sword*, 291; George T. Davis, *A Navy Second to None: The Development of Modern American Naval Policy* (New York, NY: Harcourt, Brace & Co., 1940), 154; Potter and Nimitz, *Sea Power*, 378; Hagan, *This People's Navy*, 194-197; O'Connell, *Sacred Vessels*, 38-45.

Chapter Four

"Strategy depends on logistics for its effectiveness": The Lifeblood of Modern War

Steam propulsion revolutionized naval warfare. Its introduction affected every facet of naval planning from ship design to tactics, strategy, grand strategy, and naval policy. While steam-powered warships possessed undeniable tactical advantages over sailing ships, the strategic picture remained murky. Steam power changed strategic geography in ways that did not always seem obvious. Additionally, it entailed one major strategic disadvantage. Sailing ships had essentially unlimited range. While steamships could ignore the wind and go anywhere with sufficient water to float them, their range depended on the amount of coal they could carry. Nevertheless, steam power conferred such dramatic tactical advantages that no aspiring maritime power could afford to be without it, and solving the strategic problem of limited range became a vital but secondary concern. Compound steam engines, first introduced during the 1860s, offered a partial solution. They dramatically improved efficiency and helped make reliance on steam as the primary motive force viable. Compound engines increased range for a given amount of coal by one hundred percent or more, yet steamships still suffered from limited range and required frequent refueling.[1]

As Captain Alfred T. Mahan succinctly informed readers of *Atlantic Monthly* in 1890, "Fuel is the lifeblood of modern naval war. Around it cluster some of the most

[1] Hill, *War at Sea*, 50. This figure was achieved by the modernized British battleship *Thunderer* which received triple expansion engines in 1889-90. On sea trials she burned slightly less than half the coal as she had when equipped with single expansion engines and fire tube boilers. A British naval engineer reported that triple expansion engines were 50% more efficient than simple engines. Royal Navy Staff Engineer W. H. Riley, "Coal Consumption in Warships," *Proceedings* 19, no. 4 (1893), 425.

important questions of naval strategy."[2] Growing dependence on steam power helped spark a new wave of European imperialism as Great Britain, France, and Germany sought coaling stations around the world.[3] A number of historians have remarked upon the positive correlation between steam power and imperialism; most argue that by removing obstacles steam power and other technologies encouraged already existing imperialistic tendencies.[4] Others simply note that "A long-range steam navy needed coaling stations."[5] While such a conclusion seems obvious in retrospect, American naval officers initially resisted such thinking. Great Britain and France had long histories of imperial conquest; for them, the acquisition of new territory for coaling stations presented no ideological difficulties. Germany, which had only recently become a consolidated political entity, harbored imperial ambitions and acquiring overseas territories represented a positive foreign policy goal. The United States had no such traditions or ambitions and naval officers were "keenly aware" that the acquisition of non-contiguous

[2] Alfred Thayer Mahan. *The Interest of America in Sea Power, Present and Future* (Boston, MA: Little, Brown, and Company, 1911), 26.

[3] Albion, *Makers of Policy*, 318, 329-330; Herring, *Colony to Superpower*, 302-303; Ropp, *Development of a Modern Navy*, 37, 40, 264-267, 311-317 passim. Ropp includes a world map showing trade routes and both French and English coaling stations on pages 264 and 265. Hill, *War at Sea*, 142; O'Connell, *Sacred Vessels*, 40; Seward W. Livermore, "American Strategy Diplomacy in the South Pacific, 1890-1914," *The Pacific Historical Review* 12, no. 1 (Mar. 1943): 35; Livermore, "American Naval Base Policy in the Far East, 1850-1914," *The Pacific Historical Review* 13, no. 2 (Jun. 1944): 116-129; John H. Mauer, Fuel and the Battle Fleet: Coal, Oil, and American Naval Strategy, 1898-1925," *Naval War College Review* 34, no. 6 (Nov.-Dec. 1981): 63.

[4] Headrick, *The Tools of Empire*, see chapters 1, 3, 5, 7, and 13. Hill, *War at Sea*, 142; Bernard Brodie, *Sea Power in the Machine Age* (Princeton, NJ: Princeton University Press, 1941), 106-107. Headrick offers perhaps the strongest statement of this position.

[5] Baer, *One-Hundred Years of Sea Power*, 21. Herring, *Colony to Superpower*, 349; Lester D. Langley, *Struggle for the American Mediterranean: United States-European Rivalry in the Gulf-Caribbean, 1776-1904* (Athens, GA: The University of Georgia Press, 1976), 139-140. Most histories of U.S. expansionism in the nineteenth century, if they address naval aspects at all, reduce the issue to simple statements such as Baer's.

territory contravened established national policy.[6] Steam power thus presented American naval officers with a seemingly impossible dilemma. The navy either had to solve the range problem without foreign bases or change the nation's policy. Despite ongoing efforts to reduce the need for bases, American naval officers became increasingly convinced that the defense of vital national interests required the acquisition of overseas naval bases. From the debates of the 1880s and 1890s emerged a new American strategic paradigm that called for an all-steam navy capable of offensive operations against an enemy's fleet. That a modern steam navy required dependable coal supplies and repair facilities in its expected areas of wartime operations stood as a necessary and inescapable corollary of the new battle fleet strategy. Not only had modern technology made imperialism possible, steam power made imperialism necessary.[7]

The wind ultimately dictates where a sailing ship can and cannot go. With a well-drilled crew, the most weatherly square-rigged ship could sail no closer than six points (sixty-seven degrees) off the wind; seven points (seventy-nine degrees) represented a more realistic limit for most warships. Sailing upwind, therefore, required a long series of tacks back and forth across the wind.[8] In restricted waters square-riggers simply could not

---

[6] Nancy Mitchell, *The Danger of Dreams: German and American Imperialism in Latin America* (Chapel Hill, NC: University of North Carolina Press, 1999), 21, 135-138, 223; Hagan, *This People's Navy*, 242-243; Hagan, *Gunboat Diplomacy*, 18-19; Richard W. Turk, "Defending the New Empire, 1900-1914," *Peace and War*, 188; Potter and Nimitz, *Sea Power*, 381.

[7] Belknap, "Naval Policy," 386; Barber, "A Practical Method," 422; Wainwright, "Naval Power," 44-69; Walker, "Size of Fighting Ships," 519-521; Dion Williams, "The Defense of Our New Naval Stations," *Proceedings* 28, no. 2 (Jun. 1902): 182; Henry C. Dinger, "Some Notes on Naval Needs and Requirements," *Proceedings* 30, no. 1 (Mar. 1904): 91-93; Richard Wainwright, "Our Naval Policy," *United Service* 2, no. 3 (Sep. 1889): 237-239; Stockton, "Reconstruction of the Navy," 386. Barnet Phillips, "Coaling a Man-of-War," *Harper's Weekly* 36, no. 1837 (Mar. 5 1892): 234; Alfred Thayer Mahan, "Hawaii and Our Future Sea Power," *Forum* (Mar. 1893): 1-11.

[8] Nicholas Tracy, "Naval Tactics in the Age of Sail," in *The Trafalgar Companion*, ed. Alexander Stilwell (University Park, IL: Osprey Publishing LTD., 2005), 125-129.

sail upwind. For this reason, contrary winds could seriously affect a navy at both the tactical and strategic levels. For example, it might prevent a fleet from leaving port. Prevailing wind patterns also dictated the routes ships followed on the open ocean. In the North Atlantic the prevailing wind is from the east below 30^{o} north latitude while above that latitude it flows from the west. The Coriolis effect bends those winds to the right, forming a roughly circular clockwise flow.[9] Ships sailing from Europe to North America usually sailed south along the European coast until about the latitude of the Azores before turning west. The return voyage followed the American coast northward before turning east near Newfoundland. By "sailing around the wind" this route, though longer, proved to be the fastest. While these factors affected merchant ships and warships alike, they had special relevance for warships.

Steam power offered immediate, dramatic, and obvious tactical advantages. It also eradicated most of the wind-imposed limitations. An admiral could now signal his subordinates to assume a tactical formation with reasonable assurance that his captains could and would do so in a timely manner. The ease of maneuvering under steam sparked a surge in tactical studies. For example, the United States Naval Institute's *Proceedings* published frequent articles on tactics replete with complex, carefully-drawn diagrams of ship movements. The Naval War College introduced war games in a class room setting as a way to study strategy and tactics. The students also used steam launches as stand-ins for warships to practice tactical evolutions on the waters of Narragansett Bay. Navies, particularly those of France and Great Britain, used full-scale war games (often called "fleet problems") to test their tactical theories. The United States Navy formed its first

[9] John Rousmaniere, *The Annapolis Book of Seamanship* (New York, NY: Simon and Schuster, 1983), 96-97.

"squadron of evolution" in 1889 to develop steam tactics "for a new era of naval warfare." Tactically, the positive contributions of steam power far outweighed any negative consequences. The two major drawbacks of early steam-powered warships, the loss of broadside firepower due to the presence of paddle wheels and the vulnerability of their machinery to gunfire, were both eliminated by the introduction of screw propellers in the 1840s. From that point on, it was clear that ships would fight under steam.[10]

As the discussions turned to strategy, reliance on steam power became problematic. As it did with tactics, steam power offered undeniable strategic benefits. The predictability it gave to strategic movements constituted the most obvious. For the first time planners could know, with near certainty, how long it would take for vessels to move from one point to another. Plans could be made and orders issued with the expectation that the ships would arrive at the designated place at the designated time. Simultaneously steam power made some strategic evolutions such as blockade both more dependable and more difficult. Throughout much of the eighteenth and early nineteenth centuries England and France engaged in war. England attempted to maintain a close blockade of French naval ports as a key element of its maritime strategy. Adverse winds and weather periodically raised the blockade by driving British squadrons off the French coast. Steam power made it possible to maintain a close blockade in all but the most severe weather conditions. Nevertheless, steam power imposed its own limitations. Sailing ships, with periodic resupply of food and water, could sustain a blockade

[10] Parker, "Fleet Maneuvers," 166-168, 173-176; Mason, "Two Lessons," 62-66; Hoff, "Naval Policy," 122-126; Richard Wainwright, "Tactical Problems in Naval Warfare," *Proceedings* 21, no. 74 (1895): 217-262; Spector, *Professors of War*, 71-87; Michael Vlahos, "The Naval War College and the Origins of War-Planning Against Japan," *Naval War College Review* 33, no. 4 (Jul.-Aug. 1980): 23-41; Daniel H. Wickes, "The First Cruise of the Squadron of Evolution," *Military Affairs* 44, no. 2 (April 1980): 64-65; Ropp, *Development of a Modern Navy*, 176-177, 196, 226, 232-234; Marder, *British Sea Power*, 165-166, 421.

essentially indefinitely; a steamship's time on station could be measured in days.[11] Sustaining a blockade therefore became a logistical question based on the ability to refuel.

Rear Admiral Stephen B. Luce, one of the navy's premier strategists during the latter decades of the nineteenth century, had the opportunity to observe this truth first hand. As a captain, Luce had witnessed the consequences of inadequate preparation. Admiral O. S. Glisson, commanding officer of the U.S. Navy's European Squadron, had dispatched Luce to observe and report on the French blockade of the Elbe and Weser rivers during the Franco-Prussian War. The French, Luce reported, lacking a forward base, had to re-coal the blockading ships at sea and experienced great difficulty in doing so. Maintaining an adequate supply of coal, he acknowledged, represented "one of their chief troubles." Writing to Glisson on September 28, 1870, Luce recounted how a combination of severe weather and the "almost impossibility of coaling" ultimately compelled the French to lift their blockade. The French inability to refuel, a logistical failure, resulted in a strategic failure.[12]

Steam power altered strategic geography as well, with far-reaching implications. It dramatically reduced distances. Where the distance between Europe and America had once been measured in weeks, it therafter became a matter of days. The changes in

---

[11] Spencer Miller, "Refueling Warships at Sea," *Transactions of the Society of Naval and Marine Engineers* 22 (1914):158-160. Miller's article refuted suppositions that torpedo boats would make close blockades impossible. As examples Miller pointed to the successful U.S. blockade of Santiago in the Spanish-American War, a similarly successful Japanese blockade of Port Arthur during the Russo-Japanese War, and the on-going British North Sea blockade of Germany. He did note that the British ships needed to coal every ten days and that it took twelve ships, coaling in rotation, to keep ten on station.

[12] Stephen B. Luce to O.S. Glisson, Sept. 12, 1870, in Albert Gleaves, *Life and Letters of Rear Admiral Stephen B. Luce, U.S. Navy: Founder of the Naval War College* (New York,NY: G.P. Putnam's Sons, 1925), 119.

strategic geography wrought by steam could impose strict new limitations on a nation's naval strategy. During the Age of Sail, prevailing winds and currents forced ships entering the Mediterranean to hug the European side of the Straits of Gibraltar which the British controlled from their mighty base at Gibraltar. Ships under steam could follow the African side of the straits, usually undetected and well out of range of British guns at Gibraltar, a fact the French navy discovered and exploited. Despite a reduction in its strategic value, Gibraltar remained an important British outpost.[13]

Steam power also made the United States' preferred strategy of commerce raiding much more difficult to execute because sailing ships had to follow more or less predictable routes. A raider could cruise those routes with a reasonable assurance of encountering enemy shipping. Steam gave captains greater leeway in choosing their routes. During times of peace captains chose the great circle route as the shortest distance to their destination. During wartime they could choose any route, greatly reducing their chances of encountering an enemy. A raider could improve its opportunities for success by operating near physical chokepoints, such as the Cape of Good Hood or the approaches to the English Channel, but such a decision also increased the likelihood of meeting an enemy combatant. Furthermore, the vast distances a raider needed to patrol contrasted sharply with the necessarily limited range of a steamship. As Marine Captain Dion Williams noted, "The ships of our fleet were tied to our home ports by the invisible, but none the less binding, ties of their steaming radii."[14] Steamships were powerful but

[13] Ropp, *Development of a Modern Navy*, 312-313.

[14] Williams, "The Defense of Our New Naval Stations," *Proceedings*, 181. ; Hill, *War at Sea*, 53-54, 100-101(these pages contain an excellent map showing British trade routes and both sail and steam patrol routes); Lisle A. Rose, *Power at Sea: The Age of Navalism, 1890-1918* (Columbia, MO: University

short-range weapons, without a solution to the coaling problem all navies became localized, regional forces. Until the end of the nineteenth century only three basic solutions existed. Ships could continue to rely on sail power for the bulk of their cruising, using steam only to fight or flee. Designers and engineers could increase range by improving the efficiency of steam plants and increasing the amount of coal carried. Finally, the nation could address the range issue by acquiring coaling facilities in strategically important areas. The United States pursued all three solutions. Questions of coal, coal endurance, and bases became part of the larger discussion of ship types, the navy's missions, and territorial expansion.[15]

Well aware of its need for coal, the United States Navy had, since the introduction of steam power, developed a logistics system tailored to its needs and the nation's traditions. The first piece of the system remained the emphasis on sail as the primary motive force until well into the 1880s. This step recognized the physical limits on endurance imposed by a ships' coal capacity and the severe fiscal restraints under which the navy operated in peacetime. Following the Civil War the Navy Department had ordered ship captains to use sail whenever possible; any use of steam had to be noted in the ship's log and a report forwarded to the department.[16] Orders received by Captain George M. Ransom in 1874, directing him to conduct a "show the flag" mission in the

---

of Missouri Press, 2007), xix (this page contains a map of the major choke points on the world's oceans.), Potter and Nimitz, *Sea Power*, 238; Hagan, *Gunboat Diplomacy*, 30.

[15] Livermore, "American Strategy," 34-35, 37, 40-42; ibid., "Naval-Base Policy," 115-117; Seager, "Ten Years Before Mahan," 508-509; William R. Braisted, *The United States Navy in the Pacific, 1897-1909* (Annapolis, MD: Naval Institute Press, 2008), 5, 52-54, 72-73,124-126, 135, 237-238; Maurer, "Fuel and the Battle Fleet," 60-63, 69.

[16] This was General Order 131, issued over Adolph Borie's signature but undoubtedly written by Admiral Porter. Full citation and further comments may be found in chapter two, note thirty-two. See also George M. Robeson, *Annual Report of Secretary of the Navy*, (Dec. 1, 1869). H.exdoc. 1/4, 41st Congress, 2nd Session, 6.

Caribbean still contained this reminder: "You will be strictly governed by all existing regulations regarding the consumption of coal."[17] These strictures remained in place and captains routinely reported coal usage until the navy finally abandoned sail power during the 1890s.[18] Nevertheless, it does appear that by the mid-1870s officers gave lip-service to the rules and increasingly used steam power. Commander William B. Hoff, upon his arrival in St, Thomas reported "In accordance with the directions of the Department, the ship proceeded under sail alone under every circumstance where progress could be made anywhere near the direction of the port." Unfortunately, "an absolute interruption of the trades . . . obliged me to steam for two days."[19] Captain Robert Boyd apparently used steam for the bulk of a voyage from New York to the West Indies and the Caribbean. He filed the required reports at each stop, blaming "unfavorable winds" and his determination to meet the timetable set forth in his orders.[20] Unfavorable winds and department-imposed schedules became the favorite excuses offered by captains. A third popular reason for resorting to steam was the inadequacies of the ships themselves. Commander J. D. Graham, for example, reported that in order to complete the run from Anapala to Corinto in daylight he had been "compelled" to use full steam power due to

[17] G. H. Scott to Captain George M. Ransom, April 9, 1874, Area Files of the Naval Records Collection: Area 8, Record Group 45, Microfilm Series M625, Roll 212, National Archives and Records Administration, Washington, D.C.

[18] Friedman, *Cruisers*, 25-27, 449. The exact date the navy gave up sail remains elusive. The navy commissioned its last warship equipped with square sails, the cruiser *Newark*, in 1891 and its last fore-and-aft sail-equipped ship, the cruiser *San Francisco*, in 1890.

[19] William B. Hoff to the Secretary of the Navy, Jan. 25, 1888, AF:8, RG 45, M625, Roll 213, NARA.

[20] Robert Boyd to William C. Whitney, Feb. 4, 1888, AF:8, RG 45, M625, Roll 213, NARA; ibid., Feb. 10, 1888; ibid., Feb. 16, 1888; ibid., Feb. 27, 1888; ibid., Mar. 3, 1888; ibid., May 9, 1888; ibid., May 16, 1888.

his ship's fouled hull.[21] Similarly, Commander O. F. Heyerman attributed his decision to steam out of the Gulf of Paria to his ship's poor sailing qualities, specifically "she would not tack."[22] The Navy Department appears to have accepted these justifications with little comment. The predictability steam power gave to ship movements had begun to outweigh its costs.

The second piece of the supply system relied on commercial vendors; on distant stations the navy became a customer in the local market. The navy initially treated coal much as it treated other supply items such as canvas, rope, and food. Ships' captains had the authority to purchase these items from local suppliers at their various ports of call. This was the system in use when Commodore Matthew C. Perry visited Japan during 1853. In a dispatch to Secretary of the Navy James C. Dobbin, he noted that "almost every description of article required for ships may be purchased in China," but at a high cost. Perry suggested instead that items be sent via commercial freighters from navy yards in the United States.[23] Orders directing Captain John B. Montgomery to his new duties as commander of the Pacific Squadron informed him that he could find supplies of coal at Rio de Janeiro, St. Catherine's, Valparaiso, Callao, Panama, and Honolulu, but enjoined him to observe "strict economy in its use."[24] Nevertheless, problems of supply could occur unexpectedly. Ensign Edward Taussig recounted the problems the USS

---

[21] J. D. Graham to Chief of Detail, April 21, 1887, AF:9, RG 45, M625, Roll 290, NARA.

[22] O. F. Heyerman to Rear Admiral S. B. Luce, Feb. 10, 1888, AF:8, RG 45, M625, Roll 213, NARA.

[23] Matthew C Perry to James C Dobbin, September 26, 1853, K. Jack Bauer, ed., *The New American State Papers (1789-1860), Naval Affairs. Vol. 1. General Naval Policy and Defense* (Wilmington, DE: Scholarly Resources, 1981), 221-222.

[24] Isaac Toucey to John B Montgomery, June 24, 1859, ibid., 173.

Wateree encountered finding coal in South America. The *Wateree* diverted to Chincas since its destination, Pisco, Peru, was quarantined due to a Yellow Fever outbreak. With local stocks depleted, the captain had to beg coal from other ships in the harbor and "managed after great exertions to get about fifty tons in lots of three or four tons so it took us two days to get it on board."[25] Lieutenant Commander J. Skerrett encountered similar problems in Sitka, Alaska where he was only able to obtain "small amounts" of coal from the monthly mail steamer. Local events could also disrupt a captain's plans. Captain George E. Belknap reported that Holy Week celebrations had interrupted most businesses in Panama Bay, Columbia, and "owing to the difficulty of getting coal" he would be forced to delay his departure from that port.[26]

In all of the instances mentioned the lack of coal imposed delays and hampered the commanders' ability to carry out his mission. The navy attempted to regularize the supply channel by negotiating fixed price coal contracts with dealers at the various ports. These efforts did not prove entirely satisfactory as complaints of overcharging, short deliveries, inferior coal, and price fixing attest. [27] To further address the issue the Navy Department began testing various coals and investigating the prices paid in various parts of world. The department then distributed lists to commanding officers so they might

---

[25] Edward D. Taussig to his parents, May 27, 1868, Edward D. Taussig Papers, Library of Congress, Manuscript Division, Box One.

[26] George E. Belknap to William H. Hunt, April 16, 1881, Captain's Letters, RG 80, M-125, Roll 405, NARA.

[27] "Navy Contracts with Mr. Abecassis of Lisbon, Portugal, for Coal or other Naval Supplies," Jan. 11, 1870, H.exdoc. 48, 41st Congress, 2nd Session. This document, prepared for the House Naval Affairs Committee as part of a Congressional investigation, reveals the types of problems navy captains faced in securing coal in foreign ports. Carlton & Moffet, esq. to Secretary of the Navy, June 15, 1899, General Records of the Department of the Navy, 1798-1947, RG 80, Box 613, File 9454-14, NARA. In reply to a letter from the Navy Department, the company's representative admitted that a "combination" of suppliers did exist to control the price of coal at Colombo but insisted that that it was not directed solely at the United States.

know "where to find and how to select at fair prices the coal best suited for the boilers of their ships."[28] The department also negotiated contracts for the delivery of American coal to foreign ports. These contracts, as Navy Secretary John D. Long reported, offered significant advantages "as to economy and certainty of supply." By1901 the navy had agreements covering fifty-three ports and that number had grown to seventy-six ports within three years.[29]

Ongoing questions about coal supply helped drive ship design during the latter decades of the nineteenth century. Little could be done to increase the steaming endurance of the old navy's wooden cruisers. When designing new ships, naval architects had only two options for increasing endurance. They could retain sail power for all peacetime and most wartime missions or they could increase the amount of coal ships could carry. Two essays written for *Proceedings* in 1881 illustrate this dichotomy. Lieutenant Edward W. Very, in discussing the types of vessels needed by the navy, emphasized unarmored vessels with "A maximum of speed and capacity for fuel; they must also be provided with full sail powers . . . to enable them to keep the sea for long . . . periods." He added that such vessels would accord well with the nation's "long history and present policy of non-interference with the affairs of foreign nations." The vessels he described fell into the "cruiser" category, equally well suited for either commerce protection or commerce raiding. Lieutenant Seaton Schroeder, addressing the same

[28] Hilary A. Herbert, *Annual Report of Secretary of the Navy*, Dec. 2, 1896, H.exdoc. 3, 54th Congress, 2nd Session, 40. Herbert reported that in two years this system had reduced the price per ton by $2.00, a 23% reduction.

[29] Charles H. Allen (Acting Secretary of the Navy) to Secretary of State, Aug. 5, 1899, GR, RG 80, Box 613, File 9454-10, NARA. Providing copies of an agreement between the Navy Department and Messrs. Castner, Curran and Bullitt of Philadelphia to supply coal to naval vessels in thirty ports world-wide. John D. Long, *Annual Report of Secretary of the Navy*, part 1, Nov. 4, 1901, H.exdoc. 3/1, 57th Congress, 1st Session, 13; Paul Morton, *Annual Report of Secretary of the Navy*, Nov. 23, 1904, H.doc. 3, 58th Congress, 3rd Session, 15.

question, also recommended unarmored cruisers for commerce raiding. Since all ship designs involved trade-offs, he asserted that increased coal capacity represented a better use of available weight than did armor. He concurred with Lieutenant Very in calling for a full spread of canvas "to economize on coal" and also stressed the need for high endurance by insisting on a "large capacity for stores, especially coal." Both of these officers envisioned ships designed for the navy's traditional roles. Both also placed a high priority on endurance as they proposed the same solution to the problem by recommending the retention of sail power and the provision of large on-board coal capacity at the expense of other military capabilities.[30] These two officers, nonetheless, as did all naval officers during the period, recognized that ships would fight under steam power and that the sailing rig posed a hazard in combat. The greatest danger was that cut rigging would foul the propeller, rendering the ship helpless. Lieutenant Schroeder addressed the issue by suggesting the "commanding officer would decide what top hamper to strike in event of encountering an enemy."[31] Lieutenant Commander Henry H. Gorringe framed the problem more starkly. In an 1882 article he insisted that on the outbreak of hostilities, "everything pertaining to sail power should be landed or thrown overboard."[32] Of course, once the sail rig had been disposed of the ship would be completely at the mercy of her coal supplies. Gorringe essentially argued that the navy had retained sail power solely as a peacetime economy measure. In his opinion, the tactical disadvantages of sail power outweighed its strategic advantage of extreme

[30] Very, "Type of Vessel," 51-54; Schroeder, "Type ofVessel," 94-6. Nevertheless, Schroeder evinced a much more expansive strategic vision than did Very. Unlike Very, he called for an armored battle fleet. See chapter three.

[31] Schroeder, "Type of Vessel," 99.

[32] Gorringe, "The Navy," 500.

endurance. Commenting on the changed priorities, retired chief engineer of the navy George Melville confirmed that "The new generation of line officers recognize that the coal bunker, and not the topsail, is the most important feature on board ship."[33]

The navy did steadily increase the endurance of its new steam and steel cruisers by increasing bunker capacity. The smaller cruisers of 1882 program, *Atlanta* and *Boston* had designed endurance of 3,390 nautical miles; the larger *Chicago*'s was 4,949. The *Baltimore*, launched in 1888, could make 7,212 miles while the *Olympia* of 1892 had a range of 13,000 miles.[34] These efforts reached their extreme expression in the commerce raiding cruisers of 1892 and 1893, *Columbia* and *Minneapolis*, which could circle the globe without refueling. Although longer than and almost as heavy as the navy's first battleships, these cruisers sacrificed everything to speed and endurance. Virtually unarmored and very lightly armed, they would have been hard pressed to deal with anything more threatening than converted merchant cruisers.[35]

Though impressive, the designed endurance figures proved to be wildly optimistic. Most ships could not come anywhere near their theoretical maximum range. The new cruiser *San Francisco*, commissioned in 1890, had a designed range of 8,333 miles; in actual service, with a clean bottom, she could make no more than 4,412. As the distance from San Francisco to Yokohama is 4,880 miles, without the ability to coal in

---

[33] George W. Melville, "The Changed Conditions of Cruising in the Modern Navy," Address to the New England Association of Naval Engineers, Feb. 19, 1898, George W. Melville Papers, Library of Congress, Manuscript Division, Washington, D.C.

[34] Friedman, *U. S. Cruisers*, 457-463. Bowles, "Our New Cruisers," 544-613. Bowles notes that the *Chicago* could carry an estimated 300 tons additional coal on her berth deck.

[35] Daniel Ammen, "Is the Value of Our Fast Cruisers Overestimated*?" The North American Review* 158, no. 446 (Jan. 1894): 77-78; John D. Alden, *The American Steel Navy* (Annapolis, MD: Naval Institute Press, 1989), 55-57; Friedman, *U. S. Cruisers*, 463.

Hawaii, vessels of this class could not readily cross the Pacific.[36] A number of factors contributed to this alarming shortfall. First, designed endurance assumed ideal conditions which rarely, if ever, occurred in actual service. Designers assumed smooth water; waves slow a ship, the rougher the water the more power required to maintain a given speed. Designers also based their calculations on a clean hull whereas the hulls of ships at sea quickly accumulated various marine growths, dramatically reducing efficiency. Designed range also assumed the use of high quality coal and a well-trained crew operating the power plant at peak efficiency. All of these factors played a role in reducing ships' actual endurance but the biggest loss came from auxiliary power uses. A sailing ship had only two machines on board, the capstan and the bilge pump, both operated by manpower. The modern warship, on the other hand, was a collection of machines, all drawing power away from the engines. In addition to steam capstans and winches, modern ships had evaporators to make drinking water and boiler feed water, steering engines, electrical generators, ammunition hoists, engines to train the turrets and elevate the guns, and ventilation systems. Admiral R. B. Bradford reported that 55% of the coal used in fiscal 1897 went to power auxiliary systems.[37] The navy at all levels engaged in serious efforts to reduce coal expenditures and improve efficiency and, as one officer noted, "it is a distinctive mark of the period that all officers now are interested in the most economical speed, what can be done on a given amount of coal."[38]

---

[36] Benjamin F. Tracy, *Annual Report of Secretary of the Navy*, Dec. 3, 1891, H. exdoc. 1/13, 52nd Congress, 1st Session, 35.

[37] Riley, "Coal Consumption," 419-436; W. F. Worthington, "Coal Consumption on Warships," *Proceedings* 30, no. 2 (June 1904), 373-388; R. B. Bradford, "Coaling Stations for the Navy," *Forum* 26, no. 6 (Feb. 1899), 733.

[38] George Melville, "*Changed Conditions*," Melville Papers, LOC.

Enterprising officers found make-shift ways to increase coal capacity beyond that designed into their ships. Carrying extra coal in bags on deck became routine for long passages. Captain Francis J. Higginson submitted a typical report on April 21, 1895. "I am carrying altogether about 350 tons of coal on this cruise," he recorded, "which is about 135 tons in excess of bunker capacity." "I am obliged to carry this coal in bags on deck," he continued, "which can be done easily enough provided we have smooth weather, but is liable to be lost in case of a storm." To alleviate this risk, Higginson recommended vessels be fitted with temporary bunkers around their turrets and superstructure.[39] Captain William H. Emory did lose a deck load of coal exactly as Higginson had warned. While in command of the USS *Petrel* on patrol in the Bering Sea, Emory sailed from Onalaska in the Aleutian Islands bound for Yokohama, Japan, the navy's preferred coaling site. In addition to filling his bunkers, Emory carried forty tons of coal on deck to enable him to reach Yokohama. Gales washed away the deck-loaded coal, forcing him to put in to Petropavlovsk, Russia instead. After obtaining coal from British stocks *Petrel* continued her journey to Japan.[40] Neither of these episodes was in any way unusual. The peacetime navy did what it had always done. Its captains had three options to obtain coal. The navy had leased facilities at a few ports, such as Yokohama, at which it maintained coal supplies. It also had supply contracts with civilian suppliers at a far larger number of ports. As a last resort, ship's captains could buy coal on the open market wherever necessary. Despite occasional problems, the relative ease with which

[39] Francis J. Higginson to Secretary of the Navy, April 21, 1895, AF:9, RG 45, M625, Roll 312, NARA.

[40] Albert Gleaves. *The Life of an American Sailor: Rear Admiral William Hemsley Emory* (New York, NY: George H. Doran Company, 1923), 180.

the navy's ships could acquire coal in peacetime worked against any attempt by the navy to acquire coaling stations.[41]

Ever since the introduction of steam power some officers had favored the establishment of coaling stations. Commodore Matthew Perry, while waiting in China for a coal ship to return, investigated the nearby Bonin Islands and found Port Lloyd admirably suited for a coal depot. Declaring the islands' sovereignty "uncertain," he suggested the United States and Great Britain reach an understanding that it be a free port and place of resort to vessels of all nations. He also announced himself willing to take possession of the islands in the name of the United States if so directed.[42] While Perry's opinion represented a distinct minority in the antebellum navy, he did not stand entirely alone. When Commodore John Rodgers, aboard the USS *Vanderbilt* sailing around Cape Horn in 1865, learned of coal deposits nearby, he investigated the possibility of establishing a base and using tugs to tow ships around the horn. Although the local coal proved unsuitable for shipboard use, Charles Clark, one of his officers, noted that the navy should have established such a base, even if it had to ship in coal. Cape Horn, with its ferocious winds and typically atrocious weather, represented one of the most dangerous navigational hazards a ship could face. Clark's suggestion, therefore, should perhaps be interpreted as an aid to navigation rather than a portent of imperialism.[43] In a series of reports to Secretary of the Navy Richard W. Thompson written during his two-year, world-circling voyage in the *Ticonderoga,* Commodore Robert Shufeldt lamented

[41] Hagan, *Gunboat Diplomacy*, 42-43; Livermore, "Naval-Base Policy," 114-115.

[42] Matthew C. Perry to the Secretary of the Navy, June 25, 1853, Bauer, *New American State Papers*, 287-289.

[43] Charles Clark, *My Fifty Years in the Navy* (Boston, MA: Little, Brown, and Company, 1917), 137-9.

"that our ships of war are dependent for supplies in all parts of the world upon the hospitality of foreign authorities." To minimize its dependence on foreign supplies and facilitate its mission to protect and promote American commerce, he argued that the navy needed to establish coaling stations among the islands of the world. He considered possession of Fernando Po -- an island off the west coast of Africa -- vital but recognizing the "absence of any such desire on the part of the American government, or people" urged the government instead to lease a coaling station from Spain.[44] A similar fate befell efforts to acquire bases in the Caribbean. During 1883 the president of Haiti offered to cede Mole St. Nicholas to the United States in return for "certain guarantees and the payment of a sum of money." The government declined the offer. In explaining that decision, Secretary of State Frederick J. Frelinghuysen cited the "conviction that a fixed policy, dating back to the origin of our constitutional government was considered to make it inexpedient to attempt territorial aggrandizement." He also commented that his country had never deemed it important to national security "to maintain impregnable fortresses along the world's highways of commerce." Frelinghuysen attributed the failure of similar attempts at Samana Bay and St. Thomas to such prevailing feelings in Congress.[45] In what was to become a recurring theme, Secretary of the Navy William Chandler's annual report for 1883 argued against the Congressional position. "The

[44] Shufeldt to Thompson, Quoted in Hagan, *American Gunboat Diplomacy*, 72. Shufeldt's comments about Fernando Po are in a series of reports from spring to fall 1879.

[45] Frederick J. Frelinghuysen to John Langston, Feb. 1, 1884, AF:8, RG 45, M625, Roll 212, NARA. Langston was US Consul in Haiti.

United States," he posited, "should not be dependent upon the ports of the great naval powers for coal for the various squadrons on foreign stations."[46]

The pleas of Chandler and his successors went unheeded. Congress had no appetite for foreign acquisitions. Neither did a substantial number of navy officers. The navy had such ready access to coal that although U.S. naval officers occupied, and the U.S. annexed the uninhabited Midway Island as a coaling station in 1867, the navy saw no need to establish a permanent base there until 1903. In its 1890 report, the Naval Policy Board concluded, "We fear no encroachments upon our territory, nor are we tempted at present to encroach upon that of others . . . . We have no colonies, nor any apparent desire to acquire them."[47] Luce, Mahan, and others in the big-navy faction felt considerably less sanguine. Regardless of their personal convictions, the navalists had to develop a rationale to justify their expansionist agenda.

The big navy faction built their argument around a new strategic vision that encapsulated the twin pillars of commerce and national security. The two, navalists insisted, could not be separated. Nothing better illustrates their argument than the isthmian canal question. Interest in an inter-oceanic canal reached a fever pitch during the final decades of the nineteenth century. Long little more than a dream, it appeared that a canal might finally be technologically feasible. A French company, headed by Ferdinand de Lesseps, builder of the Suez Canal, began raising money in 1879 and actually began construction across the Isthmus of Panama in 1880. That Europeans, even if a private

[46] William E. Chandler, *Annual Report of Secretary of the Navy*, Nov. 29, 1883, H. exdoc. 1/9, 48th Congress, 1st Session, 32.

[47] "Report of the Policy Board," *Proceedings* 16, no. 53 (1890): 202.

organization, should undertake such a project struck many Americans as a violation of the Monroe Doctrine. Any foreign attempt to build a canal made the United States uneasy. A French attempt, little more than a decade after Napoleon III had tried to make the Austrian Hapsburg Ferdinand Maximilian the Emperor of Mexico, aroused passionate opposition. The furor forced President Rutherford B. Hayes to issue a rare foreign policy announcement. By March 1880, Hayes had evolved a doctrine championing the "paramount interest" of the United States in hemispheric affairs. U.S. interest, as he explained, did not derive solely from the Monroe Doctrine. Neither did he base his claim on commercial interests. Instead, he emphasized national security by insisting that a canal represented "part of our general system of defensive works . . . . It is essential for our national defense." In a special message to Congress, Hayes declared that the "true policy of the United States . . . is a canal under American control, or no canal at all." [48] Hayes' statement, delivered ten years before Mahan wrote his famous book, clearly indicates a growing awareness that the United States had security interests beyond its own coastlines. Most naval officers fully agreed with Hayes' adamant insistence that the United States should control any canal across the isthmus. Commander J. S. McKean clearly described the navy's position on the Panama Canal as a "*naval necessity* and a *commercial convenience*." Any tolls collected, he insisted, represented pure profit as the maintenance costs of the canal were "properly chargeable to national defense."[49]

[48] Kenneth E. Davison, *The Presidency of Rutherford B. Hayes* (Westport, CT: Greenwood Press, Inc., 1972), 202; Ari Hoogenboom, *The Presidency of Rutherford B. Hayes* (Lawrence, KS: University press of Kansas, 1988), 184-6; Charles Richard Williams, ed. *Diary and Letters of Rutherford Birchard Hayes* (Columbus, OH: F. J. Heer Printing Company, 1924), 587, 589.

[49] J. S. McKean, "Naval Logistics," Lecture delivered at the Naval War College, March 13, 1913, Faculty & Staff Presentations, RG 14, Box 2 Naval War College Archives, Newport, RI. Emphasis in original.

Ultimately, American control of the canal became a centerpiece of U.S. foreign policy. Even President Grover Cleveland, a confirmed isolationist, succumbed in his second term to the nationalistic fervor sweeping the land and called for U.S. control. As Cleveland's conversion attests, American diplomacy underwent a paradigm shift during the 1890s. Driven by social malaise and economic depression at home and intense economic competition in overseas trade, Americans increasingly favored policies designed to secure economic advantages abroad.[50]

Expanding American commerce, especially in non-European areas of the world, remained an explicit and popular goal; even isolationists had favored commercial expansion. Perceptive Americans knew that their expanding commercial interests remained at the mercy of stronger European states. Commercial expansion necessarily brought the United States into economic competition with the major European powers and brought with it political and military entanglements. In a lecture at the Naval War College Commander French E. Chadwick expressed the widely-held view that "Commercial rivalry is at the bottom of all great wars." "[We] are threatened," he continued, "because we are driving Europe to the wall through our cheapening of manufacture."[51] Mahan, one of the foremost advocates of American expansion, recognized the potential for conflict. He viewed the acquisition of foreign bases as a necessary adjunct to the large fleet he envisioned as the guarantor of national security.

---

[50] James D. Richardson, *A Compilation of the Messages and Papers of the Presidents* (New York, NY: Bureau of National Literature, 1897), 9:450-1. In his first term, Cleveland rejected unilateral control of a canal and suggested that any canal be held as a trust for mankind, administered for the benefit of the whole world. Mark T. Gilderhus, *The Second Century: U.S.- Latin American Relations Since 1889* (Wilmington: Scholarly Resources, Inc., 2000), 7-8.

[51] French E. Chadwick, "Coal" lecture delivered at the Naval War College, 1901, FSP, RG 14, box 2, NWC archives, 32.

Admiral Luce concurred with his young protégé and believed that the accession of colonies and of battleships moved as a synchronous process. He predicted that "Both our colonial interests and our fighting ships will continue to increase until there will be an American colonial system and a fully organized fleet."[52] One begat the other; neither could exist unless both existed. As a "corollary of capital ship theory," overseas bases and colonies represented a greater departure from tradition than the theory itself. The discussion about bases focused on two regions, the Caribbean and the Pacific, in which navalists claimed the United States had vital national interests.[53]

Conflating commercial prowess and national security, navalists understood that military power rested upon economic power. Belief in the interdependence of naval and commercial power had long been at the heart of naval officers' geopolitical philosophy.[54] During the 1880s, officers increasingly spoke of overseas bases as part of the commercial/naval power equation.[55] Mahan, the best known of the new navy's propagandists, formalized this understanding. Writing after the 1898 war with Spain, Mahan repeated his expansionist mantra. "One great element of sea power," he insisted, "which, it will be remembered, is commercial before it is military, is that there be

---

[52] Stephen B. Luce, *The Writings of Stephen B. Luce*, ed. John D. Hayes and John B. Hattendorf (Newport, RI: Naval War College, 1975), 112.

[53] LaFeber, *The New Empire*, 59-61; Robert Seager II, "Alfred Thayer Mahan: Christian, Expansionist, Navalist, and Historian," in James C. Bradford, ed. *Admirals of the New Steel Navy* (Annapolis, MD: Naval Institute Press, 1990), 52; Herrick, *Naval Revolution*, 90.

[54] Collins, "Naval Affairs," 161; Belknap, "Naval Policy," 376. The essays by these two lieutenants provide clear illustrations of the prevailing view on the interrelation on commercial and naval power. Both had been lieutenants since 1871. At the time they wrote, Collins had been in the navy twelve years and Belknap sixteen. Wainwright, "Naval Power," 42.

[55] Belknap, "Naval Policy," *Proceedings*, 386. Belknap described coaling stations as a "necessary adjunct" of the wartime navy. Also see Very, "Type of Vessel," *Proceedings*, 55; Barber, "Practical Method," *Proceedings*, 422; Wainwright, "Naval Power," *Proceedings*, 64-69.

territorial bases for action in the regions important to its commerce. That is self-interest."[56] Mahan's position reflected the changing attitudes of naval officers. Younger officers, in particular, after 1880 began to stress the need for distant bases and seemed much less reluctant than their predecessors to acquire territory.[57]

The prevailing attitudes among the officer corps seem to have undergone a classic Kuhnian paradigm shift.[58] Officers in the "old navy," for example, viewed the Pacific as a challenge to ships and men. It was an arena wherein they might prove their competence through heroic deeds. The region's native inhabitants, they believed, controlled their own destinies and the promotion of commerce served as the navy's chief interest.[59] The men of the "new navy" adopted a much different view. While commerce remained important, it no longer occupied first place in their considerations. They valued a region more for its strategic possibilities and saw it as an arena for great power conflict. Additionally, they no longer saw native peoples as active participants and instead viewed them as passive receptors of great power actions.[60] Pacific islands and territories became less valued for their intrinsic worth and more valued for what they represented – markers in the great game of empire and waypoints to other, more valuable possessions. Commenting on a

---

[56] Alfred Thayer Mahan, *Lessons of the War with Spain, and Other Articles* (Freeport, NY: Books for Libraries Press, 1970), 247 (reprint of the 1899 edition).

[57] Hagan, *Gunboat Diplomacy*, 43-49.

[58] Thomas S, Kuhn, *The Structure of Scientific Revolutions* (Chicago: The University of Chicago press, 1996), 144-59. Kuhn argued that individuals construct paradigms in an effort to make sense of the world. The paradigm that best explains the perceived world gains dominance. Competing paradigms arise when the dominant worldview can no longer rationally account for anomalies. Competing paradigms battle for the allegiance of new entrants into the field; conversions are rare. A competing paradigm "wins" by attracting new adherents. Unable to attract new adherents, the "losing" paradigm withers and dies.

[59] Shulman, *Navalism*, 4.

[60] Albion, *Makers of Naval Policy*, 331.

paper delivered at the Naval Institute, Commander C. H. Stockton insisted that the strategic importance of Hawaii lay in "its position as a stepping-stone to what is beyond."[61] Stockton made frequent use of the stepping-stone analogy. Writing to Rear Admiral Luce in June of 1898, he attested "If we secure . . . a coaling station in the Philippines, we would have San Francisco or a trans-isthmian canal to Honolulu, Honolulu to Guam, and Guam to the Philippines, the entire stretch across the Pacific with American stepping stones in the way of coaling stations."[62] Luce agreed and reiterated the same argument to Senator Henry Cabot Lodge two days later adding only the suggestion that "those way stations should be well-stocked with coal and other supplies for the ships of our national and merchant marine."[63] Stockton used the analogy again in a published paper during late 1899.[64] The stepping stone analogy proved quite durable. Commander C. T. Vogelgesang fell back on it in his lecture on logistics to the Naval War College class of 1911 when he stated that due to the "guiding hand of providence," the Unites States found itself "the sole possessor of stepping stones that lead across the [Pacific] ocean."[65] The characterization of possessions as stepping stones neatly encapsulates the strategic viewpoint of these officers. The usual justifications for territorial expansion are notably absent. Nowhere is there an attempt to rationalize

---

[61] C. H. Stockton, "Discussion," *Proceedings* 24, no. 1 (Mar. 1898): 127-128. The paper under discussion was "Our Naval Power" by Lieutenant Commander Richard Wainwright. Wainwright made the argument, later copied by Mahan, that Hawaii's importance lay in its location as a base to defend the west coast.

[62] C. H. Stockton to Stephen B. Luce, June 5, 1898, in Gleaves, *Life and Letters*, 280.

[63] Stephen B. Luce to Henry Cabot Lodge, June 7, 1898, in Gleaves, *Life and Letters*, 281-282

[64] C. H. Stockton, "The American Oceanic Canal: A Study of the Commercial, Naval and Political Conditions," *Proceedings* 25, no. 4 (Dec. 1899): 772.

[65] C. T. Vogelgesang, "Logistics – Its Bearing on the Art of War," Lecture delivered at the Naval War College, 1911, SFP, RG 14, box 2, NWC Archives, 14.

acquisitions by an appeal to economics, there is no discussion of these places as either markets or sources of raw materials. The unspoken understanding seemed to be that these bases, considered individually, would be economic cost centers. In addition to the acquisition costs, bases would have to be developed and fortified. The nation would then incur ongoing expenses to man and maintain them. Similarly absent is any attempt to justify expansion by appeals to a missionary duty to civilize and Christianize the native populations.

One aspect of the navalist argument drew an analogy that compared a navy at sea to an army in the field. The writings of French General Antoine Jomini heavily influenced Luce and Mahan in this regard. Jomini, one of Napoleon's generals, published the first widely read books on the concepts of warfare. His *Summary of the Art of War*, in addition to its emphasis on geometric formations and inflexible axioms, stressed the importance of proper logistical support for the field army.[66] Mahan, deeply impressed by Jomini's theories, concluded, "The principle laid down by military writers, that an army advancing far from home should establish a second base near the scene of operations . . . holds good here."[67] Mahan made the connection between a field army and a navy explicit in *Armaments and Arbitration or the Place of Force in the International Relations of States.* "In a naval campaign," he asserted, "the navy is the mobile army – in the field. It, too, requires bases concerning the security of which it need feel no apprehension."[68]

---

[66] Michael Lee Lanning, *The Military 100: A Ranking of the Most Influential Military Leaders of all Time* (Secaucus, NJ: Citadel Press, 1996), 102-5.

[67] Alfred Thayer Mahan, *Naval Strategy: Compared and Contrasted with the Principles and Practices of Military Operations on Land* (Westport, CT: Greenwood Press, Publishers, 1911), 191, 200.

[68] Alfred Thayer Mahan, *Armaments and Arbitration or the Place of Force in the International Relations of States* (New York: Harper & Brothers Publishers, 1912), 183.

Luce, in full agreement with Mahan, turned to the issue of location. Bases in the continental United States, while necessary, were not sufficient. "One of the chief requisites of a naval base," he argued, "is that it shall be placed in the most advantageous strategic point in the field of possible operations." While the presence or absence of a base would not decide the outcome of a battle, it could decide the outcome of a campaign. Should a fleet lose a battle, the nearness of its supporting bases would determine whether the defeat became simply a reverse or an absolute ruin. Absence of bases at which to repair, refit, and resupply would turn a tactical reverse into a strategic failure. The war of 1898 provided a concrete example. Luce drew attention to the Battle of Manila Bay in which Commodore George Dewey emerged victorious. Defeat, warned Luce, would have been a disaster. The damaged American squadron, low on fuel and ammunition and with no base to fall back upon, would have been hunted down and destroyed by the victorious Spanish squadron.[69]

A second facet of the argument addressed the status of coal during wartime as a rebuttal to the assertion that the navy's ships could resupply at neutral ports. While admitting that the navy had little trouble securing coal in peacetime, the navalists insisted that in time of war international law would seriously restrict access to the vital commodity. Writing in 1881 Lieutenant Charles Belknap warned his brother officers that the navy and the nation had to address the question of coaling stations since, in time of war, "coal is virtually a contraband."[70] Lieutenant Commander F. M. Barber outlined the

---

[69] Stephen B. Luce, Lecture, Aug. 27, 1901, in John D. Hayes and John B. Hattendorf, *The Writings of Stephen B. Luce* (Newport, RI: Naval War College Press, 1975), 161; Stephen B. Luce, "Naval Strategy," *Proceedings* 35, no. 1 (1909): 111.

[70] Charles Belknap, "Naval Policy," *Proceedings*, 386.

choices in stark terms. "The general usefulness in *time of war*, for a man-of-war . . . is a question of coal-piles. . . . [I]t would be the board's duty," he suggested, "to make the country alive to this vital point, and, if we are to have no coal-piles, to outline to Congress what our men-of-war must be obliged to do if they are away from home when a war breaks out and coal is still a contraband of war – viz.: *Stay in port*, and in case of a long war dismantle the ships . . . ." Barber's essay dramatized the issues by contending that without advance bases, the nation, in effect, had no navy.[71]

Strategists recognized that any potential adversary faced many of same problems as did the United States. Any nation planning to attack the United States would have to do so from across a vast ocean and faced the same strategic need for advance bases.[72] The acquisition of bases, therefore, had both offensive and defensive components. Considered from an offensive strategy, outlying bases allowed America to project power. From a defensive viewpoint, the acquisition of bases denied their use to an enemy. Lieutenant Commander Wainwright insisted that one of the navy's first tasks in case of war would be to seize any coaling stations belonging to the enemy that were near the U.S. coast.[73] While the defensive argument focused on the Caribbean and Hawaii, the proposed isthmian canal drew considerable attention. Mahan added his voice to the chorus during 1890, suggesting that the nation must have the capability in warships, bases, and coaling stations in Caribbean to protect the proposed canal. Describing Puerto Rico as a vital base to protect the projected canal, he compared it to Malta and the Suez

[71] Barber. "A Practical Method," 422. Emphasis in original.

[72] Seager, "Mahan," in Bradford, *Admirals*, 42-43.

[73] Wainwright, "Naval Power," 44-45.

Canal for Great Britain.[74] Commander C. H. Stockton discussed the implications the canal held for American defensive plans in an 1899 essay "The American Interoceanic Canal" in which he stressed the importance of Cuban ports in defending both the canal and the entrance to the Mississippi River. Moreover, the navy needed a "good military port" near the eastern end of the canal; he recommended Chiriqui Lagoon between Colon and Greytown. On the west coast, he suggested the Pear Islands off Panama or Golfito, Port Culebra, or Port Elena to defend the western approaches to the canal.[75] Mahan also argued that the United States should hold Hawaii for similar reasons to protect San Francisco. Hawaii, 2,100 miles west of San Francisco, represented the "only possible island coaling base within operational range of our Pacific coast."[76] American possession of Hawaii, therefore, rendered the west coast of the United States safe from attack. The Naval Policy Board, in preparing its recommendations, considered the proximity of coal and ammunition supplies to areas that the navy might be called upon either to attack or defend an essential component of any realistic strategy. The board noted with some urgency that most European nations already had bases in the western hemisphere.[77]

Studies at the Naval War College and elsewhere added depth to the expansionist argument. The program for the college's session beginning August 6, 1888 included a course entitled "Naval Logistics; maintenance of coal, ammunition and other supplies to

---

[74] Mahan, *Lessons*, 28-29.

[75] Stockton. "The American Interoceanic Canal." 764-8.

[76] Reprinted in A. T. Mahan *The Interest of America in Sea Power Present and Future*, 26; Mahan, *Lessons*, 28-9.

[77] *Policy Board*, 206-11; Richard S. West, Jr., *Admirals of American Empire* (Westport, CT: Greenwood Press, Publishers, 1948), 304.

a fleet acting at a distance; establishment of depots and chains of seaports" to be led by Lieutenant C.C. Rogers. The college's 1895 war game problems indicated a need for a coaling station in the Aleutian Islands to defend the United States in the Pacific. In 1896 and 1897 the major problem focused on a war with Spain and highlighted the need to refuel the fleet in the Caribbean. The college's annual problem proved a useful way to conceptualize operations and identify problem areas.[78]

Lieutenant William W. Kimball, as part of his duties as staff intelligence officer, prepared in 1896 a detailed plan for a possible war with Spain. Noting that the "greatest necessity of our fleet [is] coal," Kimball devoted a large part of his eighty-page report to addressing the supply of this critical commodity. The navy would need a large fleet of colliers; he recommended that they be chartered "wherever they may be found." To aid that process, he included a list of suitable civilian vessels in the report's appendices. His plan, which assumed the United States Navy would be on the offensive, addressed the waters around Cuba, the Spanish coast, and the Far East as the three possible theaters of action. The Cuban theater would present the fewest logistical difficulties and offered the greatest reward. Operations in European waters presented the greatest difficulties and the greatest hazard. Operations in the Far East, he argued, though difficult to supply posed no serious military challenges. Kimball anticipated that coal would be contraband and recommended the use of British-flagged colliers to circumvent neutrality laws. The navy could establish "flying bases" in the Balearic Islands, located in the western Mediterranean, to re-coal. Nonetheless, without a naval base at which to repair battle damage, the American ships would have to avoid combat with the Spanish fleet except

[78] Mahan "The Necessities and Objects of a Naval War College." *Proceedings* 14, no. 47 (1888): 639; Hattendorf, *Sailors and Scholars*, 43-5.

under the most favorable conditions. Kimball accordingly assigned a supporting role to operations off Spain. The squadron's mission in Spanish waters embodied harassing operations, tying down elements of the Spanish fleet, and preventing their being used to either reinforce Spanish forces in Cuban waters or attack the U.S. Atlantic Seaboard. The Asiatic squadron had the mission of seizing Manila to interdict Spanish trade, as a base of operations for the squadron, and as a bargaining chip in peace negotiations. [79]

Practical experience at sea validated many of the college's and Kimball's conclusions. Experiments during the years leading up to the 1898 war with Spain, as well as the navy's experiences during the war confirmed the paramount importance of forward bases to a modern navy. As Commander Richard Wainwright lamented, "No satisfactory method has yet been found for coaling at sea." Noting that in wartime the ability to re-coal rapidly was almost as important as that of repairing damage rapidly, he cautioned, "Much may depend upon the rapidity with which the vessel is recoaled."[80] As relations with Spain deteriorated in early 1898, questions of coal supply took on a new urgency. Before war broke out, Rear Admiral William T. Sampson, charged with blockading Cuba, recommended that the Navy Department dispatch three colliers to supply his squadron. Reminding the department that "the supply of coal to the ships when

[79] William W. Kimball, "War Plan with Spain," June 1, 1896, Naval Operating Forces, RG 313, Box 11, NARA. Kimball's plan is quite detailed including extensive lists of vessels, both warships and civilian, U.S. and Spanish. It also includes evaluations of various possible bases in the Caribbean and detailed drawings of Spanish harbors, to included fortifications. At the time he prepared this plan, Kimball had been a lieutenant for twenty-two years. http://www.history.navy.mil/books/callahan/reg-usn-k.htm.

[80] Richard Wainwright, "Tactical Problems," 241-2.

on the Coast of Cuba is vitally important," he warned that "even now it demands the utmost care to keep the ships in the best condition for service."[81]

Once the war began, the lack of coal prevented Sampson from immediately executing his orders.[82] The State Department tried to assist the navy in circumventing anticipated neutrality restrictions. The Secretary of State directed the U.S. Consul at St. Thomas, Danish West Indies, to purchase a large hulk or ship, fill it with coal, hire a crew, issue consular papers, hoist the American flag, and supply any U.S. Navy ships with coal that might call at that port.[83] The Haitian government rejected a request to cede sufficient territory for a coal depot. The Haitians did agree that if the U.S. government chartered vessels, filled them with coal, and consigned them to private parties, those ships could supply U.S. warships in ports without violating Haitian neutrality.[84] The British government, as expected, instituted a policy of strict neutrality. A ship of a belligerent would only be allowed enough coal to take it to the nearest port of that belligerent.[85] The United States had hoped that Japan would allow American warships to coal in Japanese ports such as Yokohama where the United States had leased ground and stockpiled coal. This proved impossible and the Japanese "would concede nothing beyond strict

---

[81] William T. Sampson to the Secretary of the Navy, Mar. 30, 1898, AF:8, RG 45, M625, Roll 227.

[82] Sampson to the Secretary of the Navy, April 14, 1898, AF:8, RG 45, M625, Roll 228, NARA. Sampson reported that due to the shortage of coal he could not blockade the eastern half of Cuba.

[83] R. B. Bradford to Winfield S. Schley, April 2, 1898, AF:8, RG 45, M625, Roll 228, NARA. This information was contained in Bradford communication to Schley.

[84] W. F. Powell to John Sherman, April 19, 1898, AF:8, RG 45, M625, Roll 228, NARA.

[85] Major General Wilsone Black to George Dewey, April 23, 1898, AF:10, RG 45, M625, Roll 363, NARA; Colonial Secretary Ralph Williams to US Consul S. A. Macallister, April 27, 1898, AF:8, RG 45, M625, Roll 228, NARA; US Consul Louis A. Dent to William Day, April 18, 1898, AF:8, RG 45, M625, Roll 228, NARA.

neutrality."[86] Supply arrangements in Mexico proved difficult and American warships experienced delays getting needed coal. The experience of the USS *Alert* in Acapulco was representative. The Spanish-owned Welsh Coal Company typically supplied American warships in Acapulco. Not surprisingly, it declined to do so after war began. In anticipation of that situation, the American government had made arrangements to purchase coal from the Pacific Mail Steamship Company, an American firm with a depot in Acapulco. Nevertheless, when the *Alert* arrived, it took the intervention of the Pacific Mail's general manager in San Francisco, the efforts of the U.S. Consul in Acapulco, the Minister to Mexico, the U.S. Secretary of State, and the personal approval of Mexico's president before an American warship could purchase coal from an American company in a Mexican port.[87] An article in *Scientific American*, published shortly after the war, pointed to the "embarrassing situation" that the shortage of coal caused for Dewey's fleet, the *Oregon* in its epic sixty-six day voyage from Bremerton, Washington to Key West, Florida, and for the fleet off Cuba. "This," the article insisted, "is a great argument for coaling stations at a distance from home ports." Confirming pre-war arguments, the war with Spain demonstrated that coal represented a contraband of war, and when away from their home ports, "United States steamers are practically useless for fighting purposes unless they can obtain coal from their colliers; so that coaling stations at various points

[86] A. E. Buck to George Dewey, April 4, 1898, AF:10, RG 45, M 625, Roll 363, NARA.

[87] State Department to Secretary of the Navy, May 2, 1898, AF:9, RG 45, M625, Roll 320, NARA; Consul Edgar Battle to Powell Clayton, May 4, 1898, ibid; Commander Leutze to Clayton, May 5, 1898, ibid.; Clayton to Battle, May 5, 1898, ibid.; Clayton to Leutze, May 5, 1898, ibid.; Leutze to Secretary of the Navy, May 5, 1898, ibid.; Clayton to John Sherman, May 6, 1898, ibid.; Battle to William R. Day, May 7, 1898, ibid.

are not only important, but are absolutely necessary."[88] In view of its lack of coaling stations the navy purchased seventeen colliers; fifteen supplied the fleet off Cuba while two supported operations in the Pacific. These proved adequate for the short war. Secretary Long cautioned that their success had only been possible due to the proximity of the Atlantic fleet to American ports and the early destruction of the Spanish squadron in the Philippines.[89] In summing up the navy's experience in the war and the "lessons learned," Long maintained "if fleets are to be maintained . . . in time of war, it is necessary that provision should be made for furnishing adequate supplies of coal wherever hostile operations may occur, and this can only be done by establishing coal depots throughout the world and acquiring sovereign rights to the property on which they are located."[90]

The easy victory over Spain changed the terms of the debate. In a burst of expansionism that combined commercialism, imperialism, racism, and patriotism the United States seized a maritime empire. The nation acted promptly on the long-delayed acquisition of Hawaii, an "unquestioned strategic asset as a naval base." Guam and the Philippines followed in close succession. The navy, which wanted certain locations as bases, played a primary role in the rapid transformation of the Caribbean after 1898 into an American lake. Mahan, who served on the Naval Advisory Board during the Spanish-American War, drafted the board's final report near the end of August 1898, which recommended eight coaling stations: two in the Caribbean, one each in Hawaii, Samoa,

---

[88] "Coal for the Navy." *Scientific American* 79, no. 27 (Dec. 31, 1898): 426.

[89] John D. Long *Annual Report of Secretary of the Navy*, vol. 1, Nov. 15, 1898, H. exdoc. 3, 55th Congress, 3rd Session, 27.

[90] John D. Long, *Annual Report of Secretary of the Navy*, Nov. 22, 1899, H. exdoc. 3, 56th Congress, 1st Session, 27-28.

Manila and Guam, plus two in the Chushan islands near the mouth of the Yangtze River. The report did not, however, call for annexing the Philippines. The war provided an emphatically positive answer to the question of whether the nation would have outlying territories.[91]

Once the nation had decided to acquire bases, the debate changed. The question, thereafter became, "How many bases and where"? Commander C. H. Stockton recommended establishing bases that could provide coaling stations, repair facilities, and dry docks in Samoa and the Philippines. In a statement that recalled the navy's role in promoting commerce, he suggested that their importance derived from their "position as a stepping stone to what is beyond, as a coaling station, with docking facilities, at a crossing of sea highways."[92] The nation's role in China, he declared, would dictate the location of naval bases. Defending remote bases posed a nagging problem. In 1898 Lieutenant Commander Richard Wainwright addressed the issue in essay for *Proceedings*, suggesting "the advantage of outlying ports and coaling stations, in time of peace is freely admitted by all sides. During war the debate becomes heated and controversy arises." Unlike some, Wainwright argued the necessity of holding such bases against attack.[93]

Some officers felt that the navy should hold the number of bases to an absolute minimum to simplify the defense problem. Captain Asa Walker provided one of the more articulate expressions of this position positing that the navy needed to increase the size of

---

[91] Albion, *Makers*, 326-9; Seager, "Mahan," in Bradford, *Admirals*, 47.

[92] C. H. Stockton. "Discussion," *Proceedings* 24, no. 85 (1898): 127-8.

[93] Wainwright. "Our Naval Power," 64.

its battleships in order to increase coal endurance. Walker wanted ships with high speed and high sea endurance. But he knew there existed only two ways to reduce the need for sea endurance: bases or colliers. The navy could not rely on vulnerable bases unless fortified, a task he considered economically impossible. Colliers offered a better solution, but they must be special, high-speed vessels designed to keep up with fleet. Yet even with colliers the navy still needed some bases since the colliers would require periodic replenishment. "Coal stations *must* be established," he concluded, "but those to be relied upon in time of war *must* be fortified and made secure."[94]

Walker's comments about high endurance harkened back to earlier debates about cruiser specifications. One faction in that debate had recommended sacrificing offensive and defensive capabilities in the search for more endurance. In addition to Walker's concerns about the vulnerability of bases, officers pointed to the difficulty experienced when trying to re-coal at sea as a point in favor of increasing the coal capacity of warships. Mahan quickly joined the fray in defense of what he believed to be a more appropriate prioritization of desirable ship characteristics. Describing coal endurance as a particular function of mobility, he did not contest its desirability. He insisted, though, "it cannot, with the vessels now available, be possessed beyond very narrow limits." He contended that the navy should solve the re-coaling difficulty by improving methods, not by sacrificing other fighting qualities for greater endurance. He also suggested that the appropriate endurance of a battleship must equal the greatest distance separating two

[94] Walker. "Size of Fighting Ships," 517-522. Emphasis in original.

coaling places "as they exist in the scheme of fortified coaling ports, which every naval nation should frame for itself."[95]

As further support for their basing argument, the navalists also theorized that the navy would encounter significant difficulties coaling even in peacetime. The nation still required an adequate navy to protect both its far-flung commerce and its vital national interests. While single ships might coal anywhere during peacetime, a fleet could not. The vast quantity of coal a fleet required overwhelmed all but the largest facilities. In 1891 Lieutenant R.C. Smith forecasted that that coal limitations would restrict the activities of the fleet in both peace and war. "With a modern navy," he worried, "the question of coal becomes a serious one."[96]

The experience of Teddy Roosevelt's "Great White Fleet" during its 1907-1908 around the world cruise demonstrated the accuracy of Smith's concerns. Fuel became an issue early in the voyage on the leg from Trinidad to Rio de Janeiro. Staff planners had miscalculated the distance by 400 miles, an error of twelve percent. The fleet also encountered adverse currents which increased fuel consumption. It appeared that the older battleships, which carried less coal, might not make it to Rio. By instituting strict economy measures all of the ships arrived under their own steam, the *New Jersey* with but forty-five tons of coal remaining.[97]

Assuring adequate supplies of coal presented a major problem throughout the voyage. Lacking colliers of its own, the navy had chartered foreign-flagged colliers,

[95] Mahan, *Lessons*, 41.

[96] Lieutenant R. C. Smith, "Disposition of the Fleet: Ship and Squadron Drill," *Proceedings* 27, no. 58 (1891): 130.

[97] James R. Reckner, *Teddy Roosevelt's Great White Fleet* (Annapolis, MD: Bluejacket Books, 1988), 32-33.

primarily British, to load coal at American ports and meet the fleet at its various planned stops around the world. The voyage provided a rare opportunity for the navy bureaus to estimate a fleet's requirements and then arrange for delivery of necessary supplies at distant points. Failure to allow sufficient lead time for coal deliveries emerged as the one major logistical failure.[98]

By the time the fleet reached Australia, the coal issue had become acute. Australian suppliers, informed by the Navy Department that no local coal would be required, had only very limited stocks on hand. Only three of six colliers appeared at the Auckland rendezvous. Short 16,000 tons of coal, and with little more than 500 tons available locally, crews toiled "night and day" to redistribute coal throughout the fleet to enable the ships to continue to Sydney. Similar problems occurred in Sydney and in Melbourne. On September 13 1908, the fleet arrived in Albany, its last stop before the 3,500-mile passage to the Philippines. Once again, only three of six colliers arrived. Rear Admiral William H. Emory, commander of the 2nd Battleship Division, found the Australian coal expensive, unsuited to the ships' boilers, and insufficient to meet fleet's demands in any case. The fleet's sixteen battleships all had to coal from just three colliers, leaving each ship short 500 tons. Reluctant to begin a long passage low on fuel and in the middle of typhoon season, the fleet delayed its departure five days until two of the errant colliers arrived.[99]

Lacking bases and colliers of its own, the navy incurred delays and expenses that graphically illustrated the strategic need for bases. As Commodore Shufeldt had

[98] Michael J. Crawford, ed., *The World Cruise of the Great White Fleet* (Washington DC: Naval Historical Center, 2008), 98-99.

[99] Reckner, *Great White Fleet*, 102-6.

complained in the 1870s, the United States should not have to rely on the kindness of foreigners. The fleet had begun its voyage during a war scare with Japan. Britain and Japan were allies; had war broken out, the fleet would have been immobilized.[100] By disproving the contention that the ready availability of coal in peacetime obviated any need for global bases, the fleet's journey buttressed the call for fueling stations.

The navy did seek other ways to reduce its need for overseas bases. Some factions within the navy argued for the retention of sail power on the navy's new cruisers. As late as 1886, Admiral of the Navy David Porter was still warning that the navy "was crippling our proposed cruisers" by reducing their sail power.[101] Nevertheless, the five cruisers launched and commissioned between 1888 and 1890 marked the final transition away from sails. The *Newark* (cruiser no. 1), built to an American design, represented the last U.S. warship with full sail power. The *Charleston* and the *Baltimore* (cruisers nos.2 and 3) built on British designs, had no sails. The next two cruisers (*Philadelphia* and *San Francisco*), again American designed, reverted to limited sail power. [102] The United States did not differ materially from European navies in this regard. Great Britain, despite its worldwide system of coaling stations and naval bases, retained sailing rig on its capital ships until 1887 and launched sail-equipped cruisers intended for foreign stations as late as 1904.[103] Extreme coal endurance could only be gained by sacrificing other essential military qualities. If ships had no sails and lacked great coal capacity and the nation had

---

[100] Crawford, *World Cruise,* 99; Reckner, *Great White Fleet,* 104.

[101] David D. Porter, "Report of the Admiral of the Navy," in William C. Whitney, *Annual Report of Secretary of the Navy*, Dec. 1, 1886, H. exdoc. 1/9, 49th Congress, 2nd Session, 65.

[102] Friedman, *Cruisers*, 22-27.

[103] Canney, *The Old Steam Navy*, vol. I*:* 165.

no secure overseas coaling facilities, carrying extra coal in support vessels and refueling the warships at sea remained the only option. Colliers, purpose-built coal-carrying ships, already existed in the merchant fleets of the world. The difficulty lay in transferring coal to the warship. The backbreaking work of filling bags with coal, hoisting them out of the collier's hold, and swinging them across to the deck of the warship could only take place in smooth water. Even then the process involved great risk to both men and ships. It remained all but impossible while underway or in the open ocean.[104] Following the 1898 war with Spain the United States Navy began experimenting with methods for refueling at sea. By 1899 a marine cableway had been designed and tested that allowed bow to stern coaling in virtually all weather conditions. Tests conducted by the U.S. Navy and the Royal Navy during 1901 indicated that the system could deliver approximately forty tons of coal per hour.[105] Continued development and testing increased the rate to sixty tons per hour with one hundred tons possible under the "stress of war conditions." [106] Despite the proven viability of the system the navy lacked funds for both colliers and the transfer system. As war engulfed Europe during 1914, the U.S. Navy had just thirteen modern colliers, none of which apparently had the necessary transfer equipment. Captain A. P. Niblack ruefully noted that the new colliers, which cost about $1,000,000 each, only needed about $25,000 to add the equipment needed to permit them to supply both coal and oil while underway.[107]

---

[104] Spencer Miller, Coaling Vessels at Sea," *Transactions of the Society of Naval Architects and Marine Engineers* 7 (1899), 1.

[105] Spencer Miller, "Coaling Warships at Sea – Recent Developments," *Transactions* 12 (1904), 198.

[106] Spencer Miller, "Refueling Warships at Sea," *Transactions* 22 (1914), 178.

[107] A. P. Niblack, Comments," *Transactions* 22 (1914), 181.

One other option to fixed bases remained to be explored. If the nation would not establish bases in peacetime, the navy could perhaps seize territory and establish a temporary advance base during wartime. Such a solution resolved a number of problems. From a political standpoint, it removed all of the thorny issues surrounding acquisition of sovereign rights to foreign territory. From an economic standpoint it eliminated the costs associated with acquiring, fortifying, and maintaining overseas bases in peacetime. From a strategic standpoint it assured that the necessary advance bases would be near the theater of operations and simplified the defensive problem of defending scattered bases. While a moveable base solved many problems it did introduce new ones. Upon the outbreak of war, the navy would have to seize a suitable location, diverting it from its primary mission of destroying the enemy's fleet. Proponents of the moveable base countered by arguing that an enemy would probably capture any American fixed bases before the navy could intervene. Competition for scarce defense appropriations proved to be the biggest hurdle. In addition to its fuel needs, a naval force operating away from its home ports needed a place where it could perform routine maintenance tasks and repair battle damage. This meant specialist repair vessels, store ships, and, most importantly, a dry dock.[108] The British built a floating dry dock and towed it to the Bermudas in 1869. At least one officer suggested the U.S. Navy do the same.[109] Along with the necessary repair and supply ships a floating dry dock would allow the navy to establish rapidly a base in any suitable harbor. Nevertheless, every dollar spent on the ships required to make the moveable base a reality meant one less dollar spent on warship construction.

---

[108] A. C. Cunningham, "The Moveable Base," *Proceedings* 30, no. 1 (March 1904): 182-187.

[109] G. A. Nichols, "The Bermuda Floating Drydock," *United Service* 6, no. 3 (Mar. 1882): 334-336.

Prior to World War I the navy did acquire a few repair ships, supply ships for both cold storage and fresh provisions, and a few modern colliers but a floating dry dock remained elusive.

The introduction of steam power brought new possibilities and presented new challenges to the world's navies. The United States Navy developed a logistics system suited to its geographical situation and its missions. The navy established repair facilities and coaling stations on leased ground at a few key ports in its operational areas. It negotiated supply contracts for coal at major ports worldwide. If needed, ship captains had the ability to buy coal virtually anywhere. This system generally worked well for a small navy dispersed singly and in small squadrons around the world. International law, which listed coal as a contraband item, completely disrupted the system during wartime. The navy reinvented itself beginning in the 1880s with new technologies, new ships, and a new strategic doctrine based on command of the sea.

The new doctrine required the navy to project power far from the nation's shores. It could only do so with the support of a sophisticated logistical system. The navy fully understood this requirement. Once sail power had been finally abandoned, logistics became a vital concern. C. T. Vogelgesang, lecturing at the Naval War College in 1911, reminded his audience "We must not forget that a modern fleet is a projectile of relatively short range." Without bases, he argued, the fleet in the Pacific was like Napoleon before Moscow.[110] Building on the Napoleon analogy, Josiah S. McKean intoned "Strategy depends on logistics for its effectiveness. No strategic plan based on *incorrect* logistics,

[110] Vogelgesang "Logistics," 15.

or worse *impossible*, logistics can succeed."[111] No feasible alternative to fixed bases existed during the late nineteenth century. Lacking a viable alternative, naval officers adopted the idea that the United States had to become an imperial power and acquire certain vital territories.

[111] Josiah S. McKean, "Naval Logistics," Lecture delivered at the Naval War College, 1913. Staff and Faculty Presentations, RG 14, Box 2, Naval War College Archives, Newport, RI, 4. Emphasis in original.

Chapter Five

"It is our duty as Naval Officers to teach the public": Selling the New Navy

The 1873 threat of war caught the American government off guard. In October of that year a Spanish warship captured the *Virginius*, a small steamer running guns to insurgents in Cuba. Spanish authorities in Santiago, ignoring American protests, peremptorily executed most of the ship's crew as pirates, many of whom held American citizenship. Amidst much bluster and bombast the United States hastily assembled the remnants of its once-proud navy off Key West.[1] The possibility of war with Spain forced the navy's officers to review dispassionately their ships. Spain's navy, though not large, possessed modern, powerful vessels. The ships of the United States Navy, by contrast, represented relics of a bygone era. An objective comparison of the two nations' warships favored Spain. Fortunately diplomacy ultimately prevailed, sparing the navy the test of combat. The run-in with Spain nevertheless forced two conclusions upon American naval officers. The suddenness with which the incident developed reminded them that war could come without warning and from unexpected quarters. Furthermore, as the fleet's performance off Key West revealed, the navy stood little chance of winning should war come. Reacting to the embarrassment of 1873, naval officers mounted a campaign for naval rehabilitation, and their efforts grew into an increasingly well-organized and sophisticated public relations campaign.[2]

---

[1] Bradford, *Virginius Affair*; Soodalter, "To the Brink," 62-67; Parker, "Fleet Maneuvers," 163-176. The *Virginius* Affair, as the incident came to be called, is discussed in chapter 2.

[2] Karsten, *Naval Aristocracy*, 301-305.

Rehabilitating the navy proved a daunting task. Since the end of the Civil War the navy had been both literally and figuratively far from the public eye. Congress slashed its budget, forcing a draconian reduction in the number of ships in service. The navy's understanding of its peacetime missions compounded the problem by dispersing the few remaining ships to the far corners of the world. Additionally, most of the country lacked any direct connection to the sea. Most residents of inland states had never seen the ocean or a naval vessel, probably knew no one in the navy, and failed to see how the navy affected them (other than by soaking up their tax dollars). Naval reformers therefore faced a multi-dimensional challenge. They had to secure increased funding from a parsimonious Congress, and they had to build public support for the navy. To accomplish these goals they had to make the navy a national rather than a sectional institution.[3]

Naval officers utilized a wide range of venues to present their opinions to the public. Though never a disciplined, organized group, the proponents of a "new" navy became a reasonably effective and persuasive group. Their messages had certain themes. Recognizing that building a modern navy would require public support and a national commitment, proponents of naval rehabilitation aggressively utilized every venue open to them to promote their agenda and influence Congress.

The navy's officers had one official channel, the Secretary of the Navy's annual report, through which they could directly present their concerns to Congress. Each of the bureau chiefs and the Admiral of the Navy wrote an annual report, which the secretary appended to his report. In addition to summarizing the bureaus' activities and accomplishments during the year, each chief could and frequently did use his report to

[3] Baer, *One Hundred Years*, 11-16; Sexton, *Forging the Sword*, 52, 232-234; Herrick, *Naval Revolution*, 21-23; Seager, "Ten Years before Mahan," 491-512.

highlight concerns and recommend changes. Furthermore, the secretaries themselves often became conduits for their subordinates' professional opinions. As civilian appointees, many secretaries lacked the experience and the detailed knowledge necessary to analyze effectively the navy's needs. They quite naturally relied on the advice of the various bureau chiefs on technical matters. Of course, this avenue only gave voice to those few senior officers who actually occupied the chiefs' billets.[4]

Appeals to Congress through the official channel had brought little action. The navy's deteriorating condition and declining capabilities had been a feature of every annual report since the late 1860s. In 1881 Secretary William Hunt opened his annual report with a dire assessment of the navy's condition and warned that without the "prompt and earnest attention" of Congress, the service would soon cease to exist.[5] Despite the efforts of the secretaries and a few pro-navy congressmen, the navy languished; Congress authorized just eight new vessels between 1864 and 1882. Extreme partisanship played a prominent role in stalling any Congressional attempt to revitalize the navy. Officers tried to avoid making the navy a partisan, political issue. They understood, perhaps subconsciously, that only by remaining non-partisan could they succeed. The navy had to be a national institution; identification with either party could only bring disaster. For that reason, some members of the 1882 naval advisory board, believing Congress was too caught up in partisan politics to act in the navy's best interest,

[4] Albion, *Makers of Policy*, 35, 41-42; Sexton, *Forging the Sword*, 12; Charles O. Paullin, "A Half Century of Naval Administration in America, 1861-1911," *Proceedings* 39 (Mar. 1913): 753; Hagan, *This People's Navy*, 33.

[5] William H. Hunt, "*Annual Report of the Secretary of the Navy*," November 28, 1881, H.exdoc 1/9, 47th Congress, 1st Session, 3.

declined to participate in hearings before the House Naval Affairs Committee.[6] The history of the naval appropriations bill for that year lends credence to their concern. The bill of August 5, 1882 authorized, but appropriated no money for, two new cruisers for the navy. It passed the House, after heated partisan debates, by a vote of 119-76; Democrats cast all 76 "nays."[7]

With the official channel unresponsive, enterprising officers sought other avenues to advance their cause. Partisanship might scuttle congressional debate, but politicians could be counted on to respond to constituent concerns. Officers knew two things about rebuilding the navy. First, they could not succeed without broad-based public support. Second, they knew that most people lacked any knowledge of, or interest in, the navy. Alfred Mahan noted the "dead apathy" of the American people towards the navy during the 1870s. The people, he asserted, accepted the navy as part of the "necessary burden" of a properly organized state but lacked "sufficient interest to dispute the necessity of its existence."[8] Naval officers hoped to change that situation. By 1878 senior officers prepared to take their case public. Frustrated by the lack of congressional action, they determined to make a survey of the true condition of the navy, and were "determined the country shall know it."[9] As Lieutenant Fredrick Collins told the Naval Institute the following year, "It is our duty as Naval Officers to teach the public what they need in the

[6] Sexton, "Forging the Sword," 55-56.

[7] Congressional Record, 47th Congress, 1st Session, 5698; Sexton, "Forging the Sword," 63-64, 73-74.

[8] Mahan, *From Sail to Steam*, 267, 8.

[9] W. C. Whitthorne, March 21, 1878, Congressional Record, 45th Congress, 2nd Session, 1957.

way of a Navy. I think that we . . . should tell the country what we need, and insist upon it until we get it."[10] Collin's comments suggest a public education program.

Personal appeals to influential persons represent one of the earliest methods officers used. Mahan tried to enlist his former classmate and good friend Samuel Ashe. Beginning in 1875, Mahan asked Ashe "to stir up some people on [the navy's] behalf." In 1876, he confided to Ashe that he was "very busy" writing to anyone he could think of who might be "likely to feel an interest, or duty" in "seeing justice done by the Navy."[11]

Officers also reached beyond their personal acquaintances in their efforts "stir up the people." *Proceedings*, the U.S. Naval Institute's journal, provided both a template and impetus. A small group of concerned officers had founded the institute in 1873 to advance "professional and scientific knowledge in the Navy."[12] The institute initially restricted membership to officers of the navy and marines and staff of the Naval Academy. The institute invited its members to present papers on professional subjects at its meetings; it then published many of those papers in *Proceedings* and sent a copy to each member. Officers soon realized that they could use the institute to spread their message to a larger, non-military audience. Amendments to the organization's constitution in 1876 created an Associate Member category open to persons connected to the naval and military professions and interested civilians.[13] In 1880 distribution of *Proceedings* expanded to include the Congressional Library, the University of Harvard

[10] Collins, "Naval Affairs," 179.

[11] Karsten, *Naval Aristocracy*, 330-332; Sexton, *Forging the Sword*, 232.

[12] The Institute's purpose is stated in Article 2 of its constitution, which was printed as part of the front matter of each volume.

[13] "Constitution," Article IV, Section 5, *Proceedings* 3 (1876). Associate members were limited to fifty; none are on the 1876 roles.

Library, and corresponding societies. Records for that year list seventeen associate members and five corresponding societies.[14] The Boston Public Library began receiving the journal in 1884 and, in an effort to reach a wider audience, the organization began accepting subscriptions from non-members.[15] By 1889 the group tallied 94 life members, 593 regular members, 168 associates, and 23 corresponding societies.[16] In his annual report to the membership for 1891, the institute's secretary concluded that the organization had broadened its field of usefulness and by "means of the large number of associate members [the institute] promotes good feeling." He further noted that "its members and subscribers, including libraries and colleges, disseminate important factual information relating to naval science and . . . national defense."[17] Clearly, the Naval Institute quickly grew beyond its insular beginnings as a closed professional society, morphing into a dynamic public relations platform. Nonetheless, despite its dramatic growth and its efforts to reach a wider audience, the Naval Institute's *Proceedings* still suffered when compared to other journals and magazines.[18]

[14] *Proceedings* 6 (1880): i-xvii. Two of the associates were army officers and three were officers in the Royal navy. The corresponding societies were all scientific/engineering organizations.

[15] *Proceedings* 10 (1884): xxvi.

[16] *Proceedings* 15 (1889): 166. Through 1900 membership numbers stabilized near these values. Regular memberships fluctuated between 553 and 593 while associates ranged from 165 to 199. From 1900 on, membership counts were not reported.

[17] H. G. Dressel, "Secretary-Treasurer's Report," *Proceedings* 16 (1891): iii, v.

[18] Circulation data are generally unavailable for these years although the secretary's report for 1891 listed 256 subscriptions and 130 average outside sales per quarter. H. G. Dressel, "Secretary-Treasurer's Report," *Proceedings* 16 (1891): v. The treasurer's report for 1906 lists dues income of $3070.64, subscription income of $1,182.49 (about 338 subscriptions at the stated price of $3.50), and "extra publications" of $24,874.90. This author has been unable to determine the nature and distribution of these extra publications. Philip Alger, "Treasurer's Report," *Proceedings* 32 (1906): 377.

As a compliment to *Proceedings*, officers also submitted articles on naval subjects to civilian publications. *United Service, a Quarterly Review of Military and Naval Affairs*, which began publishing in 1879, proved a natural fit. Lewis R. Hamersly, the journal's naval affairs editor, had served in the navy during the Civil War and gave officers ready access to the publication's pages.[19] Admiral Porter published an article in *United Service*'s first issue. His article, "Our Navy," drew attention to the poor condition of the United States Navy and called on Congress to establish a "permanent navy."[20] Lieutenant J. D. S. Kelly wrote a scathing assessment in the following issue that ranked the U.S. Navy on a par with Peru's. Complaining that "In time of peace, the navy . . . is conspicuous only by the utter neglect Congress shows for it," Kelly insisted that the nation faced a turning point and had to build a modern navy.[21] *United Service* published a steady stream of articles on all aspects of naval rehabilitation.

Following an 1877 change in editorial policy, *The North American Review* became another popular outlet. The new policy reveled in controversy and the formerly staid journal became an open forum for opinion. The *Review*'s editors frequently solicited opposing articles on contentious issues. In 1881, for example, the magazine published two diametrically opposed articles on the American Merchant Marine. John Roach, a shipbuilder, argued that a healthy and vibrant carrying trade would prove essential to American security and that the government should subsidize the merchant marine.[22] The

---

[19] Officers of the Continental and U. S. Navy and Marine Corps, 1775-1900, Naval Heritage and History Command, <http://www.history.navy.mil/books/Callahan/reg-usn-h>.

[20] David D. Porter, "Our Navy," *United Service, a Quarterly Review of Military and Naval Affairs* 1, no. 1 (Jan. 1879):1-9.

[21] Kelly, "A Lay Sermon," 265.

[22] Roach, "Shall Americans Build Ships?" 467-481.

following month's issue carried a rebuttal by W. G. Sumner that presented a classic free trade-comparative advantage economic argument.[23] Admiral Porter again took the lead among naval officers with an 1878 article that extolled the virtues of torpedoes as a way for weaker navies to offset the armored vessels of more powerful foes.[24] Others quickly followed.

While advocates of naval reform and rehabilitation found *United Service* and *The North American Review* to be the most receptive outlets, dozens of other magazines also carried occasional articles on naval affairs. The list of publications that carried naval-related stories is long and varied. One would expect a movement attempting to build public support on a national scale to utilize such broad-based titles as *Atlantic Monthly*, *McClure's Magazine, Forum, Frank Leslies' Popular Monthly, Harper's Weekly,* and *Century Illustrated Magazine*. Somewhat unexpectedly, and perhaps indicative of growing interest in the navy, one also finds *The Social Economist, The Chataquan, Overland Monthly and Out West Magazine, Zion's Herald,* and *The Michigan Farmer* discussing naval topics. Despite the rather limited, parochial scope suggested by their titles these journals carried articles addressing broad elements of naval policy. Even *The Youth's Companion*, a publication aimed at boys, published stories extolling the navy. Most of these stories showed boys searching for adventure and stressed themes of duty and heroism.[25] Mark Shulman's study of the new American navy presents an intensive

---

[23] W. G. Sumner, "Shall Americans Own Ships?" *The North American Review* 132, no. 295 (June 1881): 559-566.

[24] Porter, "Torpedo Warfare," 213-236.

[25] See for example, "A Naval Hero," *The Youth's Companion* 49, no. 9 (May 11, 1876): 150; "Sailor Boys in the Navy," ibid. 54, no. 17 (April 28, 1881): 153; "The Midshipmen of the 'Essex,'" ibid.

analysis of the navy and the media during this era. He discovered a dramatic increase in naval related content during the years between 1889 and 1897. Naval coverage in *Harper's New Monthly Magazine* increased from 0% to 3.3% while *North American Review* increased from 4.8% to a remarkable 8% of all stories. He also found a marked increase in navy-themed advertising across the publishing spectrum, including the circulation-leading *Ladies Home Journal*.[26] The breadth of coverage indicates the public's voracious appetite for navy-related stories. The vast majority of the articles that appeared, while they differed on specifics, supported rehabilitating and enlarging the navy.

Further evidence of the navy's growing popularity can be found in *The Advocate of Peace*, a publication of the American Peace Society. Between 1865 and 1870, more than 100 articles addressed the navy. Most of these dealt with the "needless" death, destruction, and waste of the recent war while lauding the steep reductions in the nation's military forces after the war. In common with the rest of the country, the Peace Society quickly lost interest in the navy. It published only seven articles that mentioned the navy between 1881 and 1885. The next five years, from 1886 to 1890, reveal no missives on the navy. By 1890 the new navy had emerged, the first battleships had been authorized, and the Peace Society awoke. Eighty-eight stories opposing the new spirit of militarism appeared between 1891 and 1895. This rose to 165 for the period 1896 to 1900 and

---

59, no. 27 (July 6, 1886): 263; "Chasing a Blockade Runner," ibid. 62, no. 45 (Nov. 7 1889): 575; "The Nation and the Sea," ibid. 63, no. 3 (Jan. 16 1890): 36.

[26] Shulman, *Navalism,*, 47-49. Shulman records that *Ladies Home Journal* and *The Youth's Companion* each had average monthly circulation of over 500,000 copies.

peaked at 244 from 1901 to 1906, when the magazine ceased publication.[27] The peace society waged an intense battle to counter the pro-navy sentiments expressed in other publications. Stories in the *Advocate* stressed the horrors of war and offered counter arguments to those raised by the navalists.

Newspapers offered another dynamic, though much less controllable, venue for promoting the navy. Newspapers generally printed a summary of the Secretary's annual report; at times they could be quite detailed and lengthy. Admiral Porter's report typically drew attention as well. Beyond these official pronouncements officers had little direct access to the newspapers. Unlike journal articles, naval officers could not write news stories. They had to get their message out more subtly. Officers could cultivate reporters and become unnamed, background sources on stories about the navy. The number of stories about the navy appearing in newspapers shows a similar growth to that in magazines.[28]

Books about naval subjects also enjoyed a resurgence. Arguably one of the most important works in reshaping public attitudes towards the navy was Theodore Roosevelt's *The Naval War of 1812*, published in 1882. Roosevelt re-interpreted the war to show the importance of sea power and the corresponding futility of land warfare. Biographies and personal memoirs also proliferated and ads in the leading magazines reveal a growing stream of navy-related books.

---

[27] These numbers are based on a search conducted online through the American Periodical Series database using the search term "navy." This generic term also returned articles dealing with the growth of European navies.

[28] Karsten, *Naval Aristocracy*, 308. Karsten records that Lieutenant J.D.J. Kelly received orders assigning him to the New York *Herald* as a publicist.

The printed word in journal articles, newspaper stories, and books represented but one avenue used to popularize the navy. Public art in the form of monuments and statues offered a visual channel through which navalists could remind the nation of its naval heritage while stressing the themes of heroism, duty, and sacrifice. The first memorial constructed in Washington, D.C. was the navy monument across from the capital building in 1877. Although renamed the "peace monument" during the Progressive Era, the monument remains to this day. A statue of Admiral David Farragut, the "Hero of Mobile Bay," appeared in 1881. New Haven, Connecticut erected a soldiers and sailors monument in 1887. Similar efforts took place across the country.[29]

The navy also found that it could raise its public profile by arranging public appearances. One of the navy's public relations problems had always been the nature of naval service. By definition, the bulk of the navy's ships and personnel were usually away at sea, far from the public's sight. Employing the service's bands to provide public concerts became one way to overcome this difficulty. John Philip Sousa and the Marine Corps Band gained undying fame in this role. During the late 1880s and early 1900s his stirring military marches captured the public mind. In 1891 the band initiated an annual cross country concert tour.[30] In addition to the Marine Corps band, naval stations and large ships each had their own band, many of which gave local concerts. The musical groups and their very popular concerts put a human face on the service and helped connect the navy to the American people.

[29] Shulman, *Navalism*, 50-51.

[30] Ann M. Lingg, *John Philip Sousa* (New York, NY: Holt, Rinehart and Winston, 1954), 90-91.

Introducing the public to the navy's tools of its trade, its ships, posed a more difficult challenge, but offered a potentially more effective message. As Lieutenant John M. Ellicott noted in 1896 "the people had to be shown something for their money as quickly as possible in order that they would continue to give it."[31] The navy could participate in events along the coast such as the dedication of the Statue of Liberty in New York Harbor. Rear Admiral Luce brought the North Atlantic Squadron to New York in 1886 to take part in the festivities. Similarly, Secretary of the Navy William C. Whitney sent the squadron to New Haven, Connecticut to help dedicate the Soldiers and Sailors monument in 1887. A reported 75,000 visitors witnessed the event.[32] The navy also scheduled events such as demonstrations and naval reviews to build public awareness. In 1886 the navy held maneuvers off Pensacola, Florida, in part to "create an increased interest in the movement to build up the service commensurate with its importance." Bad weather reduced public turnout, leading the president of the Pensacola Board of Commissioners to suggest the maneuvers be repeated in mid-winter of 1888. In requesting a naval squadron the board insisted it would "create an interest in the service not to be gained in any other way."[33] In 1892 Senator John W. Daniels suggested the navy organize a naval review to commemorate the four hundredth anniversary of Columbus's voyage. Secretary of the Navy Benjamin F. Tracy leapt at the chance to show the navy's new ships to the American people, believing that the event would do

[31] Ellicott, "Composition of the Fleet," 546-547. Ellicott's article argued the necessity of building battleships, but admitted the propriety of the early focus on cruisers.

[32] Shulman, *Navalism*, 51.

[33] W. D. Chibley to William C. Whitney, (Nov. 23, 1887), AF 8, RG 45, M625, Roll 212, NARA.

more to enhance the navy's image than a multitude of speeches or press releases.[34] Great Britain, France, Germany, Russia, Spain, Holland, Brazil, and Argentina sent naval forces to take part. Thirty-five warships representing the nine nations gathered in Hampton Roads before sailing en masse to New York harbor in April 1893. The review received extensive, laudatory press coverage, fully meeting Tracy's expectations. The New York *Times* reported that "Hundreds of thousands of people" saw and applauded.[35] The reporter for *The Independent* gushed "crowds . . . lined the shores and filled the tugs and boats of every description, shrieking their welcome."[36] Even the *Advocate for Peace* approved, noting that such displays helped build bridges between nations and was a good way to keep the ships busy and out of mischief.[37] And if the people could not come to see the navy, the navy would go to the people. As part of the great 1893 Columbian Exposition in Chicago, the navy spent $50,000 to build a "full-sized replica of one of the new coast line battleships" along the lakeshore. Erected on pilings, the giant cement warship appeared to be floating. Visitors could tour the ship, see how the sailors lived, and watch as the smartly-dressed, well-drilled, and hand-picked crew went about daily tasks and drills, including firing salutes from the very real 6" cannons. The *Illinois*, as the ersatz ship was named, proved "stunningly popular" with the exposition's twenty million viewers. All of these opportunities helped personalize the navy. The

[34] Herrick, *American Naval Revolution*, 76.

[35] "Cheers for all Nations," New York *Times* (April 29, 1893).

[36] The Great Naval Review," *The Independent* 45, no. 2318 (May 4, 1893): 14.

[37] "Warships of Other Nations in New York Harbor," *Advocate of Peace* 55, no. 6 (June 1893): 127-129.

demonstrations, reviews and exhibits presented the new ships as marvels of modern technology and appealed to the public's reverence for the heroic.[38]

After the war with Spain in 1898 the navy and the nation had a new set of naval heroes. William T. Sampson, commander of the naval forces off Cuba, Winfield S. Schley, commander of the navy's flying squadron, and George Dewey, commander of the Asiatic squadron, all became household names. All held the rank of commodore at the start of the war. Success brought promotion. Sampson and Schley both became rear-admirals in March 1899, but their very public spat over their roles in the defeat of Spanish Admiral Cervera's squadron off Santiago somewhat damaged both their reputations. Dewey emerged as the clear winner in the popularity contest. The navy made him a rear-admiral in May 1898. With Dewey obviously in mind, though unnamed, the 55th Congress re-established the rank of admiral. Dewey became just the third admiral in the navy's history in March 1899. Dewey mania swept the nation. Numerous magazines published hagiographic stories and placed his likeness on their covers. A typical article in *McClure's* placed Dewey in the line of such naval heroes as John Paul Jones, Stephen Decatur, and Isaac Hull.[39] Congress passed a joint resolution awarding him a memorial sword with "The gift of the nation" engraved on the blade. Tiffany's jewelers designed

[38] "Model Battleship at the World's Columbian Exposition," *Scientific American* 65, no. 24 (Dec. 12, 1891): 376; Shulman, *Navalism*, 55. The 6" guns were later installed on the USS *Oregon* and fired on the Spanish squadron off Cuba.

[39] L. A. Coolidge, "Stories of the Fighting Leaders," *McClure's Magazine* 11, no. 2 (June 1898): 178-185. See also "Dewey the Hero of Manila," *Leslie's Weekly* 24, no.1 (July 1898): 27; J. D. Jerrold Kelly, "Rear-Admiral George Dewey," *The Independent* 50, no. 2581 (May 19, 1898): 1-2; "Three American Admirals," *The Christian Advocate* 74, no. 11 (Mar. 16, 1899): 416; Oscar King Davis, "Stories of Admiral Dewey," *McClure's Magazine* 13, no. 1 (May 1899): 43-49.

the 22kt gold hilt.[40] At least one writer found that insufficient recognition. Park Benjamin of *The Independent* called on Congress to award Dewey $500,000 and the honorary title "Dewey of Manila."[41] Dewey's likeness was everywhere. Spoons, pitchers, beer tankards, crystal serving dishes, kerchiefs, and stick pins all displayed his gruff visage. There were Dewey figurines, hatchets, and toy cannons, "Dewey Outing Club" pins, commemorative coins, and even bars of soap.[42] Dewey was the focal point, but the entire navy gained popularity following its swift and complete victory over the Spanish navy.

By 1898 the navy had apparently won the public relations battle. After decades wandering in the wilderness, the Promised Land appeared within reach. Once dismissed as a non-entity in world power calculations, victory in war ensured that the new navy could not be ignored. Where it had once been ignored by the American public, the navy became a popular topic. The navy had impressive new ships with more on the way.

Nevertheless, the navy's officers and their civilian supporters knew that they could not rest on their laurels. The navy had proven its technical and professional competence against a third-rate power. But should not the United States aspire to more than third-rate status? Naval officers and their supporters also feared that the nation's traditional postwar repugnance of all things military would result in reduced funding. The only remedy, argued Lieutenant Commander John Gibbons, was a "campaign of education among the people, through the medium of naval leagues and press agitation"

---

[40] "Naval and Military Affairs," *New York Observer and Chronicle* 76, no. 35 (Sept. 1, 1898): 76; "Recognition for Rear-Admiral Dewey," *Scientific American* 80, no. 4 (Jan. 28, 1899): 54.

[41] Park Benjamin, "Concerning the Admirals," *The Independent* 50, no. 2630 (Oct. 2, 1898): 1093-1094.

[42] A recent search of online auction sites found all of these items for sale.

that would "excite a keener sense of legislative responsibility."[43] The navalists continued to push for a navy commensurate with the nation's needs and status.

Borrowing from their European counterparts, they established the Navy League of the United States in December 1902 to educate the American people on the relationship between sea power and the nation's new international responsibilities. The league planned to operate as a pressure group, using lectures, pamphlets, its magazine, and local sections to create a favorable public opinion which would make demands on Congress. Since naval regulations barred officers from engaging in propaganda activities, the league would have to be a civilian entity. Membership was open to all except active naval officers and congressmen. During the first six years of its existence the league struggled to stay alive, its message a "barely audible whisper." By 1907 active duty officers and congressmen could join, although they could neither vote nor hold office. That same year Horace Porter, a West Point graduate and Civil War veteran, became president and introduced a mandate to revitalize the organization. Porter's efforts began to produce results by 1909. In January, at the start of a trans-continental lecture series, Rear Admiral Robley D. Evans spoke to a crowd that filled Carnegie Hall. The Navy League also published four pamphlets that year and mailed them to a select list of prominent citizens, newspaper editors, and congressmen. Other pamphlets, such as 1910's "Is a Strong Navy a Guarantor of Peace?" followed. As a part of a membership drive, the league conducted a large-scale lecturing effort in the winter of 1912-13. Speaking before chambers of commerce, civic and religious groups, and university audiences in thirty cities, league

[43] John H. Gibbons, "The Need of a Building Program for Our Navy," *Proceedings* 29, no. 2 (June 1903): 325.

members drew large crowds. By the second decade of the twentieth century the Navy League stood poised to become a powerful voice in American naval affairs.[44]

Naval officers and other supporters of a modernized navy utilized a broad spectrum of venues to get their message to the American people. Books, magazines, newspapers, and pamphlets presented the navy's story to the reading public. Monuments reminded citizens of the nation's naval heritage while naval demonstrations, international naval reviews, and exhibits at the world's fair gave them the opportunity to see the navy's new ships. Band concerts and lectures provided entertainment and a sense of community. But what was the message? Officers sincerely believed, for both professional and personal reasons, that the nation needed a larger, modernized fleet. That core belief never changed and undergirded all of their efforts. Officers and navalists wrapped that simple, consistent message in a variety of different guises in their appeals to the public.

One of the most common arguments addressed the navy's condition, usually in comparison to other navies. The U.S. Navy always came off second best in these comparisons and officers insisted that the navy's plight held dire consequences for the nation. A report prepared for the secretary of the navy in 1869 asserted that none of the navy's ships was "fit to cruise at large in war . . . or to cope with the cruisers now possessed by the . . . naval powers of Europe." They were, in fact, "scarcely more than naval trash."[45] Comparing the U.S. Navy to that of Spain during the *Virginius* affair, *The*

[44] Armin Rappaport, *The Navy League of the United States* (Detroit, MI: Wayne State University Press, 1962), 2-4, 14, 19-25, 213. The league produced 27,000 copies of "Patriotic Reasons for the Navy League of the United States." The other three pamphlets, "Why a Strong Navy," "The Naval Program for 1909," and "President Roosevelt's Message on the Four Battleships," had a total distribution of approximately 40,000 copies. Great Britain established a navy league in 1894. Italy, Germany, France, Portugal, and Spain followed suit between 1897 and 1901.

[45] "Report of the Board on Steam Machinery Afloat" Annual Report of the Secretary of the Navy (Dec. 1, 1869), H.exdoc. 1/4, 41st Cong., 2nd Session, 206-207. This is the so-called Goldsborough Board.

Nation lamented that the American government had challenged a "maritime power of considerable force… without having anything that can be called a navy" of its own. Such ships as the navy had were "almost useless for military purposes" and "would be sent to the bottom in five minutes."[46] Admiral Porter, writing in 1879, noting that the navy had dwindled away, complained that "no sooner is a war ended than the navy is cast aside as useless."[47] Building on Porter's comments, Lieutenant J. D. S. Kelly compared the American fleet to other navies of the world. The United States, he concluded, ranked with Peru.[48] Despite progress on naval rehabilitation in the latter half of the 1880s, the dire warnings continued. During the Samoan crisis in 1889, newspapers frequently compared the American ships to those of Germany and Great Britain.[49] The Naval Policy Board of 1890 claimed to be "astonished at our own weakness and total lack of preparation."[50] While the tone of these warnings remained the same, the details changed as the navy acquired modern warships. The aging wooden warships that made up the navy of the 1860s, 70s, and 80s represented relics of an earlier age and stood no chance against modern vessels. Once the navy began building modern ships it quickly caught up with contemporary practices. Those complaining about the navy's condition then focused on the types and numbers of ships. Writing in1891, Secretary of the Navy Hillary Herbert

---

[46] "How Should We Fight Spain?" *The Nation* 17, no. 440 (1873): 364.

[47] David D. Porter, "Our Navy," *United Service* 1, no. 1 (Jan. 1879): 3.

[48] Kelly, "A Lay Sermon," 265.

[49] "Our Present Warships," *Newark Daily Advocate*, Jan. 23, 1889, 2; "The Samoa Difficulties," *New York Times*, Jan. 8, 1889, 3; "Will There Be War?" *Galveston Daily News*, Jan. 22, 1889, 1; "All Ready for Sailing," *Lima Daily Democratic Times*, Jan. 22, 1889, 1; "Thinks We'd Win,: *Richwood Gazette*, Mar. 14, 1889,1.

[50] Naval Policy Board Report, (Jan. 20, 1890), S.exdoc 43, 51st congress, 1st Session, 4. This was the so-called McCann Board.

suggested that the navy was deficient in battleships and torpedo boats when compared to other fleets.[51]

Naval proponents usually paired the "status of the fleet" argument with the fear-mongering "our defenseless coasts" argument. This argument postulated that the United States lacked the capability to defend its harbors and coastlines. Furthermore, they warned, assorted villains awaited the slightest provocation to descend on American cities to burn and pillage. Navalists frequently pointed to Chile as a looming threat. During the mid-1880s Chile emerged from the War of the Pacific as the strongest South American naval power, challenging American hegemony in the Western Hemisphere. In June of 1882, Virginia Congressman John Dezendorf gave a classic statement of the "defenseless coasts" argument. Calling for an increase in the navy, he warned "Chile could come right into San Francisco, levy tribute on its people, burn down the town and you have nothing to keep them outside the harbor."[52] As the debate on appropriations continued during the next session, other congressmen weighed in. Congressman William Whitthorne warned that the ships of the Pacific Squadron were too weak to take on any of Chile's three ironclads and too slow to run away. John R. Thomas referred to the "humiliating condition" of the navy, which prevented it from defending against attacks by the "smallest naval power of Europe, or even by Chile." Benjamin W. Harris agreed, adding that San Francisco would be placed under contributions that in one day would be five times the amount asked for in the appropriations. Even New York, he warned, appeared

[51] Hillary A. Herbert, "A Plea for the Navy," *Forum* (Sept. 1897): 3-6. In 1891, then-secretary Benjamin Tracy conceded that the first four ships of the new navy (the ABCDs) had been experimental, but the ships that followed were fully up to international standards. Benjamin F. Tracy, "Our New Warships," *The North American Review* 152, no. 415 (June 1891): 642.

[52] John F. Dezendorf, House debates, June 28, 1882, 47th Congress, 1st Session, *Congressional Record*, 5474.

vulnerable.[53] An article in *United Service* insisted that Chile could command the U.S. west coast and sink every vessel in "our miserable navy."[54] Articles published in other journals with titles such as "National Defense," "A Defenseless Sea-Board," and "Our Defenceless [sic] Coasts" kept the argument alive through the 1890s.[55]

Great Britain, Germany, and eventually Japan joined Chile on the list of most likely assailants. That many viewed England as a potential adversary did not seem surprising. After all, the United States had twice gone to war with England and during the Civil War Great Britain had provided crucial support to Confederate commerce raiders. Negotiations over claims arising from losses inflicted by the CSS *Alabama* drug on until 1872. Ongoing trade disputes over the Newfoundland fisheries and sealing in the Bering Straits also fed tensions. American intervention in ongoing disputes between Britain and Venezuela also caused war scares. Perhaps most importantly, Great Britain, the world's leading commercial and naval power, actually possessed the capability to attack America. Many naval officers remained staunch and vocal Anglophobes throughout the nineteenth and early twentieth centuries.[56]

Germany and Japan also emerged as rising imperial powers during the late nineteenth century. American and German interests crossed in Samoa in 1889 and again in the Anglo-German blockade of Venezuela in 1903-04. Moreover, Americans also

---

[53] William C. Whitthorne, John R. Thomas, Benjamin W. Harris, Jan. 23, 1883, *Congressional Record*, 1411, 1563.

[54] An Unpensioned Volunteer, "Our Little Navy," *United Service* 11, no. 3 (Sept. 1884): 303.

[55] Franklin, "National Defense," 594-604; H. A Smalley, "A Defenseless Sea-Board," Ibid. 138, no. 328 (March 1884): 233-245; George N. Southwick, "Our Defenceless Coasts," Ibid. 162, no. 472 (March 1896): 317-327.

[56] Collins, "Naval Affairs," 163-164; Belknap, "Naval Policy," 377; Clark, "Discussion," 456; Fiske, "Naval Power," 704; Joyce S. Goldberg, "Consent to Ascent: The Baltimore Affair and the U.S. Rise to World Power Status," *The Americas* 41, no. 1 (Jul. 1984): 26-27. Karsten, *Naval Aristocracy*, 113-116. Karsten insists that the navy's Anglophobic officers represented a minority position.

feared Germany planned to create a colony in Brazil. Tensions with Japan developed over concerns about Japanese immigration to California and Japan's interest in Hawaii.[57]

Arguments based on fear appeal to emotions and naval officers and their supporters hoped to garner increased appropriations through such motivations. The extent to which officers believed their own propaganda remains unclear. Clearly officers deliberately distorted some threats.[58] Chile never posed a realistic threat to the west coast. Her ironclads, though capable warships, lacked the range, and Chile lacked the supporting infrastructure, to keep them in action off San Francisco. Other nations, though, did have the capability to threaten the United States and officers, especially those who had attended the Naval War College, had been trained to evaluate the capabilities, not the intentions, of potential enemies. The college's annual war game had students defend the coast against attacks by various combinations of enemies. Counting ships and guns, comparing speed, endurance, and armor protection was easy; determining intentions remained virtually impossible. What mattered in such exercises were possibilities, not probabilities. No doubt some officers earnestly believed the country was in imminent danger. Others adopted a more moderate position. Mocking a paper calling for a massive increase in the navy presented at an 1896 meeting of the Naval Institute, Commander Caspar Goodrich remarked "the wonder arises as to how we have managed to escape a direful fate during the twenty-five to thirty years following the late war, when

[57] Murdock, "Fighting Ships, 249; W. G. Fitz-Gerald, "Does Germany Menace the World's Peace?" *The North American Review* 184, no. 613 (Apr. 1907): 853-860; Braisted, *U.S. in the Pacific*, 14, 235, 243-243; Herring, *Colony to Superpower*, 303; Turk, "Defending," in *Peace and War*, 188. Potter and Nimitz, *Sea Power*, 381-382; Vlahos, "War-Planning Against Japan," 23-24.

[58] Sexton, *Forging the Sword*, 5; Apt, "Mahan's Forbears," 102; Baer, *One Hundred Years*, 11-12.

our navy was a negligible quantity."[59] Whether or not officers believed the threats credible, they certainly believed the arguments had political utility.

Other emotions besides fear also came into play. Navalists appealed to a sense of national pride as well in a two-faceted argument. One side of the appeal addressed the "disgrace," "dishonor," and "humiliation" the nation experienced as a result of its decrepit, inadequate navy.[60] The positive side of the argument reminded people that the country's "dignity and supremacy as the greatest nation on the globe" rested on an adequate navy.[61] Great nations, almost by definition, had great navies. The United States, insisted the navalists, both needed and deserved a great navy. Possession of a powerful navy thus became a status symbol, an admission token to an exclusive club of nations. As Rear-Admiral Bradley Fiske wrote in his memoirs, "A great country needed a fine navy, but it was a thing to be admired, not used."[62]

Navalists also promulgated a series of what may be termed national security arguments. While many of these appeals contained elements of fear mongering, most presented a more nuanced argument designed to educate laymen while promoting the naval agenda. One facet of this argument stressed the deterrent value of an adequate navy, a value which rested almost solely on its preparedness for war. Designed to counter the American tradition of virtual disarmament in times of peace, the argument mirrored

---

[59] Caspar F. Goodrich, "Comments," *Proceedings* 22, no. 3 (1896): 553.

[60] Theodore Roosevelt to Henry Cabot Lodge, (Jan. 22, 1888), in Henry Cabot Lodge, ed. *Selections from the Correspondence of Theodore Roosevelt and Henry Cabot Lodge, 1884-1918* (New York, NY: Charles Scribner's Son, 1925), I:62; "A Humiliating Policy," *Burlington Hawk-Eye*, (April 15, 1893), 4.

[61] "To Provide Against War," *The New York World*, February 23, 1889, 2.

[62] Fiske, *Midshipman to Rear Admiral*, 133. Fiske was referring to the widespread attitude among American officers and civilians on the eve of the war with Spain. Fiske remembered that he and his fellow officers simply did not believe the United States would go to war.

the changing strategic paradigm within the navy that emphasized the emerging battle fleet "distant shield" strategy at the expense of the older commerce raiding strategy. The new paradigm defined the navy's wartime goal as destruction of the enemy's fleet and its primary peacetime role as preparing for war. A powerful fleet, ready and prepared for war at all times, served as a strong deterrent to would-be aggressors. Recognizing that the outcome of any war remained subject to a certain amount of chance, and that even victory resulted in much death and destruction, the Naval Policy Board of 1890 suggested that deterrence may be the navy's most important function.[63] Following the great naval review during the spring of 1893, Secretary of the Navy Hillary Herbert offered an article on the lessons learned for *The North American Review*. "If America would keep her own peace with all the nations of the earth," he intoned, "and maintain her place in the vanguard of civilization she must at all times be prepared for war."[64] Navalists even enlisted George Washington in their cause. At the time of the Chilean troubles in 1891 the New York *World*, commenting on the nation's unpreparedness, noted "We have before us a demonstration of the wisdom of Washington's maxim: 'In time of peace prepare for war.'" The *Standard* of Ogden, Utah, reprinted the same story on page one.[65] Assistant Secretary of the Navy Theodore Roosevelt addressed the Naval Institute on that

[63] "Report of the Naval Policy Board," Jan. 20, 1890, S.exdoc 43, 51st Congress, 1st Session, 3.

[64] Hillary A Herbert, "The Lesson of the Naval Review," *The North American Review* 156, no. 439 (June 1893): 647. For similar arguments see Mentz, "Our Naval Force," 596; Charles H. Rockwell, "The Lessons of the Naval Review," *United Service* 10, no. 1 (July 1893): 14; Edward F. Qualtrough, "Our Naval Necessities," *Overland Monthly and Out West Magazine* 12, no. 76 (April 1889): 423; James R. Soley, "The Value of Naval Maneuvers," *The North American Review* 153, no. 417 (Aug, 1891): 144-147; Charles H. Rockwell, "Wanted – A Definite Policy," *United Service* 8, no. 5 (Nov. 1892): 3; Charles H. Cramp, "Sea Power of the United States," *The North American Review* 159, no. 453, (March 1894): 137. Mentz, Rockwell, and Qualtrough were naval officers; Solely was a professor at the Naval War College and Cramp was one of America's leading ship builders.

[65] "Our Navy Handicapped," The *New York World*, Oct. 30, 1891, 5; "Chile's Grave Peril," The *Ogden Standard*, Oct. 31, 1891, 1.

theme in 1897, calling a great battleship navy, kept ready for war, the best guarantor of peace.[66] The "peace through strength" argument became particularly useful in the 1890s and 1900s as a counter to the growing peace movement's "peace through disarmament" argument.

A consistent, regular building program represented one of the key goals of the navalists. They repeatedly insisted that a modern navy could not be improvised as the country had done during the Civil War. The addition of a few guns could not turn a merchant ship into a warship. Technology had advanced too far; warships had to be built from the keel up. And a modern warship, they repeatedly noted, took three to five years to build. Expecting future wars to be short and sharp, navalists warned that they would be fought with the ships on hand at the beginning. Proponents also claimed that recent events disproved the contention that the country would have time to prepare for war. There would not be a long, slow increase in tension resulting finally in war. Some unexpected and unpredictable event could trigger a war virtually overnight. Commander Caspar Goodrich warned in 1885 that the nation had already been at peace longer than usual and that a "rude awakening" must come. When it did, the advanced nature of "modern implements of war" ensured that the outcome would be decided "almost at its outset."[67]

As a necessary corollary to a building program, officers insisted, the navy's ships should be kept in commission and fully manned. The U.S. had traditionally kept only a

---

[66] Theodore Roosevelt, "Washington's Forgotten Maxim," *Proceedings* 23, no. 3 (1897): 447-461.

[67] Franklin, "National Defense," 600-602. Goodrich, "Our National Defenses," 173. For similar presentations see also W. S. Hughes, "Our New Steel Cruisers and Their Uses," *Frank Leslie's Popular Monthly* 20, no. 2 (Aug. 1885): 164-165; Bradley A. Fiske, "Naval Battle of the Future," *Forum* (May 1890): 323-324; Theodore A. Dodge, "The Needs of Our Army and Navy," *Forum* (Oct. 1891): 253; J. W. Miller, "Rumors of War and Resultant Duties," *Forum* (April 1896): 243.

very small number of ships in commission. They provided a nucleus of trained men should war break out. Most of the navy's ships remained laid up "in ordinary," theoretically ready to be activated in time of need. The navy expected to man those ships with trained seamen drawn from the merchant marine, untrained landsmen, and a leavening of seasoned seamen and officers from the active navy. Mobilizing such a force took time, which officers insisted the nation would not be granted. Commodore G. W. Melville warned that a "European fleet of any required size could be thrown upon the Atlantic coast" within two weeks.[68] In the type of conflict these officers imagined only those ships actually in commission at the start of war would play any role.

The war with Spain in 1898 fit these predictions almost exactly. Although tensions between Spain and the United States had been high for some time, few people, including naval officers, expected war. On February 15 the often-postulated unexpected event occurred when the USS *Maine* blew up in Havana harbor; by late April the two nations were at war. Combat operations lasted less than four months. The two months between the *Maine*'s loss and the declaration of war allowed the navy to do no more than reposition its ships, put them on a war footing, and arrange for supplies. As predicted, the navy fought the war with the ships on hand when it began.[69]

Building modern warships and keeping them in commission entailed considerable expense. To allay concerns about the costs, navalists likened the navy to an insurance

[68] Melville, "Our Future in the Pacific," 283; Goodrich, "Our National Defenses," 172.

[69] Mahan, *Lessons from the War with Spain*, passim; Potter and Nimitz, *Sea Power*, 366-377; Sprout and Sprout, *Naval Power*, 258-277; Baer, *One Hundred Years*, 27-32.

policy.[70] Like an insurance policy, a navy had to be acquired before it was needed; the operating costs represented the premiums paid to keep the policy in force. The navalists also assured the public that, just like an insurance policy, the premiums would be far less than an uninsured loss. The title of one article succinctly stated: "Battle-Ships Cheaper than War."[71] An article in the October 1891 issue of *Forum* called for a fifteen-year plan to improve America's naval and military defenses. Spending $36 million per year, for a total investment of $500 million – which the author compared to the premiums on an insurance policy, represented true wisdom. America, the author contended, practiced false economy by failing to fund defense. Emergency spending during the first few months of the Civil War, he noted, exceeded $500 million.[72] Navalists did not dispute the obvious costs of building and maintaining an adequate navy. They countered by pointing out the even higher potential costs of not maintaining a navy.

Officers also spoke about the dangers the United States faced in a hostile world. They stressed the navy's deterrent value and compared it to an insurance policy. Officers descibed the changing technical, tactical, and strategic realities the navy faced.[73] Admiral Porter contributed a lengthy two-part discussion on modern tactics to *The North American Review* in 1889.[74] Admiral Luce followed with wide-ranging discussions of

---

[70] Miller, "The Need for a Coast Defense Vessel," Mentz, "Our Naval Force," 595-597; Eugene Griffin, "Our Sea-Coast Defenses," *The North American Review* 147, no. 380 (July 1888): 65; R. P. Hobson, "America Mistress of the Seas," *The North American Review* 75, no. 551 (Oct. 1902): 544-547.

[71] Henry C. Taylor, "Battle-Ships Cheaper than War," *Harper's Weekly*, (May 9, 1903): 744.

[72] Dodge, "The Needs of Our Army and Navy," 247-262.

[73] See for example, Benjamin Micou, "Torpedo Boats in Naval Warfare," *The North American Review* 165, no. 491 (Oct. 1897): 409-417.

[74] David D. Porter, "Naval Wars of the Future," *The North American Review* 148, no. 386 (Jan. 1889): 1-15; ibid., no 387 (Feb. 1889) 196-216.

naval strategy.[75] By the 1890s, discussions of American naval strategy increasingly focused on meeting and defeating an enemy's fleet before it reached American shores. Many of the articles, particularly those focused on naval strategy, stressed the navy's lack of, and absolute need for, bases. Officers had long recognized both the advantages and disadvantages of steam power. The need for fuel, particularly in wartime, implied the need for overseas bases. That the United States had none, and evinced little interest in acquiring any, drove the long-lived debate over the retention of sail power. By the late-1880s the U.S. Navy had fully committed to steam power and calls for bases became more frequent. Following the war with Spain, these calls became insistent. As Chief Engineer George W. Melville told the New England Association of Naval Engineers, "One of the most important points nowadays in naval strategy is the coal supply and bases for its storage."[76] Articles with titles such as "Coal and War," "Coaling Stations in the Pacific," "Coaling Stations for the Navy," and "The Problem of Coaling" hammered home the link between strategy, a reliable coal supply, and American naval power.[77] Rear Admiral Royal B. Bradford became, arguably, the navy's chief advocate for bases, calling for facilities in the eastern Atlantic, the Caribbean, both coasts of Central and South America, virtually every island chain in the Pacific, China, and in Japan. His

[75] Luce, "Our Future Navy," 54-65; Luce, "Naval Warfare under Modern Conditions," ibid. 162, no. 470 (Jan. 1896): 70-77.

[76] George W. Melville, Address, New England Association of Naval Engineers, Feb. 19, 1898, George W. Melville Papers, Library of Congress, Manuscript Division.

[77] D. Allen Wiley, "Coal and War," *The Independent* (May 19, 1898): 644-645; "Coaling Stations in the Pacific," *New York Observer and Chronicle* (Aug. 18, 1898), 206; "The Problem of Coaling," *The Salt lake Daily Tribune*, Feb. 14, 1880, 1. See also "A Way to Coal at Sea," *The New York Times*, Jan. 1, 1893, 15; "Coaling Stations," *Hawaiian Gazette*, Jan. 17, 1896, 8; "The Navy and Coal," *The Davenport Republican*, Nov. 21, 1901, 4.

mantra may be condensed to "any base, anywhere."[78] Lieutenant Henry Dinger and Lieutenant Commander A. P. Niblack represented the other extreme by arguing that fixed bases, while necessary, had to be defended and should be limited in number.[79] The sheer volume of journal articles and newspaper stories that, at minimum, mention coal supply issues suggests that any reasonably well-informed individual would have been exposed to the navy's message.[80]

The last major category of the navalists' message centered on what they characterized as a Darwinian struggle for world dominance. According to this argument, the United States, Great Britain, France, and Germany confronted one another in a battle that could determine the fate of nations. Officers stressed the country's duty to take its place as a major power and accept the attendant responsibilities. One part of this

[78] Bradford, "Coaling Stations for the Navy," 732-747.

[79] Dinger, "Naval Needs and Requirements," 89-95; A. P. Niblack, "Colliers and Coaling Stations," *Proceedings* 30, no. 3 (Sept. 1904): 567-576. Both of these officers recognized the difficulty of defending distant bases, suggested ways to reduce dependence on them, but concluded that some were necessary.

[80] "The Problem of Coaling," *The Salt Lake Daily Tribune*, Feb. 14, 1880, 1; "The Chiriqui Land-Grant Demanding Money for Worthless Coaling Station, *The New York Times*, Mar. 12, 1882, 1; "No Title," *The New York Times*, Jan. 2, 1884, 6; "No Title," *The Oshkosh Daily Northwestern*, Apr. 19, 1884, 2; "No Title," *The Independent*, Jul. 15, 1887; "How Our Navy Stands," *The Hornsville Weekly Tribune*, Feb. 1, 1889, 7; "To Provide Against War," *The New York World*, Feb. 23, 1889, 2; "Samoan Harbors," *The Oakland Evening Tribune*, Apr. 1, 1889, 4; "Coaling Stations," *The San Antonio Daily Light*, May 28, 1889, 2; "Coaling Stations," *The Galveston Daily News*, Jun. 11, 1891, 7; "Coaling Depots and a Navy," *The New York Times*, Jul. 23, 1891, 8; "Our Navy Handicapped," The New York World, Oct. 30, 1891, 5; "Foreign Coaling Stations," *The Tyrone Daily Herald*, Aug. 11, 1892, 2; "Needs of the Navy," *The Galveston Daily News*, Apr. 29, 1895, 2; "Coal Contraband of War," *The New York Times*, Apr. 17, 1898, 3; "Lessons of the War: Need of Coaling Stations," *The Logansport Journal*, May 26, 1898, 3; "Coaling Stations," *The Logansport Pharos*, Oct. 5, 1898, 7; "The Need of Coaling stations," *The Weekly Wisconsin*, Nov. 18, 1899, 4; "Coal for the Navy," *The Courier*, Aug. 3, 1900, 2; "The Navy and Coal," *The Davenport Republican*, Nov. 21, 1901, 4; "Coal for Our Ships," *The Daily Progress*, Mar. 2, 1904, 3. The decision to build battleships, the Chilean war scare of 1891, and the War of 1898 all dramatically affected the number of stories about the navy, coal, and coaling stations. Between 1880 and 1888 only thirteen stories addressed coaling issues. That number jumped to fifty-one between 1889 and 1895 before dropping to just two stories during 1896 and 1897. Thirteen stories appeared in 1898 and four more in 1899. Only one or two stories appeared per year thereafter.

argument addressed the economic competition between the major powers.[81] These efforts focused on the alleged need for foreign outlets for American excess production. Captain R. P. Hobson, for example, championed America's "uncontested right" to a fair share of the China market.[82] Few would have disagreed with him. While the United States sought its "fair share" of the China market, most navalists argued that the country had a paramount interest in South America that merged commercial concerns with a national duty to uphold the Monroe Doctrine. In 1881 John Kasson reframed the Monroe Doctrine in terms of national security and national interest. Calling it a question of "commercial rivalry and commercial advantage," he insisted that the "danger which European dominions in America offer to our material interests" constituted the doctrine's underlying principle.[83] Others argued that the nation had a duty to expand the doctrine's coverage to include areas such as Hawaii and even China.[84] These calls could become quite messianic in tone. Captain Alfred Mahan asked rhetorically if the United States had "no right or call to progress further in any direction?" American expansion, he suggested, would "greatly increase the world's sum of happiness."[85] Speaking to the Boston Commercial Club in 1898 George Belknap urged the annexation of Hawaii with a

---

[81] See John R. Proctor, "America's Battle for Commercial Supremacy," *Forum* (Nov. 1893): 315-324; Irving M. Scott, "Naval Needs of the Pacific," *Overland Monthly and Out West Magazine*," 24, no. 142 (Oct. 1894): 367-371.

[82] Hobson, "America Mistress of the Seas," 547-548.

[83] John A. Kasson, "The Monroe Doctrine in 1881," *The North American Review* 133, no. 301 (Dec. 1881): 525-528; H. C. Bunts, "The Scope of the Monroe Doctrine," *Forum* (April 1889): 192-200; Albert Bushnell Hart, "The Monroe Doctrine: Its Territorial Extent and Application," *Proceedings* 32, no. 3 (Sept. 1906): 754-759. Hart argued that the doctrine applied only to the western hemisphere.

[84] John R. Proctor, "Hawaii and the Changing Front of America," *Forum* (Sept. 1897): 34-45; John T. Morgan, "The Duty of Annexing Hawaii," *Forum* (March 1898): 11-16. Hobson, "Mistress," *North American Review*, 550-552.

[85] Mahan, "Hawaii and Our Future Sea-Power," 2-9.

missionary's call to action. In an argument laced with overtones of social Darwinism Belknap urged "Let us then, cast off our swaddling clothes of isolation and provincialism and take our rightful stand among the states of the earth, even to the acquisition of territories, necessary to our continued progress and well-being."[86]

Starting during the 1870s American naval officers embarked on an extended campaign to build public support for a revitalized American navy. They hoped that public opinion could do what appeals through official channels could not – move Congress. In their quest they evinced a deep faith that the American people, once they had been educated, would be with them. Officers called on the public to write their Congressmen and vote out those who refused to support the navy.[87] The education process involved the written word, through periodicals, newspapers, and pamphlets, the spoken word, through speeches and lectures, and experiences such as naval reviews, the Columbian Exposition, and naval monuments. Never an organized group, those in favor of naval rehabilitation bombarded the American people with a staggering cacophony of messages. They appealed to the nation's basest instincts and its highest aspirations. Fear, greed, and self-interest shared space with courage, honor, and duty. Appeals to tradition merged with visions of the future. Accounts designed to call forth raw emotions stood next to coldly rational and analytical expositions of the navy's and the nation's needs. One common thread nevertheless united all of the messages; the navy lacked the resources in men, materiel, and bases to meet its commitments.

[86] George E. Belknap, Speech, Boston Commercial Club, Feb. 19, 1898, George E. Belknap Papers, Library of Congress, Manuscript Division, Box 2. Belknap was by then a retired rear-admiral.

[87] Mentz, "Our Naval Force," 597.

Chapter Six

"The Navy was powerless to engraft its carefully considered ideas upon the holders of the public purse": The Limits of Influence

The United States Navy, which had been the source of so much embarrassment and anguish during the 1870s and early 1880s, ranked among the world's best by 1914. Great Britain's Royal Navy still occupied the top spot, but depending on the criteria used the United States ranked either just ahead of or just behind Germany. Japan slotted in as number four.[1] All four of these navies had been built on the sea control strategy so eloquently popularized by Alfred Thayer Mahan. American officers, who had complained so bitterly of the shame and humiliation they experienced during the 1870s, now spoke of their powerful new navy with pride. The public seemed to share that pride; the new navy, with its ships painted a glistening white, drew enthusiastic crowds wherever it appeared. Additionally, the navy had acquired a number of overseas bases as a result of the war with Spain in 1898. Puerto Rico, Guam, Wake, and the Philippines came as spoils of war. Limited by the Teller Amendment, the navy negotiated a perpetual lease on Guantanamo Bay, Cuba, that granted the United States de facto sovereignty.[2] In a burst of expansionist fervor the United States also completed the long-proposed annexation of Hawaii. Despite the visible, measurable success of their efforts to mold public opinion and win support for

[1] France had more ships than Japan but, under the influence of the *jeune ecole,* had focused on an asymmetric strategy that emphasized torpedo boats and commerce raiders. Ropp, *Development of a Modern Navy*, 17-19.

[2] The Teller Amendment, part of a joint resolution passed by Congress on April 20, 1898, guaranteed Cuban independence and renounced any U.S. interest in Cuban territory. Pérez, *The War of 1898,* 21.

their expansionist agenda, officers nonetheless found that their influence had distinct limits.

The proponents of naval rehabilitation could point to some notable successes. The American navies of 1883 and 1914 bore no similarities. The navy had passed through a wrenching technological revolution and emerged as a thoroughly modern force built around a new strategic paradigm. The navy's size and the types of ships it built embodied the two most obvious changes. The navy had grown dramatically larger by 1914 and its newest ships were as good as or better than any in the world.[3]

The navy reached its nadir in 1883 and 1884. The Navy Lists for those years reveal fewer than two dozen warships in squadron service. Armed primarily with smooth bore, muzzle-loading cannons, all were aging wooden sailing vessels with auxiliary steam power.[4] But congressional action gave navy officers hope. The Naval Appropriations Bill of 1883 marked the birth of a new American navy. The bill authorized the navy's first modern ships, the cruisers *Atlanta*, *Boston*, and *Chicago* along with the dispatch boat *Dolphin* (usually referred to as the ABCD ships).[5] These four ships marked a first tentative and transitional step. Although they had steel hulls, steam power,

---

[3] René Greger, *Battleships of the World*. trans. Geoffrey Brooks (Annapolis, MD: Naval Institute Press, 1993). 15, 21-22. Greger notes that after years of experimentation a "standard" battleship emerged during the 1890s and early 1900s. These all generally possessed the same size, speed, armor and armament. A similar standardization reoccurred after Great Britain introduced the all-big-gun ship. In 1914 U.S. battleships closely resembled their European counterparts in terms of size, speed, armor, and armament but had superior endurance.

[4] William E. Chandler, *Annual Report of Secretary of the Navy*, November 29, 1883, , 48th Cong., 1st Session, H. exdoc. 1/9, 21-23; Chandler, *Annual Report*, December 1, 1884, 48th Cong., 2nd Session, H. exdoc. 1/10, 17-18.

[5] Archibald Odin, Jr., compiler, *Navy Yearbook: Embracing All Acts Authorizing the Construction of Ships of the "New Navy" and a Resume of Naval Appropriation Laws from 1883 to 1919*, 65th Congress, 3rd Session, S.doc. 418, 15. The Naval Appropriations Act of August 5, 1882 set the process in motion. By limiting the amount of money that could be spent repairing old vessels the act ensured that new ships would have to be built. The act also authorized two new cruisers but failed to appropriate funds for them.

and modern breech loading weapons, they also carried full complements of sails and became obsolescent as soon as built. The USS *Atlanta*, the first of the new cruisers, joined the fleet in July 1886. Once begun, the process of new ship construction proved durable. With the exceptions of 1884 and 1901 Congress authorized at least one new ship every year between 1883 and 1914. Three of the first four ships had been cruisers, designed for the American navy's understanding of its traditional missions in both peace and war. Through 1904 cruisers represented the most frequently authorized ship type. The navy commissioned forty-two cruisers between 1886 and 1914; twenty-three remained in commission during 1914. Battleships, however, formed one of the key components of the new developing strategic mission the navy and quickly became the central focus. Congress authorized the navy's first true battleships in 1890. The first of these, the USS *Indiana*, entered service in November of 1895. By 1914 the navy had commissioned thirty-five first-class battleships and had four more under construction. Between 1883 and 1914 Congress authorized a total of 312 ships of all classes for the new navy.[6] Within another two years the nation would commit to building a navy second to none. The United States Navy on the eve of World War I bore no resemblance to the navy of the early 1880s. Gone were the graceful wooden sailing ships of the old navy. No one would call the navy's newest battleships, the *New York* and the *Texas*, graceful. Angular and bristling with massive guns, these 27,000 ton behemoths exuded raw power. In 1907 President Theodore Roosevelt decided to showcase the American navy's

[6] See appendices 1, 2, and 3. Prior to World War I a number of the battleships and cruisers were "in commission, in reserve," therefore the active fleet was smaller than these numbers indicate. Of the 312 ships, all but 38 were combatants.

growing power by sending sixteen of its battleships on a two-year cruise around the world. The cruise proved to be an international public relations tour de force.[7]

Bases constituted the second element of the emerging sea control paradigm. Steamships obviously had limited range. The repair of steam and steel ships also required specialized equipment and skills beyond those found aboard a warship. A modern navy therefore absolutely required bases where it could repair, refit, and resupply. To project power beyond its own shores, some of those bases had to be in distant seas. Naval officers had called on the nation to establish overseas coaling stations virtually since the introduction of steam power before the Civil War. Those calls became increasingly insistent as the navy completed the transition to steam power. Two areas, the Caribbean and the Pacific, drew particular attention. A number of European nations had base facilities in the Caribbean and the U.S. Navy believed it had to maintain a presence as well both to defend the American coast and to uphold the Monroe Doctrine. As interest in a trans-isthmian canal increased, the navy insisted that it needed Caribbean bases to defend the eastern approaches to the canal as well. Naval concerns in the Pacific centered primarily on protecting American interests in the Far East – essentially access to the China market. In addition to bases either in or near China, the navy needed intermediate bases to use as "stepping stones." To be useful in time of war the bases needed to be fortified and located on sovereign United States territory. Until the war with Spain, the navy had been singularly unsuccessful in its quest. During the years following the war the navy established facilities at Guantanamo, Cuba; San Juan, Puerto Rico; and at Culebra, a small island near Puerto Rico in the Caribbean. Pacific bases included Honolulu and

[7] Reckner, *Great White Fleet*, chapters 4 through 14.

Pearl Harbor in Hawaii, Tutuila in Samoa, Guam, and Cavite and Olongapo in the Philippines. Although not extensive, the navy had at least developed a skeletal network of bases in its areas of primary concern.

Increasing that network and turning the scattered possessions into functioning naval establishments proved difficult. Expansion ultimately proved impossible. Despite officers' earnest pleas, the nation simply had no appetite for further acquisitions. Calls for bases in China, on Mexico's west coast, and elsewhere fell on deaf ears.[8] In 1910 Secretary Meyer listed eleven overseas installations; these included a "first-class" navy yard at Hawaii, two "second-class" navy yards in the Philippines at Cavite and Olongapo, "naval stations" at Guantanamo, San Juan, Guam, and Tutuila, a coaling station at Pichilinque Mexico, and "miscellaneous" facilities at Sitka, Yokohama, and Culebra.[9] Of these, only Cavite had significant amounts of coal on hand. Meyer addressed the issue again the following year stressing that the navy lacked coal and fuel depots at strategic points. Without ample stores at distant bases, he warned the "activity and effectiveness of the fleet will be seriously, if not fatally, affected in time of war."[10] Base improvements had to compete with warship construction for funding and usually emerged in second place. The bases received sporadic funding that paled in comparison to that lavished on ships. During 1908, one of the highest years for base appropriations, Congress appropriated $3 million to establish the Pearl Harbor facility. Six other facilities

[8] Officers wanted a base to protect the western end of the Panama Canal. For a typical presentation see Edward Ellsberg, "Naval Strength in Naval Bases," *Proceedings* 39, no. 3 (Sept., 1913): 975-980.

[9] George V. L. Meyer, *Annual Report of the Secretary of the Navy*, November 30, 1910, 61st Congress, 3rd Session, H. doc. 1005, 31.

[10] George V. L. Meyers, *Annual Report of the Secretary of the Navy*, December 1, 1911, 62nd Congress, 2nd Session, H. doc. 119, 31.

combined -- those at Olongapo, Guam, Cavite, Culebra, Tutuila, and the naval station at Honolulu -- received $223,800. In the same bill Congress authorized two battleships, ten destroyers, five colliers, and eight submarines for a total of $28,675,000.[11] Opinion within the navy gradually coalesced around maintaining a few key bases. Chief among these were Guantanamo, Pearl Harbor, and one of the Philippine bases. Opinion differed, both within the navy and between the army and the navy, as to the best site in the Philippines. The General Board preferred Olongapo. The army insisted it could not defend Olongapo and preferred Cavite. Some naval officers felt neither location was suitable as the fleet could be bottled up in either. Both survived as naval facilities until well after World War II. Everyone agreed that Pearl Harbor should be the primary Pacific base.[12]

Paralleling the dramatic increase in its size, the navy enjoyed widespread popularity. In November 1911, for example, the Atlantic Fleet conducted a mobilization drill and review in New York harbor. In addition to the president of the United States, an estimated two million people watched from the shoreline. More than one hundred thousand people visited some of the ninety-five naval vessels taking part. A similar, but smaller, review took place in San Diego with the Pacific Fleet.[13] American newspapers eagerly followed the growth of the new navy. Frequent stories kept the public apprised of

[11] Odin, *Navy Yearbook*, 272-282.

[12] Braisted, "Philippine Naval Base Problem," 24-27; Turk, "Defending he Empire," 195-197; Grenville, "War Plans," 13.

[13] George V. L. Meyers, *Annual Report of the Secretary of the Navy*, December 1, 1911, 62nd Congress, 2nd Session, H. doc. 119, 29-30.

the latest advances in size, speed, armor, and armament.[14] Filling their articles with superlatives, writers described each new ship in glowing terms. Launchings became immense public events with widespread coverage. A reported crowd of 40,000 watched the cruiser *New York* slide down the ways in 1891.[15] Such numbers were not at all unusual; a "great throng" watched the *Florida* launch in 1910 while the president and a "vast throng" estimated at 50,000 attended the launch of the battleship *New York* in 1912.[16]

Evaluating the depth and meaning of this evident public interest requires some care. Citizens certainly enjoyed the parades, reviews, demonstrations, and launchings. But did they attend because they felt a deep sense of patriotism or did they see these events merely as a form of cheap entertainment? An article in the *New York Times* describes the launch of a commercial passenger liner in much the same tone as that used when describing warship launchings and a comparable crowd, estimated at 25,000, attended.[17] The evidence suggests that launching a major vessel, military or civilian, had substantial entertainment value. No doubt most Americans felt a sense of pride about their navy and the navy did enjoy widespread public support. Nevertheless, that support

---

[14] Stanley Prather, "Uncle Sam in the Dreadnought Race," *The Portsmouth Daily Times*, November 13, 1909, 17. This same story, complete with illustrations, appeared in a number of papers within a span of a few days. See *The Lowell Sun*, November 15, 1909, 17 and *The Mansfield News*, November 27, 1909, 5.

[15] "The New Warship Afloat," *The New York Times*, December 3, 1891, 9.

[16] "Initial Plunge Taken," *The Evening Observer*, May 12, 1910, 1. The paper placed the crowd at "fully 30,000." *The New York Times*, May 13, 1910, 1; "50,000 at Launching of Biggest Warship," *The New York Times*, October 30, 1912, 5. 15,000 people braved terrible weather to watch the battleship *Texas* launching. "The Texas in the Water," *The New York Times*, June 29, 1912, 1. Battleships drew the biggest stories and the largest crowds but smaller ships, down to destroyers, also received coverage. The Naval Appropriations act of May 4, 1898 reserved state names for battleships. Cruisers named for states received new names. The cruiser *New York* became the *Saratoga* in 1911.

[17] "Launch of the St. Louis," *The New York Times*, November 13, 1894, 5.

lacked depth. For most people these events remained just events, not causes. They attended, they had a good time, they were entertained, but the next day they went back to work and forgot about the navy.

The Navy League of the United States, which had been founded during late 1902 to marshal public support, remained a non-factor and illustrates the limits of public interest in the navy. The league counted just over 6,000 members in 1909 and had a budget of less than $8,000. The German Naval League that same year boasted over one million members.[18] Absent a crisis or obvious threat, popular support simply could not be effectively mobilized on the navy's behalf.

Officers certainly believed that they had been the central figures in rehabilitating the navy. Reacting to press accounts that identified former Secretary of the Navy William C. Whitney as the "father of the new navy," Rear Admiral Bradley Fiske insisted *"Nobody was the father of the new navy. The new navy was the child of a public opinion created by naval officers."*[19] Fiske, as did many naval officers, bristled when Whitney received credit. Whitney had launched a fierce, partisan attack on the ABCD ships. As secretary, he leveled charges of collusion and corruption between his predecessor and the ships' builder and refused to accept the *Dolphin* or pay for continuing work on the three cruisers, forcing the shipyard into bankruptcy.[20] His attack substantially delayed the completion of the four ships and resulted in Congress' failure to authorize any new ships in 1884. The navy was a helpless spectator in the battle. Officers, who mostly supported

[18] Rappaport, *The Navy League*, 23.

[19] Fiske, *From Midshipman to Rear Admiral*, 87-88. Italics in original.

[20] Sexton, "Forging the Sword," 136.

the builder, were "disheartened" by the secretary's actions. While rejecting the title "father of the new navy" as applied to Whitney, Fiske admitted that Secretaries William H. Hunt (1881-1882) and William E. Chandler (1882-1885) had done good work, but insisted they were only "instrumentalities for influencing Congress and the president to do what naval officers . . . urged them to do."[21]

The reality presents a considerably more complex picture. The shift from commerce raiding to a counter-force strategy had unquestionably been the navalists' greatest success. This had been presented to Congress and the public as an evolution of the navy's traditional coast/harbor defense mission. As a result of this change to a sea control strategy the navy adopted battleships as the critical weapon system. Mahan insisted, as did virtually all naval officers, that future naval wars would be decided by one climactic, decisive battle and the navy needed to be prepared at all times. Officers argued that the size and capabilities of the fleets of potential enemies, not American "interests," should dictate the size and composition of the American fleet. Nonetheless, as Fiske acknowledged, naval officers could only recommend a course of action. Congress, through its control of the purse strings, ultimately shaped the navy and that parsimonious body rarely funded all the ships the navy recommended. As Lieutenant Commander Richard Wainwright reminded his compatriots, officers had more influence over the types of vessels in the fleet than the number of vessels.[22]

Disagreement within the officer corps also contributed to the problem. By 1900 the basic tenets of the sea control strategy enjoyed broad acceptance. Battleships,

---

[21] Fiske, *Midshipman to Rear Admiral*, 87.

[22] Richard Wainwright, "Discussion – The Composition of the Fleet," *Proceedings* 22, no. 3 (1896): 549.

concentrated in a fleet, represented the only true measure of naval power. The fleet would project power at a distance from America's shores. To do so it required a number of fortified bases overseas where it could refit and resupply. A vibrant merchant marine, which would provide men and auxiliary vessels in time of war, comprised the third leg of the sea power trilogy. Despite agreement on the major points, officers differed on significant details. The burgeoning size and cost of individual battleships caused one such rift. The navy's first nine battleships all had design displacements below 12,000 tons. The *Missouri* class (1898) grew slightly to 12,846 tons while the *New Jersey's* (1900) jumped to 14,948 and the *Connecticut* class (1902) swelled further to 16,000 tons. One navy faction, led by Admiral George Dewey and then-Captain Mahan, preferred more, smaller ships rather than fewer, larger ones and argued forcefully for a return to 12,000 ton battleships.[23] Another faction composed primarily of younger officers called for 18,000 ton ships as the increased size brought measurable gains in combat power.[24] The issue went to Congress, which compromised by authorizing two 13,000 ton battleships. Reacting to that decision and lamenting officers' lack of influence Lieutenant Commander J. H. Gibbons observed "the Navy was powerless to engraft its carefully

[23] Friedman, *U.S. Battleships*, 44-49, 426-440. Friedman asserts that the controversy revealed the lack of appreciation non-technical, sea-going officers had for the considerable size and cost increases associated with relatively small demands for increased speed and range. The two ships that resulted, the USS *Mississippi* and the USS *Idaho*, proved unsuccessful and served just three years before being placed in reserve and later sold to Greece. Battleships continued to grow. The *New York* class of 1910 displaced 27,000 tons and the last battleships authorized before World War I began, the *Pennsylvania* and the *Arizona*, weighed in at 31,400 tons.

[24] Homer C. Poundstone, Size of Battleships for the U.S. Navy," *Proceedings* 29, no. 1 (March 1903): 165.

considered ideas upon the holders of the public purse."[25] Countless officers echoed his lament.

Congress rarely authorized the number of ships the navy's strategic plan called for or the amount of money the navy requested. Congressional funding limits led to the creation of an unbalanced fleet during the early 1900s. The opinion, expressed by one young lieutenant in 1896, accurately reflected the position of most officers. "Whenever Congress," Lieutenant John Ellicott demanded, "by falling short of the [building] program, compels us to choose one type and abandon another, let us insist, with the utmost intensity, upon battleships."[26] And they did! Officers understood clearly that an effective navy needed more than just battleships. The number of necessary auxiliary vessels could be expressed as a ratio of auxiliaries to battleships. Secretary of the Navy George Meyer, in his annual report for 1911, noted that the navy was "very deficient" in the vessels needed for the protection and maintenance of the fleet. He reported the need for four destroyers and one scout cruiser per battleship. The fleet also needed one repair ship, one supply ship, and one ammunition ship for every eight battleships. Every four fighting ships required the support of a collier. Of the twenty-four fuel ships needed, he noted, only twelve were built, building, or authorized.[27] During the twenty years between 1895 and 1914 battleships represented the only consistently authorized type. Congress approved at least one battleship in each of those years except 1897 and 1901.[28] Only three

---

[25] J. H. Gibbons, "Discussion – Size of Battleships," *Proceedings* 29, no. 2 (June 1903): 435-441.

[26] Ellicott, "The Composition of the Fleet," 548.

[27] George V. L. Meyer, "Annual Report of the Secretary of the Navy," December 1, 1911, 62nd Congress, 2nd Session, H. doc. 119, 38-40; Alden, *The American Steel Navy*, 224.

[28] Odin, *Navy Yearbook*, 738-746. Congress authorized no ships at all in 1901. These data are summarized in Appendix 1.

other combatant types received any focused attention. During the late 1890s the automobile torpedo showed promise as a battleship-killer and navies began developing small torpedo boats. Very limited in range, and with extremely poor crew habitability, the U.S. Navy viewed these craft solely as a coastal defense weapon. The navy built thirty-three between 1894 and 1898 and none thereafter. The new sea control strategy invalidated that mission for the United States.[29] A new type of ship, the torpedo boat destroyer, evolved to counter the torpedo boat menace. Eventually the two missions merged into one ship, the destroyer. Congress approved sixteen torpedo boat destroyers in 1898 and beginning with 1906 authorizations averaged six per year through 1914 (the authorizations adopted the shortened type designator "destroyer" in 1912). The submarine represents the third ship type to receive attention. The navy authorized its first submarine in 1893 and then every few years another group of four to eight boats received approval. Consistent funding began in 1910, with twenty-seven authorized in five years. Notable by their absence are cruisers, which had been the navy's traditional ship type for nearly a century. Congress authorized no cruisers between 1904 and 1916. Support vessels fared even more poorly. Other than tugs and training ships, the navy did not receive authorization for its first new support vessel until 1904. Through 1914 only nineteen support vessels had been authorized and fourteen of these were either colliers or fuel ships.[30]

---

[29] The French navy, which saw them as a way to offset the Royal Navy's superiority in battleships, invested heavily in torpedo boats and had 259 in service in 1909. George V. L. Meyer, *Annual Report of the Secretary of the Navy*, December 4, 1909, 61st Congress, 2nd Session, H. doc. 106, 21.

[30] Odin, *Navy Yearbook*, 738-746

The constraints within which the navy operated virtually guaranteed an unbalanced fleet. Within the sea control strategy battleships stood as the final arbiters of victory. As Secretary Benjamin Tracy told Congress in 1891 "It is only by the possession of ships of this type that the defensive strength of the United States can really be measured."[31] The United States had entered the contest late and needed to catch up; given the budgetary realities, other construction would have to wait. Armored cruiser construction provided one example. The navy recognized the need for large, fast cruisers of great endurance after the war with Spain. Between 1899 and 1904 the navy asked for and received ten large armored cruisers. Almost as large and expensive as battleships, each armored cruiser essentially eliminated a battleship from the building program. After 1904 the navy dropped its plans for armored cruisers and even larger battle cruisers, fearing their budgetary impact on more urgently required battleships.[32]

Navy Secretary John D. Long established the General Board in 1900 to "consider questions related to the efficient preparation of the fleet."[33] Although without statutory authority and intended solely as an advisory body, the board developed into a policy and planning staff. Its reports established the navy's "official" position. The board developed recommendations about the size and composition of the fleet. Battleships remained the key denominator and the board early on determined that the United States needed forty-

[31] Benjamin F. Tracy, *Annual Report of the Secretary of Navy*, December 3, 1891, 52nd Congress, 1st Session, H. exdoc. 1/13, 33.

[32] Potter and Nimitz, *Sea Power*, 383; Freidman, *U.S. Cruisers*, 45.

[33] John D. Long, *Annual Report of Secretary of the Navy*, November 17, 1900, 56th Cong., 2nd Session, H.doc. 3, 19.

eight to properly defend both coasts.[34] It recommended a building program to reach that number by 1920. All other vessels could be expressed as a ratio to battleships. Based on its continuing studies, the board's 1913 recommendation stated that for every eight battleships there should be thirty-two destroyers, sixteen submarines, two destroyer tenders, two submarine tenders, one each of hospital, repair, supply, and transport ships, and four fuel ships.[35] Thus, when fully built, the fleet would require twenty-four fuel ships. What the secretaries did with the board's recommendations varied widely. The board's recommendation for 1912 called for thirty-eight new ships, including four battleships; Secretary Meyer seconded the board's recommendation to Congress without modification.[36] The following year, Secretary Josephus Daniels, bowing to fiscal reality, pared the board's request from thirty-seven to thirteen ships.[37] Congress then debated the issue and made its own decision. Congress authorized only thirteen of the thirty-eight ships asked for in 1912, and approved sixteen ships the following year even though Daniels had only asked for thirteen.[38]

Support vessels received scant consideration primarily because of the priority placed on battleship construction and the long lead times involved in their construction. Battleships took three to five years to build and the navy would admit of no substitutes. Substitutes, however, could be found for some cruisers roles. In 1891 congress had been

---

[34] O'Connell, *Sacred Vessels*, 131. The exact genesis of 48 battleship standard is unclear. O'Connel suggests that it may have been a political maneuver to enhance funding as each of the soon-to-be forty-eight states would want its "own" battleship.

[35] Josephus Daniels, *Annual Report of the Secretary of the Navy*, December 1, 1913, 63rd Congress, 2nd Session, H.doc. 681, 33.

[36] George V. L. Meyer, , November 20, 1912, 62nd Congress, 3rd Session, H.doc. 26, 932.

[37] Daniels, *Annual Report* – 1913," 10-11.

[38] Odin, *Navy Yearbook*, 745.

persuaded to use mail contracts to facilitate the construction of fast merchant steamers that could be converted into merchant cruisers. More than twenty were in service by1898; the navy bought six of these and leased four more during the war with Spain. Once armed, they served as commerce raiders and transports. Other auxiliaries were even easier to improvise. The navy also bought seventeen colliers, three refrigerator ships, and a number of other vessels which it used as supply ships, repair ships, and hospital ships.[39] The navy preferred to spend scarce tax dollars on warships, believing that in time of need the necessary auxiliaries could again be purchased on the civilian market.

The War of 1898 and the cruise of the Great White Fleet nevertheless demonstrated that fuel supply remained a critical issue. Civilian colliers tended to be of small capacity, relatively slow, and some still relied on sail power. During the war, coaling at sea had been impossible in all but the calmest weather. Ships typically had to meet the collier in the protected waters of a harbor to refuel. The damaging Sampson-Schley controversy had its roots in the logistical problem of refueling. At the moment the Spanish squadron broke out of Santiago, Commodore Sampson, the senior commander, rode at anchor forty miles away at Guantanamo refueling. Commodore Schley, as senior officer present, executed Sampson's battle plan. They later fought over credit for the victory, splitting the officer corps in the process and damaging the navy's public image. Absent a base from which to operate, neutrality restrictions forced Commodore Dewey of the Asiatic squadron to purchase a British collier before the war began. The navy's logistics infrastructure likewise proved inadequate during the voyage of the battleship fleet around the world. The fleet required the support of forty-nine colliers, mostly

[39] Alden, *New Steel Navy*, 123-124.

British-owned, to circumnavigate the globe.[40] With Britain and Japan being allied at the time, those colliers would not have been available had war, as many feared it would, broken out between the United States and Japan. Reacting to the demonstrated need, Congress authorized five colliers in 1908 and five more during the next three years.[41]

In an effort to stabilize the building process and make the planning process more predictable and coherent, naval officers had long pushed Congress to establish a permanent construction fund for the navy. Such a fund would receive appropriations automatically each year without the need for congressional action. This request first appeared in Secretary George Robeson's annual reports for 1873 and 1874.[42] Officers also argued that the proceeds from the sale of old vessels should go to a construction fund rather than back to the treasury. Congressmen absolutely refused to consider either proposal. They correctly noted that such a plan would remove a large portion of defense spending from congressional control. The Constitution mandated that appropriations bills originate in the House of Representatives and Congress zealously guarded that mandate. Congress further controlled spending by the manner in which it allocated appropriations. Congress authorized by line item. It directed which ships could be built, their maximum cost, whether they would be constructed in navy yards or civilian yards, and on which coast they would be built. During the 1900s Congress even began dictating that civilian bidders had to adopt an eight hour work day for their employees. Also, as in the case of the battleships of the 1903 program, Congress even specified specific ship characteristics

---

[40] Miller, *War Plan Orange*, 90.

[41] Odin, *Navy Yearbook*, 743-745.

[42] George M. Robeson, *Annual Report of the Secretary of the Navy*, November 29, 1873, 43rd Congress, 1st Session, H. exdoc. 1/9, 4; Ibid,. December 1, 1874, 43rd Congress, 2nd Session, H. exdoc. 1/8, 6.

such as displacement. Through the appropriations process Congress could also control the rate at which authorized vessels were built; the annual naval appropriations bills authorized specific ships. The bill would then appropriate money for the forthcoming fiscal year to fund ongoing work on all authorized vessels. Unexpended appropriations expired at the end of the fiscal year. The funds appropriated were distributed among three accounts, Construction & Machinery, Armor & Armament, and Equipment. Therefore, to build a battleship with a maximum authorized cost of $6 million (such as those authorized from 1906 to 1911) within three years required annual appropriations of $2 million per ship.[43] On a three year build schedule, battleships alone required $12 million in 1911. By failing to fund fully all ongoing construction Congress could slow the build rate.[44] Should that happen, the Navy Department could allocate funds to battleship construction at the expense of other ship types. Congress could restrict such shifting by appropriating funds for specific ships such as it did in 1910 by specifying that $800,000 of the appropriations had to be spent on submarine construction.[45] Throughout the period Congress jealously guarded its prerogatives and kept the navy smaller than it might have been.

Nevertheless, naval appropriations did swell significantly between 1883 and 1914. During the seventeen years from 1883 to 1899 (excluding 1898) appropriations averaged $26.4 million per year. For the fifteen years from 1900 to 1915 appropriations quadrupled to $113.4 million per year. Between 1883 and 1914 Congress appropriated

[43] Odin, *Navy Yearbook*, 247-330.

[44] Due to the extremely long lead times in the production of armor plate and large caliber guns the construction time could not, in the near term, be materially shortened.

[45] Odin, *Navy Yearbook*, 317. The bill that year authorized four submarines at a total cost of $2,000,000.

more than two and one quarter billion dollars for the navy.[46] In building the new navy, officers proved reasonably successful at building a naval lobby within Congress. With the help of that lobby officers could influence, but not dictate, both the type and numbers ships built.

An analysis of the navy of 1914 nonetheless reveals important limits on what officers could and could not convince the nation to do. While officers and navalists could encourage public enthusiasms, ultimately they could neither create nor control public opinion. Similarly, they could advise, cajole, and warn Congress but politicians remained firmly in control and pursued their own naval agendas. Officers' inability to win Congress fully to their position can be attributed, in part, to on-going debates within the officer corps that weakened its message. According to Lieutenant Commander Yates Stirling Congress failed to follow a consistent program "because the councils of their naval advisers have not always been in harmony. In other words, the service itself has not crystallized its opinions of the navy's needs."[47] Additionally, despite massive increases in naval appropriations, funding limitations led to the creation of an unbalanced fleet. The navy, furthermore, never got as many overseas bases as it wanted. The flurry of acquisitions in 1898 proved to be an aberration. The nation acquired no more foreign territory. Moreover, those bases established languished due to a lack of funds.

[46] Odin, *Navy Yearbook*, 679. 1898 included over $100,000,000 in war appropriations.

[47] Yates Stirling, "The Nation's Defense – The Offensive Fleet," *Proceedings* 34, no. 2 (June 1908): 394.

Chapter Seven

"Sea power is not made up of ships, or of ships and men, but of ships and men and bases far and wide.": Conclusion and Afterword

The military professions offer their practitioners an unusual life. War is their business but peace is their normal condition. This was especially true for the United States Navy between the Civil War and World War I. With the exception of a few months during the spring and summer of 1898 the United States remained at peace from April 1865 to April 1917. The nation encountered war for only four months in fifty-two years. Actual combat occurred only twice during those four months, with each lasting only a matter of hours. Naval officers, therefore, spent virtually their entire careers doing something other than their paramount duty. Although they stood ready to fight, they nonetheless understood that peacetime duties would be the norm. That reality drove extended debates about the navy's size, composition, and, most importantly, its purpose. Those debates occurred within the context of a dramatic technological revolution that challenged long-held understandings of naval power and strategy. Out of the turmoil emerged a new American navy of vastly increased size and power designed around a new understanding of the navy's missions in both peace and war. Naval officers developed a sea control strategy predicated on meeting and defeating an enemy far from America's coasts. Given the limits of existing technologies, this power projection strategy forced the navy's officers to the conclusion that the United States would have to become an imperial power and establish naval bases on foreign territory.

In developing this new understanding of the navy's mission, naval officers and their political masters had to answer a series of fundamental questions. The most basic question addressed the need for a navy at all. A second set of questions involved the navy's missions in both war and peace, while a third set looked at the balance between those missions. Their answers dictated the number and quality of men, the number and types of ships, and logistical infrastructure the navy would need. Naval officers engaged proactively and voiced their efforts to provide answers and shape the debate.

While the Constitution gave Congress the power to provide a navy and levy taxes for its support, it did not mandate that one be created. Indeed, from 1785 to 1797 the nation did without a navy. Only when attempts to negotiate with the Barbary Pirates failed due to the lack of force to back up his demands did President George Washington ask Congress for the funds to build a small seagoing force. From those humble beginnings came the American Navy. Operations against the Barbary Pirates gave the nation its earliest naval heroes and established a tradition of victory. The War of 1812 created new heroes as the navy won a number of stirring single-ship battles against the Royal Navy. Until the Civil War the navy remained a small force scattered around the globe charged with advancing and protecting American interests. During the Civil War the federal navy expanded exponentially. For the first time in its history, the nation entered a conflict as the stronger naval power. It used that power on the high seas, in littoral waters, and on the nation's rivers to help crush the Confederacy. Following the Civil War the nation demobilized rapidly and the navy shrank.

As the navy dwindled it resumed its pre-war pattern of dispersing ships on distant stations. Extremely low appropriations furthermore forced the navy to adopt strict

economy measures. It essentially re-created the prewar sailing navy and discouraged the use of steam power. Congress proved reluctant to fund new ship construction and the few authorized mimicked earlier design concepts. Thus, through the 1870s and into the 1880s the navy grew smaller while its ships grew older and increasingly obsolescent.

A worldwide technological revolution had begun. Steam power began supplanting sail power as the primary motive force. Rifled, shell-firing guns replaced the old smooth-bore, breech-loading cannons. The new shell guns in turn spelled the end of the wooden warship. First iron and then steel became the preferred building materials. Armor also made its debut. The lack of funding forced the American Navy to abstain from the early stages of this revolution. This technological revolution in turn sparked a naval arms race in Europe. France, traditionally weaker at sea than Great Britain, saw advanced technologies as a way to redress the balance. In fact, one modern armored ship had the potential to render the entire British fleet obsolete. Each new technical innovation by either party forced a response, and other nations around the world soon joined the race. All the while, the United States sat on the sidelines and observed.

Throughout the 1870s and into the 1880s the United States Navy suffered both a quantitative and qualitative decline. Budgetary pressures forced a steady reduction in the number of vessels in commission, prevented the construction of new ones, and precluded all but the most tentative efforts to explore new technologies. As a result, the U. S. Navy gradually fell down the ranks of naval powers. A number of diplomatic crises served to highlight the navy's plight. The *Virginius* Affair of 1873 forced the navy's officers to confront the service's inadequacies. Faced with the possibility of war with a modern power, officers realized how far behind they had fallen. The most likely result of a war

with Spain in 1873 would have been the loss of all the American vessels engaged. Lacking a credible naval capability, American attempts to mediate during the War of the Pacific in the early 1880s met with contempt while naval engagements between Chile and Peru demonstrated the power of modern armaments and the value of armor. Other events, such as the 1889 confrontation with Germany over Samoa, periodically created war scares that emphasized American naval weakness. By 1880 the U.S. Navy ranked no better than twelfth, far below those of Peru and Chile.

Congress faced a stark choice. Most of the navy's vessels had reached the end of their working lives, keeping them in service required increasingly expensive repairs and no amount of repairs could bring them up to modern standards. Congress had either to fund new ships or consciously decide once more to do away with the navy. No one in Congress seriously considered doing without a navy. Even absent the threat of war, the navy had important peacetime duties. Therefore, the navy would have to be rebuilt.

What form would that rebuilding take? One primary question dealt with the appropriate balance between sail power and steam power. Sail power conferred great range and strategic mobility while steam power greatly improved tactical maneuverability. The traditional formulation made sail the primary motive power and assigned steam a secondary role; ships would cruise under sail and fight under steam. Sailing performance, therefore, took precedence over steaming efficiency. The ships of the new navy reversed that order and sail became the auxiliary. That crucial shift was not readily apparent in the first of the new ships. The three cruisers authorized in 1883 all carried substantial sailing rig. The *Atlanta* and *Boston* were two-masted brigs while the *Chicago* carried a bark rig on her three masts. Although a careful observer might note

that such rigs appeared somewhat light given the ships' size, the real key to the transition was internal. The *Atlanta* and the *Boston* followed the traditional pattern and had a single engine driving a single screw. The *Chicago*, with two engines and twin propellers, followed current naval practice. No ship with twin propellers could be efficient under sail and their adoption marks steam's ascendency. Every warship authorized after the *Chicago* had at least twin screws. The *Newark*, a cruiser authorized in 1885 and commissioned in 1891, represented the last American warship to carry sails. The transition was essentially complete by 1890 as steam fully supplanted sail.

The conversion to steam power presented the navy with a serious problem of fuel supply. Unlike Great Britain, the United States had no overseas territorial possessions from which its vessels could resupply. The U.S. Navy had world-wide responsibilities but without refueling facilities even the most powerful steam navy became nothing more than a regional force. Throughout the 1870s and 1880s some American officers had used the nation's lack of coaling stations as an argument for the retention of sail power. Sail power, even in an auxiliary role, offered a solution to the fuel problem. Contracts with civilian coal merchants offered another solution the navy vigorously pursued. Through these contracts, the navy could purchase coal at most of the world's major commercial ports. This system generally worked well for a dispersed navy operating in peacetime. Yet in time of war coal became a contraband item. As the navy had suspected, and the war with Spain proved, neutrality laws rendered the peacetime supply system useless. Officers became convinced that the navy needed outlying bases over which the United States exercised sovereignty and could defend in time of war. Furthermore, as the voyage

of the Great White Fleet demonstrated, the coal requirements of a fleet overwhelmed all but the largest facilities. Most officers insisted the navy must operate as a fleet.

By the 1890s a new strategic paradigm emerged. Alfred Thayer Mahan's opus, *The Influence of Sea Power on History*, published in 1890, popularized a strategic consensus that had been developing within the navy's officer corps for more than a decade. The nation's traditional maritime strategy assigned the navy two missions. Offensively, it would attack an enemy's commerce while its defensive mission consisted of protecting the nation's coast and harbors. The new paradigm essentially eliminated one mission and so modified the other that it became unrecognizable.

The commerce raiding mission received so little attention that it virtually disappeared. Mahan had argued that commerce raiding would never be decisive and described it as a useful, but secondary mission. Growing opinion within the officer corps went far beyond Mahan's assessment and compared the attacks on unarmed merchantmen with piracy and argued commerce raiding dishonored the navy. By the latter half of the 1890s the navy's plans and officer's professional discussions rarely mentioned the discredited raiding mission.

The coastal defense mission survived in a much mutated form. In its original form it had been essentially a point defense strategy centered on the nation's major ports and harbors. The navy's armored ships, essentially updated versions of the Civil War era monitors, would be parceled out up and down the coast, a few to each harbor. These, along with fixed defenses such as shore batteries and mines, would fend off any attack. Proponents of the new strategy insisted that such a defense would prove no more effective than it had during the Civil War or the War of 1812. Such a strategy conceded

the initiative to the enemy who could then strike a concentrated blow at the point of his choosing and overwhelm the defenses. They argued that the navy needed an offensive defense. The navy's armored force, concentrated in a battle fleet, would meet an enemy's force far at sea. As a defensive strategy, it necessarily ceded the strategic initiative to the enemy but hoped to retain the tactical initiative by choosing the time and place of battle. The requirement to fight other armored ships at sea demanded a new type of vessel. The United States began building battleships in 1890 to fit this mission. The first three battleships had been rather euphemistically called "sea-going coast defense ships" to overcome congressional resistance to the strategy's offensive nature.

The new strategy recast the navy's peacetime functions as well. Steam power had redrawn strategic geography by shortening distances. Since a hostile fleet could arrive quickly and war could break out suddenly and unexpectedly, the fleet had to be kept in readiness. Lieutenant T.B.M. Mason writing in 1884 declared that a "peace navy" was a "farce." "Like a fire brigade," he insisted, "the naval force . . . must always be prepared for action . . . against an enemy."[1] Mason clearly envisioned what would later be termed a "fleet-in-being." Officers argued that such a fleet, in commission, fully manned, and well trained, would act as a powerful deterrent.

Proponents of a larger navy, nevertheless, did not neglect its role in protecting American interests abroad. One of the navy's primary peacetime missions had always been the promotion and protection of American citizens and trade. A common perception asserted that the country had to find foreign markets for its growing domestic production or risk economic and social disaster. The non-European areas of the world, primarily Asia and South America, seemed to offer the greatest potential. Espousing a Darwinian,

[1] T.B.M. Mason, "Discussion," *Proceedings* (Apr. 1884): 70-1.

economically deterministic worldview officers foresaw conflict with European powers bent on the same task. Increasing commercial competition would, they believed, inevitably lead to war. Such a war would force the navy to fight far from home. To do so would require a network of bases.

The base question proved one of the most difficult issues to resolve. Differences of opinion within the navy complicated the issue. For a variety of reasons a sizeable contingent of the officer corps opposed the acquisition of foreign territory. Some believed that such acquisitions violated the republic's founding principles. Others opposed acquisitions due to racial prejudice. Others objected on purely practical grounds, pointing out that overseas possessions would be difficult to defend and constituted a weak point. By the early 1900s methods had been developed that made coaling at sea while underway practicable, albeit slow. Nevertheless, the realities of the fuel problem forced a consensus that the United States needed a few strategically located bases. The preferred solution consisted of a combination of specially designed colliers to accompany the fleet and civilian colliers to supply a chain of coaling stations. Such bases served as stepping stones to allow the navy to operate effectively in distant seas. As a result of the war with Spain in 1898 the United States acquired a few scattered possessions, giving the navy at least a few of the bases it claimed it needed.

The navy underwent a remarkable rehabilitation beginning in 1883. That revival owed much to the efforts of concerned officers. The nation's attention had turned inward following the Civil War. The navy languished, far from sight and seemingly forgotten. Foreigners, when they noticed the American navy at all, viewed it with scorn. American officers, embarrassed and concerned, worked to improve the navy. Increased funding

served as the key to that effort. Officers hoped to raise public awareness of the navy's plight and thereby pressure Congress to increase appropriations. One oft-used tactic pointed to the defenseless nature of the nation's coast in a hostile world. In describing potential enemies, officers equated capability with intent. If a nation had the capability to attack the United States, officers assumed it would unless deterred by a strong American navy. By the late 1870s that list included virtually every navy in the world. Officers wrote numerous articles for a wide variety of journals, decrying the sad state of the U.S. Navy and warning of potential foes. Typically the foe in these diatribes remained unnamed. A few potential enemies nevertheless stood out. Chile became the earliest named. Stories in the press, journal articles, and memorials to Congress all warned that the Chilean navy could ravage the west coast unmolested. Chile's victory over Peru in the War of the Pacific, its rude treatment of American officers during that war, and tensions arising over the *Baltimore* Affair in 1891 elevated Chile's status as a threat. Great Britain, the world's leading sea power, remained a nation both admired and feared. A number of influential officers were confirmed Anglophobes. After all, the United States and Britain had twice fought and England had provided substantial assistance to confederate commerce raiders during the Civil War. Ongoing disputes over fishing rights, sealing in the Behring Sea, and British disputes with Venezuela kept suspicions boiling. The German government's decision during the late nineteenth century to build a battle fleet and its overtly imperialistic foreign policy raised that nation to the status of potential foe. Finally, Japan's growing naval power, as evidenced by its easy defeat of a Russian fleet at Tsushima in 1905, coupled with tension over Californian immigration rules during 1906 added its name to the list of possible enemies. By the early 1900s officers touted

Germany as the most likely threat in the Atlantic and Japan as the probable enemy in the Pacific. The national security argument proved persuasive; average annual naval appropriations quadrupled between 1883 and 1914. During that same period Congress authorized 312 new ships and the nation built an impressive battle fleet.

To the trained observer that fleet nevertheless revealed the limits of influence. Efforts to popularize the battleship as the only true measure of naval strength had, if anything, been too successful. To be truly effective a fleet needed to be balanced. Each battleship squadron required a variety of supporting vessels. Some of these, such as cruisers and destroyers, were other combatants. Auxiliary vessels such as repair ships, supply ships, and, most importantly, colliers served essential functions as well. To operate at any distance from the American coast all of these vessels needed secure bases where they could resupply, refit, and repair. When appropriations fell short of requests, as the usually did, officers sought to have the bulk of the limited funds allocated to battleship construction. Popular enthusiasm and Congressional funding routinely supported battleship construction at the expense of other funding needs. Battleships were imposing and glamorous, other warships less so. Any warship stood a better chance of gaining funding than auxiliaries. Base improvements and fortifications attracted the least attention and the lowest funding. On the eve of World War I the navy had a capable battle force but lacked critical supporting vessels and auxiliaries. Furthermore, its few bases remained incomplete, poorly stocked, and virtually unprotected.

-- Afterword --

This study has examined the United States Navy during a crucial period of its

development. This period encapsulates the navy's technological transition from wood and sail to steel and steam. A strategic revolution accompanied that transition. Those changes, though dramatic and far-reaching had not concluded when World War I intervened. This study ends with 1914 because once the war in Europe began, naval planning, public policy, and spending priorities in the United States became distorted. Once the United States entered the European war, the country faced an entirely different war than the navy had expected. Although the United States sent eight battleships to Europe, the decisive Mahanian battle between fleets of dreadnoughts never occurred. The massed British and German fleets had fought one battle to a bloody, inconclusive draw. The crucial battle would be against German submarines operating as commerce raiders. Destroyers, convoy escorts, minelayers, minesweepers, cargo ships, and transports proved to be the critical vessels.[2]

After the war, strategic planning picked up where it left off. War had not shaken belief in the battleship as the final arbiter of sea power. Germany had been removed as a threat in the Atlantic, leaving the navy free to concentrate on Japan. The navy had been developing War Plan Orange, its strategy for fighting Japan in the western Pacific, since the early 1900s. While the strategy evolved over time, it retained its emphasis on bases as a vital component. Captain Frank H. Schofield succinctly stated the General Board's position when he wrote in 1923 that "Sea power is not made up of ships, or of ships and men, but of ships and men and bases far and wide."[3]

---

[2] William N. Still, Jr., *Crisis at Sea: The United States Navy in European Waters in World War I* (Gainesville, FL: University Press of Florida, 2006). Still provides a masterful study of the U.S. Navy during the war.

[3] Frank H. Schofield, quoted in John T. Kuehn, *Agents of Innovation: The General Board and the Design of the Fleet That Defeated the Japanese Navy*. (Annapolis, MD: Naval Institute Press, 2008), 23.

Following the most destructive war the world have ever known and convinced that the naval arms race had been a significant factor leading to war, the world's major powers entered into a system of arms limitation treaties. The first of these, the Washington Treaty of 1922 dealt a serious blow to the navy's plans. The treaty limited the number, size, and armament of battleships and established a ten-year building "holiday." Of perhaps even greater importance, the treaty prohibited the creation of new naval bases and existing facilities could be neither enlarged nor strengthened. These restrictions made a shambles of existing war plans. In the case of war with Japan, the existing strategy envisioned a quick thrust across the Pacific to relieve the garrison in the Philippines. Prohibited from fortifying the bases at Guam, Wake, and the Philippines, naval planners now concluded that the Philippines would fall before the American fleet arrived.

Deprived of bases that could be counted on in time of war, naval planners had to devise other solutions. All of the necessary pieces to the solution already existed. The first, and arguably essential piece, was the conversion from coal to fuel oil. Due to its higher energy content, fuel oil dramatically increased range. The battleship *Texas,* for example, had a design endurance of 7,060 nautical miles at 10 knots. After conversion to fuel oil, her endurance at the same speed increased to 15,000 nautical miles.[4] The navy's switch to fuel oil had been well underway prior to World War I. Fuel oil offered another benefit of immense value. The ease with which it could be pumped through hoses made underway replenishment a relatively straightforward task. Ships could now travel almost

[4] Friedman, *Battleships*, 436-437.

twice as far on their onboard fuel and that supply could now be replenished at sea in almost any weather.[5]

Despite the dramatic easing of the fuel supply problem, naval planners also responded to the no fortification clause of the treaty by calling for increased endurance for all new ship classes. 15,000 miles became the standard for the new battleships while cruiser designs called for a range of 10-11,000 miles. Destroyer endurance typically exceeded 5,000 miles. The navy optimized the power plants of all its new vessels to achieve maximum economy at cruising speeds. All that remained was to design and build a sufficient number of fast oilers to accompany the fleet.[6]

Fuel resupply had been only one of the requirements driving the quest for bases. The other critical need was for a place to repair damaged ships, particularly underwater damage. Such repairs required the services of a dry dock. The navy already knew the answer to this problem as well; a floating dry dock that could be taken where needed. The navy had acquired three after the war with Spain. The other needs of the fleet for ammunition, food and other supplies could be met by conversion of merchant vessels.

All of the pieces combined to form a moveable advanced base, a concept first given coherent expression by A. C. Cunningham in 1904.[7] The restrictions in the Washington Naval Treaty forced the navy to revive the idea. The General Board initiated the Mobile Base Project during 1923 and in 1924 reorganized the fleet to create the Fleet

---

[5] Maurer, "Fuel and the Battle Fleet," 70-71; Peter A. Shulman, "Science Can Never Demobilize: The United States Navy and Petroleum Geology, 1898-1924," *History and Technology* 19, no. 4 (2003): 368; Peter V. Nash, *The Development of Mobile Logistic Support in Anglo-American Naval Policy, 1900-1953* (Gainesville, FL: University Press of Florida, 2009), 15-16.

[6] Friedman, *Battleships*, 446-450; Friedman, *Cruisers*, 471-476; John C. Reilly, Jr., *United States Navy Destroyers of World War II* (New York, NY: Sterling Publishing Co., Inc., 1983), 148-149.

[7] A.C. Cunningham, "The Moveable Base," *Proceedings* 30, no. 1 (Mar. 1904): 181-196.

Base Force.[8] Denied fixed bases, the navy planned to seize territory where needed and create bases on the fly. Although never adequately funded during the lean inter-war years, planning continued and laid the basis for the successful, logistics heavy strategy employed against Japan during World War II.

The United States Navy underwent a remarkable transformation from 1865 to 1914. The navy dwindled as the federal government retrenched following the Civil War. By 1881 the navy had shrunk from its wartime peak of more than 600 vessels to fewer than two dozen in active service. The few remaining ships grew increasing dilapidated and obsolete as rapidly changing technology passed them by.

Concerned officers worked diligently to rehabilitate the navy. Disagreements over the applicability of technology to the navy's traditional commerce raiding and coastal defense missions combined with the nation's geopolitical isolation hampered progress. During the 1880s fierce debates raged within the officer corps and Congress about the types of ships needed, the navy's size, and its purpose. Agreement gradually emerged that the new navy should be built of steel and powered by steam. The new navy also gained a new strategic mission – command of the sea. The acquisition of foreign territory to serve as naval bases and coaling stations emerged as a necessary corollary of the sea control strategy.

Before they could build the new navy, officers first had to build public consensus. Officers engaged in a substantial public relations effort. Though neither formally organized nor centrally directed, they proved to be a reasonably effective pressure group. Through articles in leading periodicals, news stories, naval reviews and demonstrations,

[8] Kuehn, *Agents*, 125-129.

expositions, lectures, and personal contacts they helped create the national will necessary to construct a battle fleet.

Officers' influence nevertheless had limits. Their success at popularizing battleships came at the expense of a balanced fleet. Congress rarely met the navy's funding requests, forcing the navy to prioritize its spending. Battleships always had priority. Although admitting their necessity, officers repeatedly sacrificed auxiliary vessels and infrastructure improvements to sustain battleship construction. The navy's insistent calls for bases fell on deaf ears. The nation's only territorial acquisitions came as the result of war with Spain in 1898. Despite their lack of success, the navy's officers never abandoned their quest for bases.

Appendices
Explanatory Notes and Sources

Appendix 1: Vessels Authorized, 1883-1916

Archibald Odin, Jr., compiler, *Navy Yearbook: Embracing All Acts Authorizing the Construction of Ships of the "New Navy" and a Resume of Naval Appropriation Laws from 1883 to 1919*, 65th Congress, 3rd Session, S.doc. 418, 738-747.

Appendices 2 and 3: Cruiser and Battle Ship Forces

Dates of authorization and Congress - Archibald Odin, Jr., compiler, *Navy Yearbook: Embracing All Acts Authorizing the Construction of Ships of the "New Navy" and a Resume of Naval Appropriation Laws from 1883 to 1919*, 65th Congress, 3rd Session, S.doc. 418, 738-747.

Service dates – The tables show the month and year each commission began and ended.

Cruisers – Norman Friedman, *U.S. Cruisers: An Illustrated Design History* (Annapolis, MD: Naval Institute Press, 1984), 448-450.

Battleships – Norman Friedman, *U.S. Battleships: An Illustrated Design History* (Annapolis, MD: Naval Institute Press, 1984), 418-420.

Key:

Dates of Authorization and Congress
In Commission Dates
Other Service Dates

Appendix 4: Appropriations for the New Navy, 1883-1914

Archibald Odin, Jr., compiler, *Navy Yearbook: Embracing All Acts Authorizing the Construction of Ships of the "New Navy" and a Resume of Naval Appropriation Laws from 1883 to 1919*, 65th Congress, 3rd Session, S.doc. 418, 679.

Appendix 1
Vessels Authorized, 1883-1916

Class	**1883**	**1884**	**1885**	**1886**	**1887**	**1888**	**1889**	**1890**	**1891**	**1892**	**1893**	**1894**
Battleships								3		1		
2nd Class Battleships				2								
Battle Cruisers												
Armored Cruisers						1				1		
Protected Cruisers	3		2	1	2	3		1	1			
Unprotected Cruisers						3						
Scout Cruisers												
Monitors				4*	2							
Gun Boats			2		2	1	2				3	
Torpedo Boats				1				1				3
Dispatch Boats	1											
Dynamite Cruisers				1								
Submarines											1	
Destroyers												
Colliers												
Fuel Ships												
Hospital Ships												
Ammunition Ships												
Tugs							4					1
Rams							1					
Training Ships												
Submarine Tenders												
Destroyer Tenders												
Transports												
Supply Ships												
River Gun Boats												
Repair Ships												
Total	**4**	**0**	**4**	**9**	**6**	**8**	**7**	**5**	**1**	**2**	**4**	**4**

* These were the *Amphitrite*, *Monadnock*, *Puritan*, and *Terror*, all begun in the mid-1870s. None entered service until 1895-1896.

Appendix 1
Vessels Authorized, 1883-1916

Class	**1895**	**1896**	**1897**	**1898**	**1899**	**1900**	**1901**	**1902**	**1903**	**1904**	**1905**	**1906**	**1907**
Battleships	2	3		3	3	2		2	5	1	2	1	1
2nd Class Battleships													
Battle Cruisers													
Armored Cruisers					3	3		2		2			
Protected Cruisers					6	3							
Unprotected Cruisers													
Scout Cruisers										3			
Monitors				4									
Gun Boats	6			1*				2					
Torpedo Boats	3	10	3	12									
Dispatch Boats													
Dynamite Cruisers													
Submarines						7				4		8	
Destroyers				16								3	2
Colliers										2			
Fuel Ships													
Hospital Ships													
Ammunition Ships													
Tugs		2						2		2			
Rams													
Training Ships			1						2				
Submarine Tenders													
Destroyer Tenders													
Transports													
Supply Ships													
River Gun Boats													
Repair Ships													
Total	**11**	**15**	**4**	**36**	**12**	**15**	**0**	**8**	7	**14**	**2**	**12**	**3**

*Construction not begun until 1912.

Appendix 1
Vessels Authorized, 1883-1916

Class	**1908**	**1909**	**1910**	**1911**	**1912**	**1913**	**1914**	**Thru 1914**	**1915**	**1916**	**1916***	**Total**
Battleships	2	2	2	2	1	1	3	42	2	4	6	**54**
2nd Class Battleships								2				**2**
Battle Cruisers								0		4	2	**6**
Armored Cruisers								12				**12**
Protected Cruisers								22				**22**
Unprotected Cruisers								3				**3**
Scout Cruisers								3		4		**7**
Monitors								10				**10**
Gun Boats				1				20		1	1	**22**
Torpedo Boats								33				**33**
Dispatch Boats								1				**1**
Dynamite Cruisers								1				**1**
Submarines	8	3^	4	4	8	4	7	58	18	30	40	**146**
Destroyers	10	5	6	8	6	6	6	68	6	20	30	**124**
Colliers	5	1	2	2				12				**12**
Fuel Ships					2			2	1	1	2	**6**
Hospital Ships								0		1		**1**
Ammunition Ships								0		1	1	**2**
Tugs				2				13				**13**
Rams								1				**1**
Training Ships								3				**3**
Submarine Tenders				1	1			2			1	**3**
Destroyer Tenders					1			1			2	**3**
Transports						1		1			1	**2**
Supply Ships						1		1				**1**
River Gun Boats				1				1				**1**
Repair Ships								0			1	**1**
Total	**25**	**11**	**14**	**21**	**19**	**13**	**16**	**312**	**27**	**66**	**87**	**492**

*These ships were authorized, but not appropriated for until a later date.
^ Never constructed.

Appendix 2											
Cruiser Force, 1883-1915											
Name	**1883**	**1884**	**1885**	**1886**	**1887**	**1888**	**1889**	**1890**	**1891**	**1892**	**1893**
Atlanta	Auth. 47th, 2nd					7/86-7/93					
Boston	Auth. 47th, 2nd						5/87-11/93				
Chicago	Auth. 47th, 2nd							4/89-5/95			
Newark				Auth. 48th, 2nd					1/91-7/01		
Charleston				Auth. 48th, 2nd					12/89-7/96		
Baltimore				Auth. 49th, 1st					1/90-2/96		
Philadelphia					Auth. 49th, 2nd						
San Francisco					Auth. 49th, 2nd						
Olympia						Auth. 50th, 1st					
Cincinnati						Auth. 50th, 1st					
Raliegh						Auth. 50th, 1st					
Montgomery						Auth. 50th, 1st					
Detroit						Auth. 50th, 1st					
Marblehead						Auth. 50th, 1st					
New York						Auth. 50th, 1st					
Columbia								Auth. 51st, 1st			
Minneapolis									Auth. 51st, 2nd		
Brooklyn										Auth. 52nd,1st	
New Orleans											
Albany											
Denver											
Des Moines											
Chattanooga											
Galveston											
Tacoma											
Cleveland											
Pennsylvannia											
West Virginia											
California											
St. Louis											
Milwaukee											
Charleston											
Colorado											
Maryland											
South Dakota											
Tennessee											
Washington											
North Carolina											
Montana											
Chester											
Birmingham											
Salem											

Appendix 2											
Cruiser Force, 1883-1915											
Name	**1894**	**1895**	**1896**	**1897**	**1898**	**1899**	**1900**	**1901**	**1902**	**1903**	**1904**
Atlanta	4/94-95							9/00-3/12			
Boston			11/95-9/99							8/02-6/07	
Chicago	89-5/95						12/98-12/03				
Newark			2/91-7/01							11/02-6/13	
Charleston	12/89-7/96				5/98-11/99		(LOST)				
Baltimore	1/90-2/96				10/97-9/00					5/03-5/07	
Philadelphia		7/90-12/97				7/98-9/02					
San Francisco		11/90-10/98							1/02-12/04		
Olympia		2/95-11/99							1/02-4/06		
Cincinnati				6/94-10/07							
Raliegh		4/94-6/99								1/03-10/07	
Montgomery			6/94-9/00						5/02-9/04		
Detroit			7/94-5/00							9/02-8/05	
Marblehead			4/94-4/00							11/02-10/06	
New York				8/93-2/16							
Columbia		4/94-5/97								8/02-5/07	
Minneapolis		12/94-8/98									
Brooklyn	Auth. 52nd, 1st				12/96-5/06						
New Orleans						3/98-2/05		(Purchased)			
Albany							5/00-6/04 (Purchased)				
Denver						Auth. 55th, 3rd					
Des Moines						Auth. 55th, 3rd					
Chattanooga						Auth. 55th, 3rd					
Galveston						Auth. 55th, 3rd					
Tacoma						Auth. 55th, 3rd					
Cleveland						Auth. 55th, 3rd					
Pennsylvannia						Auth. 55th, 3rd					
West Virginia						Auth. 55th, 3rd					
California						Auth. 55th, 3rd					
St. Louis							Auth. 56th, 1st				
Milwaukee							Auth. 56th, 1st				
Charleston							Auth. 56th, 1st				
Colorado							Auth. 56th, 1st				
Maryland							Auth. 56th, 1st				
South Dakota							Auth. 56th, 1st				
Tennessee									Auth. 57th, 1st		
Washington									Auth. 57th, 1st		
North Carolina											
Montana											
Chester											
Birmingham											
Salem											

Appendix 2

Cruiser Force, 1883-1915

Name	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
Atlanta			9/00-3/12								
Boston	8/02-6/07										
Chicago	8/04/808										
Newark	11/02-6/13		Trng. Ship		Reserve						
Charleston											
Baltimore	5/03-5/07										
Philadelphia											
San Francisco								8/11-12/21 (Minelayer)			
Olympia	1/02-4/06		Trng. Ship						Barracks Ship		
Cincinnati	6/94-10/07								10/11-4/19		
Raliegh	1/03-10/07								2/11-4/19		
Montgomery						1/08-5/18					
Detroit											
Marblehead	11/02-10/06						Reserve Trng. Ship				
New York		8/93-1/16		(Renamed Saratoga in 2/11)							
Columbia	8/02-5/07										
Minneapolis	10/03-11/06										
Brooklyn	12/96-5/06										
New Orleans						11/09-1/12				Trng. Ship	
Albany					6/04/12/14						
Denver		5/04-3/10							7/12-1/31		
Des Moines				3/04-4/21							
Chattanooga		10/04-9/10								4/14-7/21	
Galveston					12/05-11/23						
Tacoma				1/04-1/24							
Cleveland		11/03-8/10							8/12-11/29		
Pennsylvannia		3/05-7/11 (Renamed Pittsburgh in 8/12)							5/13-10/21		
West Virginia			1/05-9/20 (Renamed Huntignton in 11/16)								
California	Auth. 55th, 3rd			8/07-2/17 (Renamed San Diego in 9/14)							
St. Louis			8/06-5/10					Trng. Ship		Reserve	
Milwaukee			12/06-5/10							6/13-3/17	
Charleston			10/05-10/10					Receiving Ship			
Colorado		1/05-5/13 (Renamed Pueblo in 11/16)									
Maryland			4/05-2/22 (Renamed Frederick in 11/16)								
South Dakota	Auth. 56th, 1st				1/08-6/27 (Renamed Huron in 11/16)						
Tennessee			7/06-8/17 (Renamed Memphis in 5/17)								
Washington			8/06-6/46 (Renamed Seattle in 11/16)								
North Carolina	Auth. 58th, 2nd				5/08-2/12 (Renamed Charlotte in 6/20)						
Montana	Auth. 58th, 2nd				7/08-2/21 (Renamed Missoula in 6/20)						
Chester	Auth. 58th, 2nd				4/08-12/11				Various Dates		
Birmingham	Auth. 58th, 2nd				4/08/6/11					2/14-12/23	
Salem	Auth. 58th, 2nd					8/08-8/21					

Appendix 3										
Battleship Force, 1886-1915										
Name	**1886**	**1887**	**1888**	**1889**	**1890**	**1891**	**1892**	**1893**	**1894**	**1895**
Maine			Auth. 49th, 1st							
Texas			Auth. 49th, 1st							
Indiana						Auth. 51st, 1st				
Massachusetts						Auth. 51st, 1st				
Oregon						Auth. 51st, 1st				
Iowa								Auth. 52nd, 2nd		
Kearsarge										
Kentucky										
Illinois										
Alabama										
Wisconsin										
Maine										
Missouri										
Ohio										
Virginia										
Nebraska										
Georgia										
New Jersey										
Rhode Island										
Connecticut										
Louisiana										
Vermont										
Kansas										
Minnesota										
Mississippi										
Idaho										
New Hampshire										
South Carolina										
Michigan										
Delaware										
North Dakota										
Florida										
Utah										
Wyoming										
Arkansas										
New York										
Texas										
Nevada										
Oklahoma										
Pennsylvannia										
Arizona										

Appendix 3

Battleship Force, 1886-1915

Name	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905
Maine	9/95-2/98		(LOST)							
Texas			8/95-1/96; 7/96-11/00					11/02-1/08		
Indiana		11/95-12/03								
Massachusetts			6/96-1/06							
Oregon			7/96-4/06							
Iowa				6/97-6/03					12/03-7/08	
Kearsarge	Auth. 53rd, 3rd						2/00-9/09			
Kentucky	Auth. 53rd, 3rd						5/00-8/09			
Illinois		Auth. 54th, 1st					9/01-8/09			
Alabama		Auth. 54th, 1st					10/00-8/09			
Wisconsin		Auth. 54th, 1st						2/01-11/06		
Maine				Auth. 55th, 2nd				12/02-8/09		
Missouri				Auth. 55th, 2nd				1/03-9/19		
Ohio				Auth. 55th, 2nd						
Virginia					Auth. 55th, 3rd					
Nebraska					Auth. 55th, 3rd					
Georgia					Auth. 55th, 3rd					
New Jersey						Auth. 56th, 1st				
Rhode Island						Auth. 56th, 1st				
Connecticut								Auth. 57th, 1st		
Louisiana								Auth. 57th, 1st		
Vermont								Auth. 57th, 2nd		
Kansas								Auth. 57th, 2nd		
Minnesota								Auth. 57th, 2nd		
Mississippi								Auth. 57th, 2nd		
Idaho								Auth. 57th, 2nd		
New Hampshire									Auth. 58th, 2nd	
South Carolina										
Michigan										
Delaware										
North Dakota										
Florida										
Utah										
Wyoming										
Arkansas										
New York										
Texas										
Nevada										
Oklahoma										
Pennsylvannia										
Arizona										

Appendix 3										
Battleship Force, 1886-1915										
Name	**1906**	**1907**	**1908**	**1909**	**1910**	**1911**	**1912**	**1913**	**1914**	**1915**
Maine										
Texas	11/02-1/08			9/08-1/11						
Indiana			1/06-5/14							
Massachusetts						5/10-5/14				
Oregon							8/11-6/19			
Iowa	12/03-7/08					5/10-5/14				
Kearsarge		2/00-9/09						6/12-5/20		
Kentucky		5/00-8/09						6/12-3/20		
Illinois		9/01-8/09						4/12-5/20		
Alabama		10/00-8/09						7/12-7/14		
Wisconsin					4/08-5/20					
Maine		12/02-8/09						6/11-5/20		
Missouri				1/03-9/19						
Ohio		10/04-12/09					6/11-5/22			
Virginia				5/06-8/20						
Nebraska					7/07-7/20					
Georgia				9/06-7/20						
New Jersey				5/06-8/20						
Rhode Island				2/06-6/20						
Connecticut				9/06-3/23						
Louisiana				6/06-10/20						
Vermont					3/07-6/20					
Kansas					4/07-12/21					
Minnesota					3/07-12/21					
Mississippi				2/08-7/14 (Sold to Greece)						
Idaho				4/08-7/14 (Sold to Greece)						
New Hampshire	Auth. 58th,2nd				3/08-5/21					
South Carolina		Auth. 58th, 3rd				3/10-12/21				
Michigan		Auth. 58th, 3rd				1/10-8/23				
Delaware		Auth. 59th, 1st				4/10-11/23				
North Dakota		Auth. 59th, 2nd				4/10-11/23				
Florida				Auth. 60th, 1st				9/11-2/31		
Utah				Auth. 60th, 1st				8/11-8/27		
Wyoming				Auth. 60th, 2nd				9/12-5/30		
Arkansas				Auth. 60th, 2nd				9/12-9/25		
New York						Auth. 61st, 2nd			4/14-1/26	
Texas						Auth. 61st, 2nd			3/14-8/25	
Nevada							Auth. 61st, 3rd			
Oklahoma							Auth. 61st, 3rd			
Pennsylvannia							Auth. 62nd, 2nd			
Arizona								Auth. 63rd, 1st		

Appendix 4
Appropriations for the New Navy, 1883-1914

Year	Congress	Total Appropriations
1883	47-2	$16,920,288.80
1884	48-1	$10,689,149.26
1885	48-2	$22,606,315.97
1886	49-1	$17,411,700.21
1887	49-2	$25,824,105.58
1888	50-1	$20,977,831.61
1889	50-2	$23,655,537.44
1890	51-1	$25,454,850.75
1891	51-2	$32,776,040.64
1892	52-1	$23,994,238.84
1893	52-2	$22,625,615.06
1894	53-2	$25,691,900.47
1895	53-3	$29,586,656.09
1896	54-1	$31,458,822.13
1897	54-2	$34,833,451.04
1897	55-1	$557,561.02
1898	55-2	$144,556,940.77
1899	55-3	$57,297,569.78
1900	56-1	$66,949,286.62
1901	56-2	$83,020,090.23
1902	57-1	$85,347,345.29
1903	57-2	$84,993,697.99
1904	58-2	$103,852,170.96
1905	58-3	$118,459,897.51
1906	59-1	$105,815,312.50
1907	59-2	$100,893,431.08
1908	60-1	$130,013,153.60
1909	60-2	$140,012,655.85
1910	61-2	$133,216,693.19
1911	61-3	$127,818,681.48
1912	62-2	$129,739,055.88
1913	62-3	$142,550,364.47
1913	63-1	$193,802.80
1914	63-2	$148,254,332.41
Total		$2,268,048,547.32

Appropriations from 1883 to 1899 (excluding the war year of 1898) averaged $26,397,602.17 per year.

Appropriations from 1900 to 1914 averaged $113,408,664.79 per year.

Bibliography

Archival Sources

Library of Congress, Washington, D.C.
- George Eugene Belknap Papers, Naval Historical Foundation Collection
- George W. Melville Papers, Naval Historical Foundation Collection
- Nathan Sargent Papers, Naval Historical Foundation Collection
- Montgomery Sicard Papers, Naval Historical Foundation Collection
- Henry Clay Taylor Papers, Naval Historical Foundation Collection
- Edward D. Taussig Papers, Naval Historical Foundation Collection
- John Crittendon Watson Papers, Naval Historical Foundation Collection

National Archives, Washington, D.C., United States Department of the Navy
- Area Files of the Naval Records Collection, 1867-1898. M625.
- General Correspondence of the Secretary of the Navy, Record Group 80.
- Letters Received by the Secretary of Navy from Commanding Officers of the European Squadron, 1865-1885. Record Group 45.
- Letters Received by the Secretary of the Navy from Commanding Officers of Squadrons, 1841-1886. Record Group 45, M89.
- Letters Received by the Secretary of Navy From Captains,1866-1885. Record Group 45, M125.
- Letters Sent by the Secretary of the Navy to Flag Officers Commanding Squadrons, Vessels and Stations, 1867-1886, Record Group 45.
- Letters Sent by the Secretary of the Navy to Commanding Officers of the Naval Academy, 1869-1884, Record Group 45.
- Naval Operating Forces. Record Group 313.
- Proceedings and Hearings of the General Board of the U.S. Navy, 1900-1947, Record Group 80. M1493.

Naval Heritage and History Command, Washington, D.C.
- Dictionary of American Naval Fighting Ships, online
- Officers of the Continental and U.S. Navy and Marine Corps, 1775-1900, online.

Naval War College Archives, Newport, RI.
- Faculty and Staff Presentations, Record Group 14.
- Lectures, Record Group 15.
- Student Operational Problems and Solutions, Record Group 12.
- Student Theses, 1912-1915, Record Group 13.

Published Documents

Shufeldt, R. W. *The Relation of the Navy to the Commerce of the United States*. Washington, DC: John L. Gink, Printer, 1878.

United States Congress. *Annual Report of the Secretary(s) of the Navy, 1865*

1914. Various dates and document IDs.

_____. *The Congressional Globe.* Washington D.C.: F. & J. Rives & George A. Bailey, various years, 1866-1872.

_____. *The Congressional Record.* Washington, D.C.: Government Printing Office, various years, 1873-1914.

_____. *Navy Yearbook: Embracing All Acts Authorizing the Construction of Ships of the "New Navy" and a Resume of Naval Appropriation Laws from 1883 to 1919.* Compiled by Archibald Odin, Jr., 65th Congress, 3rd Session, S. doc. 418.

_____. *Papers Relating to the Foreign Relations of the United States, 1872*. Washington, D.C.: Government Printing Office, 1873.

_____. *Report of the Naval Policy Board* (1890), 51st Congress, 1st Session, S. exdoc. 43.

Contemporary Newspapers

Bangor (ME) *Daily Whig and Courier*
Bismark (ND) *Daily Tribune*
Burlington (IO) *Hawk-Eye*
Cedar Rapids (IO) *Evening Gazette*
Courier (Connellville, PA)
Daily Gazette (Colorado Springs, CO)
Daily Gazette (Xenia, OH)
Daily Milwaukee (WI) *News*
Daily News (Frederick, MD)
Daily Progress (Petersburg, VA)
Daily Times (Portsmouth, OH)
Davenport (IO) *Daily Leader*
Evening Herald (Syracuse, NY)
Fort Wayne (IN) *Sentinel*
Fresno (CA) *Morning Republican*
Galveston (TX) *Daily News*
Hawaiian Gazette (Honolulu, HI)
Herald-Dispatch (Decatur, IL)
Hornsville (NY) *Weekly Tribune*
Independent (Massillon, OH)
Lima (OH) *Daily Democratic Times*
Lincoln (NB) *Evening News*
Logansport (IN) *Journal*
Logansport (IN) *Pharos*

Mansfield (OH) *Daily News*
Marion (OH) *Daily Star*
Middletown (NY) *Daily Press*
Newark (OH) *Daily Advocate*
New York Observer and Chronicle
New York Times
Oakland (CA) *Evening Tribune*
Oshkosh (WI) *Daily Northwestern*
Petersburg (VA) *Index-Appeal*
Pittsburgh (PA) *Post*
Richwood (OH) *Gazette*
San Antonio (TX) *Daily Express*
San Antonio (TX) *Daily Light*
Salt Lake (UT) *Daily Tribune*
Standard (Ogden, UT)
St. Louis (MO) *Globe Democrat*
Sterling (IL) *Standard*
Times (Trenton, NJ)
Tyrone (PA) *Daily Herald*
Weekly Wisconsin
Wellsboro (PA) *Gazette*
Wisconsin State Journal
World (NY)

Contemporary Articles

Ammen, Daniel. "Is the Value of Our Fast Cruisers Over-estimated?" *The North American Review* 158, no. 446 (Jan. 1894): 77-85.

_____. "The Purposes of a Navy, and the Best Methods of Making it Efficient." *Proceedings of the United States Naval Institute* 5 (1879): 119-134.

Baldwin, Elbert F. "The Naval Defenses of the Nation." *Outlook* 58, no. 14 (Apr. 1898): 816-824.

Barber, F. M. "A Practical Method of Arriving at the Number, Size, Type, Rig and Cost of the Vessels of which the U.S. Navy Should Consist in Time of Peace." *Proceedings of the United States Naval Institute* 12, no. 38 (1886): 417-422.

Barrett, John. "The Paramount Power of the Pacific." *The North American Review* 169, no. 513 (Aug. 1899): 165-179.

Bates, William M. "Importance of Hawaii and Samoa." *The Social Economist* 6, no. 6 (June 1894): 352 – 364.

Beehler, W. H. “The Navy and Coast Defense.” *Proceedings of the United States Naval Institute* 35, no. 2 (Jun 1909): 343-385.

Belknap, Charles. “The Naval Policy of the United States.” *Proceedings of the United States Naval Institute* 6, no 14 (1880): 375-391.

Benjamin. Park. “Concerning the Admirals.” *The Independent* 50, no. 2630 (Oct. 2, 1898): 1093-1094.

Bishop, Sereno E. “The Urgent Need of Pearl Harbor.” *The Independent* 57, no. 2907 (Aug. 18, 1904): 383-387.

Bond, Frederick Drew. “The Aims and Works of the Navy League.” *Harper’s Weekly* (May 21, 1910): 12.

Bowles, F.T. “Our New Cruisers,” *Proceedings of the United States Naval Institute* 9 (1883): 595-623.

Bradford, Royal B. “Coaling Stations for the Navy.” *Forum* 26, no. 6 (Feb. 1899): 732 747.

Brainard, F. R. “Ramming in Naval Duels.” *United Service: A Quarterly Review of Military Affairs* 6, no. 3 (Sep. 1891): 245.

Brassey, T.A. “Great Britain as a Sea Power.” *United Service: A Quarterly Review of Military Affairs* 10, no. 3 (Sep. 1893): 246-255.

Brown, R.M.G. “The Commercial and Naval Policy of the United States.” *United Service: A Quarterly Review of Military Affairs* 4, no. 5 (May 1881): 603-610.

_____. “The Type of Vessels Required by the Navy.” *United Service: A Quarterly Review of Military Affairs* 4, no. 6 (Jun 1881): 763-770.

Bunts, H. C. “The Scope of the Monroe Doctrine.” *Forum* (Apr. 1899): 192-200.

Chambers, W. I. “The Reconstruction and Increase of the Navy.” *Proceedings of the United States Naval Institute* 11, no. 1 (Apr. 1885):

Clark, N. B. “Petroleum as a Source of Emergency Power for Warships,” *Proceedings of the United States Naval Institute* 9 (1883): 798-802.

“Coal for the Navy.” *Scientific American* 79, no. 27 (Dec. 31, 1898): 426.

“The Command of the Sea.” *Scientific American* 78, no. 17 (Apr. 23, 1898): 258.

Cooke, A. P. “Naval Reorganization.” *Proceedings of the United States Naval Institute*

12, no. 4 (1886): 491-526.

Coolidge, L. A. “Stories of the Fighting Leaders.” *McClure’s Magazine* 11, no. 2 (June 1898): 178-185.

Colomb, P.H. “The United States Navy under the New Conditions of National Life.” *The North American Review* 167, no. 503 (Oct. 1898): 424-444.

Collins. Frederick. “Naval Affairs.” *Proceedings of the United States Naval Institute* 5 (Feb. 1879): 159-177.

Conant, Charles A. “The Economic Basis of ‘Imperialism’,” *The North American Review* 167, no. 502 (Sep., 1898): 326-340.

Cramp, Charles H. “The Coming Sea-Power.” *The North American Review* 165, no. 491 (Oct. 1897): 444-451.

_____. “Sea Power of the United States.” *The North American Review* 159, no. 453 (Aug. 1894): 137-149.

Cunningham, A. C. “The Moveable Base.” *Proceedings of the United States Naval Institute* 30, no. 1 (Mar. 1904): 181-196.

Davis, Oscar King. “Stories of Admiral Dewey.” *McClure’s Magazine* 13, no. 1 (May 1899): 43-49.

“Dewey the Hero of Manila.” *Leslie’s Weekly* 24, no. 1 (July 1898): 27.

Denniston, William Thaw. “The Defence [sic] of Our Maritime Frontiers.” *United Service: A Quarterly Review of Military Affairs* 15, no. 5 (May 1896): 1-8.

Dodge, Theodore Ayrault. “The Needs of Our Army and Navy.” *Forum* (Oct. 1891): 247-262.

Dinger, Henry C. “Some Notes on Naval Needs and Requirements.” *Proceedings of the United States Naval Institute* 30, no.1 (Mar. 1904): 73-108.

Dingley, Jr., Nelson. “How to Restore American Shipping.” *The North American Review* 148, no. 391 (Jun. 1889): 687-696.

Edmands, Thomas F. “Is Our Nation Defenceless[sic]?” *The North American Review* 152, no. 412 (Mar. 1891): 381-384.

Ellicott, John M. “The Composition of the Fleet.” *Proceedings of the United States Naval Institute* 22, no. 3 (1896): 538-560.

Ellsberg, Edward. “Naval Strength in Naval Bases.” *Proceedings of the United States Naval Institute* 39, no. 3 (Sep. 1913): 975-980.

Fiske, Bradley A. “American Naval Policy.” *Proceedings of the United States Naval Institute* 31, no. 1 (Mar. 1905): 1-80.

_____. “Naval Battle of the Future.” *Forum* (May 1890): 13-23.

_____. “Naval Power.” *Proceedings of the United States Naval Institute* 37, no. 3 (Sep. 1911): 683-736.

Fitz-Gerald, W. G. “Does Germany Menace the World’s Peace? *The North American Review* 184, no. 613 (Apr. 1907): 853-860.

“A Foreign Naval Officer.” “Can the United States Afford to Fight Spain?” *The North American Review* 164, no. 483 (Feb. 1897): 209-215.

“The Foreign Policy of the United States.” *The Michigan Farmer* 33, no. 26 (June 25, 1898) 496.

Franklin, W.B. “National Defense.” *The North American Review* 137, no. 325 (Dec. 1883): 594-604.

“A Friend of the American Navy.” “Some Neglected Naval Lessons of the Spanish War.” *The North American Review* 174, no. 544 (Mar. 1902): 338-347.

Fullam, William F. “The American Navy of Today,” *American Magazine* 8 (Sept., 1888): 515-532.

Gibbons, John H. “Navy Leagues.” *The North American Review* 176, no. 552 (May 1903): 758-764.

_____. “The Need of a Building Program for Our Navy.” *Proceedings of the United States Naval Institute* 29, no. 2 (Jun 1903): 321-331.

_____. “The Size of Battleships – Comments.” *Proceedings of the United States Naval Institute* 29, no. 2 (Jun 1903): 435-441.

Gibbons, William G. “The Marine Ram, As Designed by Rear-Admiral Daniel Ammen, U.S.N.” *Proceedings of the United States Naval Institute* 8, no. 20 (1882): 209-220.

Goodrich, Caspar F. “Our National Defenses.” *Century Illustrated Magazine* 30, no. 1 (May 1885): 172-174.

Gorringe, Henry H. “The Navy.” *The North American Review* 134, no. 306 (May, 1882):

486 -506.

Grier, John A. “Fostering the Merchant Marine of the United States is not Robbery, but a National Necessity.” *United Service: A Quarterly Review of Military Affairs* 10, no. 2 (Feb. 1884): 226-228.

Griffin, Eugene. “Our Sea-Coast Defenses.” *The North American Review* 147, no. 380 (Jul. 1888): 64-75.

Hart, Albert Bushnell. “The Monroe Doctrine: Its Territorial Extent and Application.” *Proceedings of the United States Naval Institute* 32, no. 3 (Sep. 1906): 753-800.

Harden, Edward W. “Dewy at Manila: Observations and Personal Impressions Derived from a Service with the American Fleet in the Philippines from April 1898 to October 1898,” *McClures’ Magazine* 12 (Feb., 1899): 369-384.

Herbert, Hillary A. “The Lessons of the Naval Review.” *The North American Review* 156, no. 439 (Jun. 1893): 641-647.

_____. “A Plea for the Navy.” *Forum* (sep. 1897): 1-15.

_____. “Porto [sic] Rico, Cuba and the Philippines.” *The Independent* 50, no. 2610 (Dec. 8, 1898): 1646-1651.

Higgins, John S. “Coal for the Navy.” *Proceedings of the United States Naval Institute* 39, no. 4 (Dec. 1913): 1427-1438.

Higginson, Francis J. “The Sea Power of the United States.” *The Independent* 51, no. 2640 (Jul. 6, 1899): 1805-1807.

Hobson, R.P. “America Mistress of the Seas,” *The North American Review* 175, no. 551 (Oct., 1902): 544-557

Hoff, William B. “A View of Our Naval Policy and a Discussion of Its Factors,” *Proceedings of the United States Naval Institute* 12 (1886): 121-139.

Hood, John. “The Monroe Doctrine: Its Meaning and Application at the Present Day.” *Proceedings of the United States Naval Institute* 35, no. 3 (Sep. 1909): 657-666.

“How Should We Fight Spain?” *The Nation* 17, no. 440 (1873): 364-365.

Hughes, W.F. “Our New Steel Cruisers and Their Uses.” *Frank Leslie’s Popular Monthly* 20, no. 2 (Aug. 1885): 164-167.

Huidekoper, Frederic Louis. “Is the United States Prepared for War? (I)” *The North American Review* 182, no. 591 (Feb. 1906): 161-178.

_____. “Is the United States Prepared for War? (II)” *The North American Review* 182, no. 592 (Mar. 1906): 391-407.

Hurd, Archibald S. “British Naval Progress.” *The North American Review* 177, no. 562 (Sep. 1903): 385-392.

Jane, Fred T. “Naval Lessons of the War,” *Forum* 24 (Nov. 1898): 294-305.

_____. “Naval Warfare, Present and Future.” *Forum* (Oct. 1897): 234-245.

Jaques, William Henry. “Immediate Naval Needs.” *Forum* (Apr. 1900): 161-170.

Kasson, John A. “The Monroe Doctrine in 1881.” *The North American Review* 133, no. 301 (Dec. 1881): 523-533.

Kelly. J. D. Jerrold. “Rear-Admiral George Dewey.” *The Independent* 50, no. 2581 (May 19, 1898): 1-2.

Kelly, J.D.S. “A Lay Sermon – Armored Vessels.” *United Service: A Quarterly Review Of Military Affairs* 1, no. 2 (Apr. 1897): 263-274.

_____. “General Interest in the Navy.” *United Service: A Quarterly Review of Military Affairs* (Apr. 1903): 1057-1061.

_____. “Navy Statistics, Facts and Figures Showing Our Disparity to Germany.” *United Service: A Quarterly Review of Military Affairs* (Apr. 1903): 1114.

_____. “The Slowness of Naval Construction.” *United Service: A Quarterly Review of Military Affairs* 5, no. 5 (May 1904): 571-573.

Lodge, Henry Cabot. “Our Blundering Foreign Policy.” *Forum* 19 (Mar. 1895): 8-17.

Luce, Stephen B. “Annual Address.” *Proceedings of the United States Naval Institute* 14, no. 1 (1888): 1-8.

_____. “Naval Strategy,” *Proceedings of the United States Naval Institute* 35, no. 1 (1909): 93-112.

_____. “Naval Training.” *Proceedings of the United States Naval Institute* 16 (1890): 367-396.

_____. “Naval Warfare under Modern Conditions.” *The North American Review* 162, no. 470 (Jan. 1896): 70-77.

_____. “On the Study of Naval Warfare as Science.” *Proceedings of the United States Naval Institute* 12 (Aug. 1886): 527-546.

_____. “On the Study of Naval History.” *Proceedings of the United States Naval Institute* 13 (Mar. 1887): 195-211.

_____. “Our Future Navy.” *The North American Review* 149, no. 392 (Jul. 1889): 54-65.

_____. “War Schools.” *Proceedings of the United States Naval Institute* 9 (1883): 633-657.

Mahan, Alfred Thayer. “Hawaii and Our Future Sea-Power.” *Forum* (March 1893): 1-11.

_____. “The Necessities and Objects of a Naval War College.” *Proceedings of the United States Naval Institute* 14, no. 47 (1888): 621-640.

_____. “The True Significance of the Pacific Voyage.” *Scientific American* 97 (7 Dec., 1907): 407-413.

_____. “The War on the Sea and Its Lessons.” *McClure’s Magazine* 12, no. 2 (Dec. 1898): 110-118.

Mason, T.B.M., “Two Lessons from the Future,” *Proceedings of the United States Naval Institute* 2, no. 4 (Apr. 1876): 57-76.

Mantus, A.P. “Wasted Energy in the Navy.” *United Service: A Quarterly Review of Military Affairs* 5, no. 5 (Nov. 1881): 635-641.

McAdoo, William. “Launching a Battleship from the Congressional Ways.” *The North American Review* 174, no. 543 (Feb. 1902): 182-200.

_____. “The Navy and the Nation.” *Proceedings of the United States Naval Institute* 20, no. 2 (1894): 399-422.

Meigs, John F. “An Essay on the Tactics of the Gun as Discoverable from Type Warships,” *Proceedings of the United States Naval Institute* 14 (1888): 655-698.

Melville, George W. “Our Actual Naval Strength. “ *The North American Review* 176, no. 556 (Mar. 1903): 376-390.

_____. “Our Future in the Pacific – What We Have There to Hold and Win.” *The North American Review* 166, no. 496 (Mar. 1898): 281-296.

Mentz, G. W. “Our Naval Force.” *The Chautauquan* 4, no. 10 (Jul. 1884): 595-597.

Meriwether, Walter Scott. “Our Navy and Japan’s.” *Harper’s Weekly* (Jun. 1, 1907): 800-801.

Micou, Benjamin. “Torpedo Boats in Naval Warfare.” *The North American Review* 165, no. 491 (Oct. 1897): 409-417.

Miller, Jacob W. “The Nicaragua Survey.” *Proceedings of the United States Naval Institute* 4, no. 1(1878): 65 -75.

Miller, Jacob W. “The Need for a Coast Defense Vessel.” *United Service: A Quarterly Review of Military Affairs* 5, no. 3 (Sep. 1881): 355-365.

_____. “Rumors of War and Resultant Duties.” *Forum* (Apr. 1896): 237-246.

Miller, Spencer. “Coaling Vessels at Sea.” *Transactions of the Society of Naval and Marine Engineers* 7 (1899): 1-18.

_____. “The Coaling of the U.S.S. Massachusetts at Sea.” *Transactions of the Society of Naval and Marine Engineers* 8 (1900): 155-165.

_____. “Coaling Warships at Sea – Recent Developments.” *Transactions of the Society of Naval and Marine Engineers* 12 (1904): 177-200.

_____. “Coaling Warships from Colliers in Harbor.” *Transactions of the Society of Naval and Marine Engineers* 18 (1910): 125-139.

_____. “Refueling Warships at Sea.” *Transactions of the Society of Naval and Marine Engineers* 22 (1914): 157-183.

“Model Battleship at World’s Columbian Exposition.” *Scientific American* 65, no. 24 (Dec. 12, 1891): 376.

Morgan, John T. “The Duty of Annexing Hawaii.” *Forum* (Mar. 1898): 11-16.

_____. “What Shall We Do with the Conquered Islands?” *The North American Review* 166, no. 499 (Jun. 1898): 641-649.

Murdock, J. B. “Our Need of Fighting Ships.” *Proceedings of the United States Naval Institute* 27, no. 2 (Jun. 1901): 247-267.

“Nauticus.” “Sea Power: Its Past and Its Future.” *Little’s Living Age* 200, no. 2590 (Feb. 1894): 451-472.

“Nauticus.” “A Lesson from the Chicago.” *United Service: A Quarterly Review of Military Affairs* 12, no. 3 (Sep. 1894): 226-239.

"Naval and Military Affairs." *New York Observer and Chronicle* 76, no. 35 (Sep. 1 1898): 76.

"A Naval Officer." "The Navy, and How to Improve It." *United Service: A Quarterly review of Military Affairs* 3, no. 3 (Sep. 1880): 357-369.

"A Naval Officer." "A Plea for Gunboats." *United Service: A Quarterly Review of Military Affairs* 1, no. 1 (Jan. 1889): 93-100.

Naval Policy Board. "Report of the Policy Board." *Proceedings of the United States Naval Institute* 16, no. 53 (1890): 201-211.

"The Navy's Needs," *Scientific American* 55, no. 23 (Dec. 4, 1886): 352.

"New Naval Stations." *Zion's Herald* 76, no. 52 (Dec. 28, 1898): 1643.

Niblack, A. P. "Colliers and Coaling Stations." *Proceedings of the United States Naval Institute* 30, no.3 (Sep. 1904): 567-576.

Nichols, G.A. "The Bermuda Floating Drydock." *United Service: A Quarterly Review of Military Affairs* 6, no. 3 (Mar. 1882): 334-336.

"Our Naval Policy." *United Service: A Quarterly Review of Military Affairs* 6, no. 5 (May 1882): 1-20.

Parker, Foxhall A. "On Fleet Maneuvers in the Bay of Florida, and the Navy of the Future." *Proceedings of the United States Naval Institute* 1, no. 1 (1874): 163 176.

Peffer, W. A. "Imperialism America's Historic Policy." *The North American Review* 171, no. 525 (Aug. 1900): 246-258.

Perry, Leslie J. "Army or Navy?" *The Independent* 51, no. 2646 (Aug. 17, 1899): 2219-2222.

Phillips, Barnet. "Coaling a Man-of-War." *Harper's Weekly* 36, no. 1837 (Mar. 5, 1892): 234.

Porter David Dixon. "Naval Wars of the Future." *The North American Review* 148, no. 386 (Jan. 1889): 1-15.

_____. "Naval Wars of the Future." *The North American Review* 148, no. 387 (Feb. 1889): 196-216.

_____. "Our Navy." *United Service: A Quarterly Review of Military Affairs* 1, no. 1 (Jan. 1879): 1-9.

_____. “Torpedo Warfare.” *The North American Review* 127, no. 264 (Sep.-Oct. 1878): 213-236.

Poundstone, Homer C. “The Size of Battleships.” *Proceedings of the United States Naval Institute* 29, no. 1 (Mar. 1903): 161-174.

Powers, H.H. “Expansion and Protection.” *The Quarterly Journal of Economics* 13, no. 4 (Sep. 1899): 361-378.

Proctor, John R. “America’s Battle for Commercial Supremacy.” *Forum* (Nov. 1893): 315-324.

_____. “Hawaii and the Changing Front of America.” *Forum* (Sep. 1897): 34-45.

Qualtrough, Edward F. “Our Naval Necessities.” *Overland Monthly and Out West Magazine* 12, no. 76 (Apr. 1889): 423-429.

Rae, Thomas W. “The Comparison of Steamships.” *Proceedings of the United States Naval Institute* 2, no. 5 (Jun 1876): 77-91.

Ransom. George M. “The Naval Policy of the United States.” *United Service: A Quarterly Review of Military Affairs* 2, no. 2 (Feb. 1880): 206-210.

“Recognition for Rear-Admiral Dewey.” *Scientific American* 80, no. 4 (Jan. 28, 1899): 54.

Reuterdahl, Henry. “The Needs of Our Navy.” *McClure’s Magazine* 30, no. 3 (Jan. 1908): 251-264.

Riley, W. H. “Coal Consumption of Ships of War.” *Proceedings of the United States Naval Institute* 19, no. 4 (1893): 419-436.

Roach, John. “A Militia for the Sea.” *The North American Review* 133, no. 297 (Aug. 1881): 176-195.

_____. “Shall Americans Build Ships?” *The North American Review* 132, no. 294 (May 1881): 467-481.

Robinson, Edwin Van Dyke. “The West Indian and Pacific Islands in Relation to the Isthmian Canal.” *The Independent* 52, no. 2674 (Mar. 1900): 523-526.

Rockwell, Charles H. “The Lessons of the Naval Review.” *United Service, A Quarterly Review of Military Affairs* 10, no. 1 (Jul. 1893): 14-16.

_____. “The Ram Question.” *United Service: A Quarterly Review of*

Military Affairs 8, no. 2 (Aug. 1892): 144-149.

_____. "Wanted – A Definite Policy." United Service: A Quarterly Review of Military Affairs 8, no. 5 (Nov. 1892): 2-13.

Roosevelt, Theodore. "Washington's Forgotten Maxim." *Proceedings of the United States Naval Institute* 23, no. 3 (1897): 447-461.

Sampson, William T. "The Battle-Ship of the Future: A Reply to Admiral Colomb." *The North American Review* 157, no. 445 (Dec. 1893): 653-664.

_____. "The United States Navy." *The Independent* 51 no. 2636 (Jun. 8, 1899): 1533-1534.

Schroeder, Seaton. "The Type of (I) Armored Vessel, (II) Cruiser, Best Suited to the Present Needs of the United States." *Proceedings of the United States Naval Institute* 7, no. 15 (1881): 85-106.

Scott, Irving M. "Naval Needs of the Pacific." *Overland Monthly and Out West Magazine* 24, no. 142 (Oct. 1894): 367-371.

Shurz, Carl. "Hawaii and Sea Power." *Harper's Weekly* (Nov. 1897): 1167.

Simpson, Edward. "The Navy and Its Prospects for Rehabilitation." *Proceedings of the United States Naval Institute* 12, no. 1 (1886): 1-39.

_____. "The Wants of the Navy – Cannon." *United Service: A Quarterly Review of Military Affair* 2, no. 5 (May 1880): 647-656.

_____. "The Wants of the Navy – Cannon." *United Service: A Quarterly Review of Military Affair* 2, no. 6 (Jun. 1880): 729-737.

_____. "The Wants of the Navy – Cannon." *United Service: A Quarterly Review of Military Affair* 3, no. 1 (Jul. 1880): 41.

_____. "The Wants of the Navy, Ironclad Cruisers." *United Service: A Quarterly Review of Military Affairs* 2, no, 2 (Feb. 1880): 1-11.

Smalley, H.A. "A Defenseless Sea-Board." *The North American Review* 138, no. 328 (Mar. 1884): 233-245.

Smith, Alexander R. "A Protected American Shipping Needed." *Overland Monthly and Out West Magazine* 34, no. 203 (Nov. 1899): 401-407.

Smith, R.C. "Conditions Governing Torpedo Boat Design." *The North American Review* 166, no. 494 (Jan. 1898): 98-106.

_____. “Disposition of the Fleet: Ship and Squadron Drill.” *Proceedings of the United States Naval Institute* 17, no. 58 (1891): 121-156.

Soley, James R. “The Value of Naval Maneuvers.” *The North American Review* 153, no. 417 (Aug. 1891): 144-159.

Soley, J. C. “On a Proposed Type of Cruiser for the Navy.” *Proceedings of the United States Naval Institute* 4, no. 1 (1878): 127-140.

“Some Needs of the Navy.” *United Service: A Quarterly Review of Military Affairs* 7, no. 1 (Jul. 1882): 87-93.

Southwick, George N. “Our Defenceless [sic] Coasts.” *The North American Review* 162, no. 472 (Mar. 1896): 317-327.

Stirling, Yates. “The Nation’s Defense – The Offensive Fleet.” *Proceedings of the United States Naval Institute* 34, no. 2 (Jun 1908): 393-424.

Stockton, Charles H. “The American Interoceanic Canal: A Study of the Commercial, Naval and Political Conditions.” *Proceedings of the United States Naval Institute* 25, no. 4 (Dec. 1899): 753-798.

_____. “Discussion of Essay.” *Proceedings of the United States Naval Institute* 24, no. 85 (1898): 127-9.

_____. “The Reconstruction of the United States Navy.” *Overland Monthly and Out West Magazine* 16, no. 94 (Oct. 1890): 381-386.

“The Strategic Importance of the Pacific Ocean.” *United Service: A Quarterly Review of Military Affairs* 8, no. 5 (Nov. 1905): 4-9.

Sumner, William G. “The Conquest of the United States by Spain.” *The Yale Law Review* 8, no. 4 (July 1899); 168-193.

_____. “Shall Americans Own Ships?” *The North American Review* 132, no. 295 (Jun 1881): 559-566.

Taylor, Henry Clay. “Battle-Ships Cheaper than War.” *Harper’s Weekly* (May 9, 1903): 744.

_____. “The Control of the Pacific.” *Forum* 3, no. 4 (Jun. 1887): 407-416.

_____. “The Fleet.” *Proceedings of the United States Naval Institute* 29, no. 4 (Dec. 1903): 799-807.

_____. “The Future of Our Navy.” *Forum* (Mar. 1899): 1-10.

“Three American Admirals.” *The Christian Advocate* 74, no. 11 (Mar. 16, 1899): 416.

Todd, C.C. “Our New Cruisers.” *United Service: A Quarterly Review of Military Affairs* 6, no. 1 (Jan. 1882): 10-20.

Tracy, Benjamin Franklin. “Our New Warships.” *The North American Review* 152, no. 415 (Jun. 1891): 641-655.

“An Unfortunate Contract.” *Harper’s Weekly* (August 8, 1892): 819.

“An Unpensioned Volunteer.” “Our Little Navy.” *United Service: A Quarterly review of Military Affairs* 11, no. 3 (Sep. 1884): 301-305.

Very, E. W. “The Type of Armored Vessel and Cruiser Best Suited to the Present Needs of the United States.” *Proceedings of the United States Naval Institute* 7 (1881): 43-83.

Vogelgesang, Theodore. “Logistics – Its Bearing Upon the Art of War.” *Proceedings of the United States Naval Institute* 39, no. 1 (Mar. 1913): 63-74.

Wainwright, Richard. “A Modern Battleship.” *United Service: A Quarterly Review of Military Affairs* 3, no. 5 (May 1890): 470-480.

_____. “The Spanish-American War.” *United Service: A Quarterly Review of Military Affairs*1, no. 1 (Jan. 1902): 1-10.

_____. “Our Coast Defense from a Naval Standpoint.” *United Service: A Quarterly Review of Military Affairs* 2, no. 1 (Jul. 1889): 46-50.

_____. “Our Naval Policy.” *United Service: A Quarterly Review of Military Affairs2, no. 3 (Sep. 1889): 234-239.*

_____. “Tactical Problems in Naval Warfare.” *Proceedings of the United States Naval Institute* 21, no. 74 (1895): 217-262.

_____. “Our Naval Power.” *Proceedings of the United States Naval Institute* 24, no. 1 (Mar. 1898): 39-87.

Walker, Asa. “With Reference to the Size of Fighting Ships.” *Proceedings of the United States Naval Institute* 26, no. 3 (Sep. 1900): 515-522.

_____. “Our Naval Power.” *Proceedings of the United States Naval Institute* 24, no. 85 (1898): 39-88.

"Warships of Other Nations in New York Harbor," *Advocate of Peace* 55, no. 6 (June 1893): 127-129.

Wiley, D. Allen. "Coal and War." *The Independent* 50, no. 2581 (May 19, 1898): 644 645.

Williams, Dion. "The Defense of Our New Naval Stations." *Proceedings of the United States Naval Institute* 28, no. 2 (Jun. 1902): 181-194.

Worthington, W. F. "Coal Consumption on Warships." *Proceedings of the United States Naval Institute* 30, no. 2 (Jun 1904): 373-388.

BOOKS

Albion, Robert G. *Makers of Naval Policy, 1798-1947*. Annapolis, MD: Naval Institute Press, 1980.

Alden, John D. *The American Steel Navy*. Annapolis, MD: Naval Institute Press, 1989.

Allin, Lawrence Carroll. *The United States Naval Institute: Intellectual Forum of the New Navy*. Manhattan, KS: Sunflower University Press, 1978.

Ammen, Daniel. *The Old Navy and the New*. Philadelphia, PA: Lippencott, 1891.

Alden, Carroll S. *Makers of Naval Tradition*. New York, NY: Ginn and Company, 1935.

_____. *The United States Navy: A History*. Chicago, IL: Lippincott, 1963.

Alden, John. *The American Steel Navy [1883-1890]*. Annapolis, MD: Naval Institute Press, 1972.

Alger, Russell Alexander. *The Spanish-American War*. Freeport, NY: Books for Libraries Press, 1971 reprint of 1901 edition.

Asada, Sadao. *From Mahan to Pearl Harbor: The Imperial Japanese Navy and the United States.* Annapolis, MD: Naval Institute Press, 2006.

Baer, George W. *One-Hundred Years of Sea Power: The U.S. Navy 1890-1990*. Stanford, CA: Stanford University Press, 1994.

Bauer, K. Jack, ed., *The New American State Papers (1789-1860), Naval Affairs. Vol. 1. General Naval Policy and Defense.* Wilmington, DE: Scholarly Resources, 1981.

Baxter III, James Phinney. *The Introduction of the Ironclad Warship*. Annapolis, MD: Naval Institute Press, 2001 reprint of 1933 edition**.**

Beach, Edward L. *The United States Navy: 200 Years*. New York, NY: H. Holt, 1986.

Beale, Howard K. *Theodore Roosevelt and the Rise of America to World Power*. New York, NY: Collier Books, 1967.

Beard, Charles A. and Mary R. Beard. *The Rise of American Civilization*, 2 vols. New York, NY: The Macmillan Company, 1927.

Beede, Benjamin R. *The War of 1898 and U.S. Intervention, 1898-1934: An Encyclopedia*. New York, NY: Garland Publishing, 1994.

Bemis, Samuel Flagg. *A Diplomatic History of the United States*. New York, NY: Henry Holt and Company, 1936.

_____. *The Latin American policy of the United States: An Historical Interpretation*. New York, NY: Harcourt, Brace and Company, 1943.

Bennett, Frank M. *The Steam Navy of the United States: A History of the Growth of the Steam Vessel of War in the U. S. Navy, and the Corps of Engineers*. New York, NY: W. T Nicholson Press, 1896, reprint, Westport, CT: Greenwood Press, 1972.

_____. *The Monitor and the Navy under Steam*. Boston, MA: Houghton, Mifflin and Company, 1900.

Bixby, William. *The Forgotten Voyage of Charles Wilkes*. New York, NY: McKay, 1966.

Bradford, James C. ed. *The Crucible of Empire: The Spanish-American War and its Aftermath*. Annapolis, MD: Naval Institute Press, 1993.

_____. *Command Under Sail: Makers of American Naval Tradition, 1775-1850*. Annapolis, MD: United States Naval Institute, 1985.

_____. *Captains of the Old Steam Navy: Makers of American Naval Tradition, 1840-1880*. Annapolis, MD: Naval Institute Press, 1986.

_____. *Admirals of the New Steel Navy: Makers of Naval Tradition, 1880-1930.* Annapolis, MD: Naval Institute Press, 1990.

Bradford, Richard H. *The Virginius Affair*. Boulder, CO: Colorado Associated University Press, 1980.

Braisted, William R. *The United States Navy in the Pacific, 1897-1909*. Annapolis, MD: Naval Institute Press, 2008.

Brands, H. W. *Bound to Empire: The United States and the Philippines*. New York, NY: Oxford University Press, 1992.

Brodie, Bernard. *Sea Power in the Machine Age*. Princeton, NJ: Princeton University Press, 1941.

Callahan, Eduard W., ed. *List of the Officers of the U.S. Navy and Marine Corps, 1775 to 1900*. New York, NY: Haskell House, 1969. (reprint of the 1900 edition)

Cameron, Euan, ed. *Early Modern Europe: An Oxford History*. New York, NY: Oxford University Press, 2001.

Canney, Donald L. *The Old Steam Navy, Volume One: Frigates, Sloops, and Gunboats, 1815-1885*. Annapolis, MD: Naval Institute Press, 1990.

_____. *The Old Steam Navy, Volume Two: The Ironclads, 1842-1885*. Annapolis, MD: Naval Institute Press, 1993.

_____. *Sailing Warships of the US Navy*. Annapolis, MD: Naval Institute Press, 2001.

Carrisin, Daniel J. *The Navy from Wood to Steel, 1860-1890*. New York, NY: Franklin Watts, 1965.

Chadwick, French Ensor. *The American Navy*. Garden City, NY: Doubleday, Page & Company, 1915.

Chapelle, Howard I. *The History of the American Sailing Navy: The Ships and Their Development*. New York, NY: Bonanza Books, 1949.

Challener, Richard D. *Admirals, Generals, and American Foreign Policy, 1898-1914*. Princeton, NJ: Princeton University Press, 1973.

Cipolla, Carlo M. *Guns, Sails, and Empires: Technological Innovation and the Early Phases of European Expansion, 1400-1700*. Manhattan, KS: Sunflower University Press, 1996.

Clark, Charles. *My Fifty Years in the Navy*. Boston, MA: Little, Brown, and Company, 1917.

Cogar, William B., ed. *Dictionary of Admirals in the U.S. Navy*. Annapolis, MD: Naval Institute Press, 1989/1991. 2 vols.

Coletta, Paolo E. *Admiral Bradley A. Fiske and the American Navy*. Lawrence, KS: Regents Press of Kansas, 1979.

_____. *American Secretaries of the Navy*. Vol. I. *1775-1913*. Annapolis, MD: Naval Institute Press, 1980.

_____. *A Survey of U.S. Naval Affairs, 1865-1917*. Lanham, MD: University Press of America, 1987.

Cooling, Benjamin Franklin. *Gray Steel and Blue Water Navy: The Formative Years of the American Military-Industrial Complex, 1881-1917*. Hamden, CT: Archon Books, 1979.

_____. *Benjamin Franklin Tracy: Father of the Modern American Fighting Navy*. Hamden, CT: Shoestring Press, 1973.

Cooney, David M. *A Chronology of the U.S. Navy: 1775-1965*. New York, NY: Franklin Watts, Inc., 1965.

Cooper, James Fenimore. *The History of the Navy of the United States*. Annapolis, MD: Naval Institute press, 2001. (reprint of Cooperstown: H. & E. Phinney, 1848).

Corbett, Julian S. Sir. *Principles of Maritime Strategy*. Mineola, NY: Dover Publications, Inc., 2004. (reprint of *Some Principles of Maritime Strategy*. London: Longmans, Green and Company, 1911)

Crawford, Michael J., ed. *The World Cruise of the Great White Fleet*. Washington DC: Naval Historical Center, 2008.

Dalzell, George W. *The Flight from the Flag: The Continuing Effect of the Civil War Upon the American Carrying Trade*. Chapel Hill, NC: The University of North Carolina Press, 1940.

Davis, George T. *A Navy Second to None: The Development of Modern American Naval Policy*. New York, NY: Harcourt, Brace & Co., 1940.

Davis, William C. *Duel Between the First Ironclads*. Garden City, NY: Doubleday & Company, Inc., 1975.

Davison, Kenneth E. *The Presidency of Rutherford B. Hayes*. Westport, CT: Greenwood Press, 1972.

Diamond, Jared. *Guns, Germs, and Steel: The Fates of Human Societies*. New York, NY: W. W. Norton & Company, 1999.

Dobson, John M. *America's Ascent: The United States becomes a Great Power, 1880-1914*. Dekalb, IL: Northern Illinois, 1978.

Dowart, Jeffrey M. *The Office of Naval Intelligence: The Birth of America's First Intelligence Agency, 1865-1918.* Annapolis, MD: Naval Institute Press, 1979.

Drake, Frederick C. *The Empire of the Seas: A Biography of Rear Admiral Robert Wilson Schufeldt, USN*. Honolulu, HI: University of Hawaii Press, 1984.

Dudley, Wade G. *Splintering the Wooden Wall: The British Blockade of the United States, 1812-1815*. Annapolis, MD: Naval Institute Press, 2003.

Dudley, William S. and Michael J. Crawford. eds. *The Early Republic and the Sea.* Washington, DC: Brassey's, Inc., 2001.

Dunnavent, Blake. *Brown Water Warfare: The U.S. Navy in Riverine Warfare and the Emergence of a Tactical Doctrine, 1175-1970*. Gainesville, FL: University Press of Florida, 2003.

Du Pont, Samuel F. *Official Dispatches and Letters, 1846, 1861, 1863*. Washington, DE: Ferris Bros., 1883.

Elleman, Bruce A. and S.C.M. Paine, eds. *Naval Blockades and Sea Power: Strategies and Counter-strategies, 1805-2005*. New York, NY: Routledge, 2006.

Evans, Robley D. *A Sailor's Log: Recollections of Forty Yeas of Navy Life*. New York, NY: Appleton, 1921.

Falk, Edwin A. *From Perry to Pearl Harbor: The Struggle for Supremacy in the Pacific*. Garden City, NY: Doubleday, Doran, 1943.

Fiske, Bradley A. *From Midshipman to Rear Admiral*. New York, NY: The Century Co., 1919.

_____. *The Navy as a Fighting Machine*. New York, NY: Charles Scribner's Sons, 1916.

Friedman, Norman. *U.S. Cruisers: An Illustrated Design History*. Annapolis, MD: Naval Institute Press, 1984.

_____. *U.S. Battleships: An Illustrated Design History*. Annapolis, MD: Naval Institute Press, 1984.

Fuller, Howard J. *Clad in Iron: The American Civil War and the Challenge of British Naval Power*. Westport, CT: Praeger Security International, 2008.

Gardiner, Robert, ed. *Steam, Steel & Shellfire: The Steam Warship 1815-1905*. Edison, NJ: Chartwell Books Inc., 2001

Gerace, Michael P. *Military Power, Conflict and Trade*. Portland, OR: Frank Cass Publishers, 2004.

Gilderhus, Mark T. *The Second Century: U.S.-Latin American Relations since 1889*. Wilmington, DE: Scholarly Resources, Inc., 2000.

Gleaves, Albert S. *The Life of an American Sailor: Rear Admiral William Hemsley Emory.* New York, NY: George H. Doran Company, 1923.

_____. *The Life and Letters of Stephen B. Luce, Rear Admiral, USN*. New York, NY: G. P. Putnam's Sons, 1925.

_____. *The Life of an American Sailor: Rear Admiral William Hemsley Emory*. New York, NY: George H. Doran Company, 1923.

Goldberg, Joyce S. *The Baltimore Affair*. Lincoln, NB: University of Nebraska Press, 1986.

Goodrich, Caspar F. *Rope Yarns from the Old Navy*. New York, NY: The Naval Historical Society, 1931.

Gould, Lewis L. *The Spanish-American War and President McKinley*. Lawrence, KS: University Press of Kansas, 1982.

Graebner, Norman A. *Empire on the Pacific: A Study in American Continental Expansion*. Santa Barbara, CA: ABC-Clio, Inc., 1983 reprint of 1955 edition.

Greger, René. *Battleships of the World*. Translated by Geoffrey Brooks. Annapolis, MD: Naval Institute Press, 1993.

Grenville, John A. S. with George Bakley Young. *Politics, Strategy, and American Diplomacy: Studies in Foreign Policy, 1873-1917*. New Haven, CT: Yale University Press, 1966.

Grenville, John A. S. "American Naval Preparations for War with Spain, 1896-1898." *Journal of American Studies* vol. 2. Edited by Dennis Wellard. Cambridge, MA: Cambridge University Press, 1968: 33-47.

Griswold, A. Whitney. *The Far Eastern Policy of the United States*. New York, NY: Harcourt, Brace, 1938.

Hagan, Kenneth J. *American Gunboat Diplomacy and the Old Navy, 1877-1889.* Westport, CT: Greenwood Press, 1973.

_____. *This People's Navy: The Making of American Sea Power*. New York, NY: The Free Press, 1991.

Hagan, Kenneth J. ed. *In Peace and War: Interpretations of American Naval History, 1775-1984*. Westport, CT: Greenwood Press, 1984.

Hamilton, C. E. *Anglo-French Naval Rivalry, 1840-1870.* New York, NY: Oxford University Press, 1993.

Hattendorf, John B. ed., *The Influence of History on Mahan: The Proceedings of a Conference Marking the Centenary of Alfred Thayer Mahan's 'The Influence of Sea Power on History, 1660-1783.'* Newport, RI: Naval War College Press, 1991.

Hattendorf, John B., et. al. *Sailors and Scholars: The Centennial History of the U.S. Naval War College*. Newport, RI: Naval War College Press, 1984.

Hayes**,** John D. and John B. Hattendorf, eds. *The Writings of Stephen B. Luce.* Newport, RI: Naval War College Press, 1975.

Haynes, Sam W. *Unfinished Revolution: The Early American Republic in a British World*. Charlottesville, VA: University of Virginia Press, 2010.

Headrick, Daniel R. *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century*. New York, NY: Oxford University Press, 1981**.**

Healy, David. *U.S. Expansionism: The Imperialist Urge in the 1890's*. Madison, WI: University of Wisconsin Press, 1970.

_____. *Drive to Hegemony: The United States in the Caribbean, 1898-1917*. Madison, WI: The University of Wisconsin Press, 1988.

Henson, Curtis T., Jr. *Commissioners and Commodores: The East India Squadron and American Diplomacy in China.* University, AL: The University of Alabama Press, 1982.

Herrick, Jr., Walter R. *The American Naval Revolution.* Baton Rouge, LA: Louisiana State University Press, 1966.

Herring, George C. *From Colony to Superpower: U.S. Foreign Relations since 1776.* New York, NY: Oxford University Press, 2008.

Hill, Richard. *War at Sea in the Ironclad Age*. London: Cassell & Co., 2000.

Hobbes, Thomas. *The Leviathan*. Amherst, NY: Prometheus Books, 1988.

Hobsbawn, Eric and Terence Ranger. *The Invention of Tradition*. Cambridge, MA: Cambridge University Press, 1983.

Hofstadter, Richard. “Manifest Destiny and the Philippines,” in *America in Crisis: Fourteen Crucial Episodes in American History*, edited by Daniel Aaron. New York, NY: Alfred A, Knopf, 1952.

_____. *The Paranoid Style in American Politics and Other Essays*. New York, NY: Alfred A. Knopf, 1965.

Hoogenboom, Ari. *The Presidency of Rutherford B. Hayes*. Lawrence, KS: University Press of Kansas, 1988.

Hoyt. Edwin Palmer. *The Typhoon that Stopped a War*. New York, NY: David McKay Company, Inc., 1968.

Israel, Fred L. ed. *The State of the Union Messages of the Presidents of the United States.* Vol. I. *1790-1860*. New York, NY: Chelsea House Publishers, 1967.

Johnson, Robert Erwin. *Far China Station : The U.S. Navy in Asiatic Waters, 1800-1898*. Annapolis, MD: Naval Institute Press, 1979.

_____. *Rear Admiral John Rodgers, 1812-1882*. Annapolis, MD: Naval Institute Press, 1967.

_____. *Thence Round Cape Horn: The Story of the United States Naval Forces on Pacific Station, 1818-1923*. New York, NY: Arno Press, 1980.

Karsten, Peter. *The Naval Aristocracy: The Golden Age of Annapolis and the Emergence of Modern American Navalism*. New York, NY: The Free Press, 1972.

Kuehn, John T. *Agents of Innovation: The General Board and the Design of the Fleet That Defeated Japan*. Annapolis, MD: Naval Institute Press, 2008.

Kuhn, Thomas S. *The Structure of Scientific Revolutions*. Chicago, IL: The University of Chicago Press, 1996.

LaFeber, Walter. *The New Empire: An Interpretation of American Expansion, 1860-1898*. Ithaca, NY: Cornell University Press, 1963.

_____. *The American Age: United States Foreign Policy at Home and Abroad since 1750*. New York, NY: W.W. Norton, 1989.

Lambert, Andrew. *Battleships in Transition: The Creation of the Steam Battlefleet, 1815-1860*. Annapolis, MD: Naval Institute Press, 1984.

_____. *Warrior: The World’s First ironclad, Then and Now*. Annapolis, MD: Naval Institute Press, 1987.

Lambert, Frank. *The Barbary Wars: American Independence in the Atlantic World*. New York, NY: Hill and Wang, 2005.

Langley, Lester D. *The Banana Wars: An Inner History of American Empire, 1900-1934*. Lexington, KY: The University Press of Kentucky, 1983.

_____. *Struggle for the American Mediterranean: United States-European Rivalry in the Gulf-Caribbean, 1776-1904*. Athens, GA: The University of Georgia Press, 1976.

Lanning, Michael Lee. *The Military 100: A Ranking of the Most Influential Military Leaders of all Tim.* Secaucus, NJ: Citadel Press, 1996.

Lingg, Ann M. *John Philip Sousa.* New York, NY: Holt, Rinehart and Winston, 1954.

Livezy, William E. *Mahan on Seapower*. Norman, OK: University of Oklahoma Press, 1947.

Lodge, Henry Cabot, ed. *Selections from the Correspondence of Theodore Roosevelt and Henry Cabot Lodge, 1884-1918*. New York, NY: Charles Scribner's Son, 1925.

Long, David F. *Gold Braid and Foreign Relations: Diplomatic Activities of U.S. Naval Officers, 1798-1883*. Annapolis, MD: Naval Institute Press, 1988.

Long, John D. *The New American Navy*, 2 vols. New York, NY: The Outlook Company, 1903.

Love, Jr. Robert W. *The History of the U.S. Navy*, vol. One, 1775-1941. Harrisburg, PA: Stackpole Books, 1992.

Luce, Stephen B. *The Writings of Stephen B. Luce*. Edited by John D. Hayes and John B. Hattendorf. Newport, RI: Naval War College, 1975.

Macksey, Kenneth. *Technology in War: The Impact of Science on Weapon Development and Modern Battle*. New York, NY: Prentice Hall, 1985.

Mahan, Alfred Thayer. *The Influence of Sea Power upon History, 1660-1783*. Boston, MA: Little, Brown, and Company, 1939.

_____. *The Interest of America in Sea Power, Present and Future*. Boston, MA: Little, Brown, and Company, 1911.

_____. *Armaments and Arbitration or the Place of Force in the International Relations of States*. New York: Harper & Brothers Publishers, 1912.

_____. *The Major Operations of the Navies in the War of American Independence.*

London: Sampson Low, Marston & Company, Limited, 1913.

_____. *Naval Strategy: Compared and Contrasted with the Principles and Practices of Military Operations on Land*. Westport, CN: Greenwood Press, Publishers, 1911.

_____. *Lessons of the War with Spain, and Other Articles*. Freeport, NY: Books for Libraries Press, 1970. (reprint of the 1899 edition)

_____. *From Sail to Steam: Recollections of a Naval Life*. New York, NY: Harper & Brothers Publishers, 1907.

_____. *Sea Power in Its Relation to the War of 1812*, 2 vols. London: Sampson Low, Marston, & Company, Limited, 1905.

Marder, Arthur J. *The Anatomy of British Sea Power: A History of British Naval Policy in the Pre-Dreadnought Era, 1880-1905*. Hamden, CT: Archon Books, 1964.

Marolda, Edward J. ed. *Theodore Roosevelt, the U.S. Navy, and the Spanish-American War*. New York, NY: Palgrave, 2001.

Massie, Robert K. *Dreadnought: Britain, Germany, and the Coming of the Great War*. New York, NY: Ballantine Books, 1991.

May, Ernest R. *Imperial Democracy: The Emergence of America as a Great Power*. New York, NY: Harcourt Brace & World, 1961.

_____. *American Imperialism: A Speculative Essay*. New York, NY: Antheum, 1968.

McBride, William M. *Technological Change and the United States Navy, 1865-1945*. Baltimore, MD: The Johns Hopkins Press, 2000.

McCormick, Thomas J. *China Market: America's Quest for Informal Empire, 1893 -1901*. Chicago, IL: Quadrangle Books, 1967.

McDermott, John D. *Circle of Fire: The Indian War of 1865*. Mechanicsburg, PA: Stackpole Books, 2003.

McNeil, William H. *The Pursuit of Power: Technology, Armed Force, and Society since A.D. 1000.* Chicago, IL: The University of Chicago Press, 1982.

Merk, Frederick. *Manifest Destiny and Mission in American History: A Reinterpretation*. New York, NY: Alfred A. Knopf, 1963.

Miller, Edward S. *War Plan Orange: The U.S. Strategy to Defeat Japan, 1897-1945*.

Annapolis, MD: Naval Institute Press, 2007.

Miller, Nathan. *The U.S. Navy: A History*. 3rd ed. Annapolis, MD: Naval Institute Press, 1997.

Millett, Allan R. and Peter Maslowski. *For the Common Defense: A Military History of the United States of America.* New York, NY: The Free Press, 1994.

Millis, Walter. *The Martial Spirit: A Study of Our War with Spain*. Boston, MA: Houghton Mifflin Company, 1931.

Mitchell, Nancy. *The Danger of Dreams: German and American Imperialism in Latin America*. Chapel Hill, NC: University of North Carolina Press, 1999.

Morgan, William J., et. al., eds. *Autobiography of Rear Admiral Charles Wilkes, USN, 1798-1877*. Washington, D.C.: Government Printing Office, 1979.

Morrison, Elting E. *Men, Machines, and Modern Times*. Cambridge, MA: The M.I.T. Press, 1966.

Munro, Dana G. *Intervention and Dollar Diplomacy in the Caribbean, 1900-1921*. Princeton, NJ: Princeton University Press, 1964.

Musicant, Ivan. *The Banana Wars: A History of United States Military Intervention in Latin America from the Spanish-American War to the Invasion of Panama*. New York, NY: MacMillan Publishing Company, 1990.

_____. *Empire by Default: The Spanish-American War and the Dawn of the American Century*. New York, NY: Henry Holt and Company, 1998.

Nash, Peter V. *The Development of Mobile Logistic Support in Anglo-American Naval Policy, 1900-1953*. Gainesville, FL: University Press of Florida, 2009.

O'Connell, Robert L. *Sacred Vessels: The Cult of the Battleship and the Rise of the U.S. Navy.* Boulder, CO: Westview Press, 1991.

Offner, John L. *An Unwanted War: The Diplomacy of the United States and Spain, 1895 -1898.* Chapel Hill, NC: University of North Carolina Press, 1992.

O'Gara, Gordon. *Theodore Roosevelt and the Rise of the Modern Navy*. New York, NY: Greenwood Press, 1969. (reprint of the 1943 Princeton University Press edition)

Paine, Lincoln P. *Warships of the World to 1900*. New York, NY: Houghton Mifflin Company, 2000.

Palmer, Michael A. *Stoddert's War: Naval Operations During the Quasi-War with*

France, 1798-1801, Columbia, SC: University of South Carolina Press, 1987.

Patterson, Thomas G. and Stephen G. Rabe, eds. *Imperial Surge: The United States Abroad, The Early 1890-Early 1900s*. Lexington, KY: D.C. Heath and Company, 1992.

Paullin, Charles O. *Diplomatic Negotiations American Naval Officers, 1778-1883*. Baltimore, MD: Johns Hopkins Press, 1912.

_____. *Paullin's History of Naval Administration, 1775-1911*.

Pérez Jr., Louis A. *The War of 1898: The United States and Cuba in History and Historiography*. Chapel Hill, NC: The University of North Carolina Press, 1998.

Perry, John Curtis, *Facing West: Americans and the Opening of the Pacific*. New York, NY: Praeger, 1994.

Philbrick, Nathaniel. *Sea of Glory, America's Voyage of Discovery, The U.S. Exploring Expedition, 1838-1842*. New York, NY: Viking, 2003.

Plesur, Milton. *America's Outward Thrust: Approaches to Foreign Affairs, 1865 1890*, DeKalb, IL: Northern Illinois University Press, 1971.

Plesur, Milton, ed. *Creating an American Empire, 1865-1914*. New York, NY: Pitman Publishing Corporation, 1971.

Potter, E. B. and Chester W. Nimitz, eds. *Sea Power: A Naval History*. Englewood Cliffs, NJ, 1960.

Pratt, Julius W. *America's Colonial Experiment: How the United States Gained, Governed, and in part Gave Away a Colonial Empire*. New York, NY: Prentice-Hall, 1950.

_____. *The Expansionists of 1898: The Acquisition of Hawaii and the Spanish Islands*. Baltimore, MD: Johns Hopkins Press, 1936, reprint, New York, NY: Peter Smith, 1951.

_____. *A History of U.S. Foreign Policy*. Englewood Cliffs, NJ: Prentice-Hall, 1965.

Rappaport, Armin. *The Navy League of the United States*. Detroit, MI: Wayne State University Press, 1962.

Reckner, James R. *Teddy Roosevelt's Great White Fleet*. Annapolis, MD: Bluejacket Books, 1988.

Reilly, Jr., John C. *United States Navy Destroyers of World War II.* New York, NY: Sterling Publishing Co., Inc. 1983.

Richardson, James D. *A Compilation of the Messages and Papers of the Presidents*. New York, NY: Bureau of National Literature, 1897.

Richardson, Leon B. *William E. Chandler: Republican*. New York, NY: Dodd, Mead, 1940.

Roosevelt, Theodore. *The Naval War of 1812*. New York, NY: The Modern Library, 1999. (First published in 1882)

Ropp, Theodore. *The Development of a Modern Navy: French Naval Policy 1871-1904.* Edited by Stephen S. Roberts. Annapolis, MD: Naval Institute Press, 1987.

Rose, Lisle A. *Power at Sea: The Age of Navalism, 1890-1918*. Columbia, MI: University of Missouri Press, 2007.

Rousmaniere, John. *The Annapolis Book of Seamanship.* New York, NY: Simon and Schuster, 1983.

Rüger, Jan. *The Great Naval Game: Britain and Germany in the Age of Empire*. New York, NY: Cambridge University Press, 2007.

Sandler, Stanley. *The Emergence of the Modern Capital Ship*. Newark, DE: University of Delaware Press, 1979.

Schley, Winfield Scott. *Forty-Five Years under the Flag*. New York, NY: Appleton, 1904.

Schoonover, Thomas D. *Uncle Sam's War of 1898 and the Origins of Globalization*. Lexington, KY: University Press of Kentucky, 2003.

_____. *The United States in Central America, 1860-1911: Episodes of Social Imperialism and Imperial Rivalry in the World System*. Durham, NC: Duke University Press, 1991.

Schroeder, John H. *Shaping a Maritime Empire: The Commercial and Diplomatic Role of the American Navy, 1829-1861*. Westport, CT: Greenwood Press, 1985.

_____. *Matthew Calbraith Perry: Antebellum Sailor and Diplomat.* Annapolis, MD: Naval Institute Press, 2001.

Schroeder, Seaton. *A Half-Century of Naval Service*. New York, NY: Appleton, 1922.

Seager II, Robert and Doris D. Maguire, eds. *The Letters and Papers of Alfred Thayer Mahan*, 3 vols. Annapolis, MD: Naval Institute Press, 1975.

Seager II, Robert. *Alfred Thayer Mahan: The Man and His Letters*. Annapolis, MD: Naval Institute Press, 1977.

Selfridge, Thomas O. *What Finer Tradition: The Memoirs of Thomas O. Selfridge, Jr., Rear-Admiral U.S.N*. Columbia, SC: University of South Carolina Press, 1987.

Shulman, Mark Russell. *Navalism and the Emergence of American Sea Power, 1882-1893*. Annapolis, MD: Naval Institute Press, 1995.

Smith, Gene A. *"For the Purposes of Defense": The Politics of the Jeffersonian Gunboat Program*. Newark: University of Delaware Press, 1995.

_____. *Iron and Heavy Guns: Duel Between the Monitor and the Merrimac.* Abilene, TX: McWhiney Foundation Press, 1998.

_____. *Thomas ap Catesby Jones: Commodore of Manifest Destiny.* Annapolis, MD: Naval Institute Press, 2000.

Smith Jr., Myron J. compiler. *The American Navy, 1865-1918: A Bibliography*. Metuchen, NJ: Scarecrow Press, 1974.

Spector, Ronald. *Professors of War: The Naval War College and the Development of the Naval Profession*. Newport, RI: Naval War College Press, 1977.

Sprout, Harold and Margaret. *The Rise of American Naval Power, 1776-1918*. Annapolis, MD: Naval Institute Press, 1990. (reprint of 1939 edition)

Steedman, Charles. *Memoir and Correspondence of Charles Steedman, Rear Admiral, United States Navy*. Edited by Amos Lawrence Mason. Cambridge, MA: The Riverside Press, 1912.

Still Jr., William N. *American Sea Power in the Old World: The United States Navy in European and Near Eastern Waters, 1865-1917*. Westport, CT: Greenwood Press, 1980.

_____. *Crisis at Sea: The United States Navy in European Waters in World War I.* Gainesville, FL: University Press of Florida, 2006.

Stilwell, Alexander, ed. *The Trafalgar Companion*. University Park, IL: Osprey Publishing LTD., 2005.

Strategic Planning in the U.S. Navy: Its Evolution and Execution, 1891-1945. Wilmington, DE: Scholarly Resources, 1981.

Summers, Mark Wahlgren. *The Gilded Age, or, the Hazard of New Functions*. Upper Saddle River, NJ: Prentice Hall, 1997.

Sweetman, Jack. *History of the U.S. Naval Academy*. Annapolis, MD: Naval Institute Press, 1979. revised by Thomas Cutter, Annapolis: Naval Institute Press, 1994.

Symonds, Craig L. *Lincoln and His Admirals*. New York, NY: Oxford University Press, Inc., 2008.

_____. *The Navalists and Anti-Navalists: The Naval Policy Debate in the United States, 1785-1827*. Newark, DE: University of Delaware Press, 1980.

Thiesen, William H. *Industrializing American Shipbuilding: The Transformation of Ship Design and Construction, 1820-1920*. Gainesville, FL: University Press of Florida, 2006.

Thompson, M.S., compiler. *General Orders and Circulars Issued by the Navy Department from 1863 to 1887*. Washington, D.C.: Government Printing Office, 1887.

Todorech, Charles. *The Spirited Years: A History of the Antebellum Naval Academy*. Annapolis, MD: Naval Institute Press, 1984.

Toll, Ian W. *Six Frigates: The Epic History of the Founding of the U.S. Navy*. New York, NY: W.W. Norton & Company, Inc., 2006.

Trask, David F. *The War with Spain in 1898*. New York, NY: McMillan, 1981.

_____. *A Bibliography of United States-Latin American Relations since 1810*. Lincoln, NB: University of Nebraska Press, 1968.

Traxel, David. *1898: The Birth of the American Century*. New York, NY: Alfred A. Knopf, 1999.

Tucker, Spencer C. *The Jeffersonian Gunboat Navy*. Columbia: University of South Carolina Press, 1993.

Turk, Richard. *The Ambiguous Relationship: Theodore Roosevelt and Alfred Thayer Mahan*. New York, NY: Greenwood Press, 1987.

Utley, Robert M. *The Indian Frontier, 1846-1890*. Albuquerque, NM: University of New Mexico Press, 2003.

Varg, Paul A. *United States Foreign Relations, 1820-1860*. Michigan State University Press, 1979.

Warren, Marion E. and Mame Warren. *Everybody Works but John Paul Jones: A Portrait of the U.S. Naval Academy, 1845-1915*. Annapolis, MD: Naval Institute Press, 1981.

Washington, George. *September 15, 1870 – December 6, 1870*. Vol. 20 of *The Writings of George Washington*. Edited by John C. Fitzgerald. Washington, D.C.: Government Printing Office, 1937.

Weigley, Russell F. *The American Way of War: A History of United States Military Strategy and Policy*. Bloomington, IN: Indiana University Press, 1973.

Weinberg, Albert K. *Manifest Destiny: A Study of Nationalist Expansion in American History*. Baltimore, MD: Johns Hopkins Press, 1935.

Wescott, Allen, ed. *American Sea Power since 1775*. Philadelphia, PA: Lippencott, 1947.

West, Richard S., Jr. *Admirals of American Empire*. Westport, CT: Greenwood Press, Publishers, 1948.

Who Was Who in America, Vol. I, 1897-1942. Chicago, IL: The A. N. Marquis Company, 1943.

Wilkerson, Marcus M. *Public Opinion and the Spanish-American War: A Study in War Propaganda*. Baton Rouge, LA: Louisiana State University Press, 1932.

Wilkes, Charles. *Autobiography of Rear Admiral Charles Wilkes, U.S. Navy 1798-1877*. Edited by William James Morgan, David B. Tyler, Joye L. Leonhart, and Mary F. Loughlin. Washington, DC: Naval History Division, Department of the Navy, 1978.

Williams, Charles Richard, ed. *Diary and Letters of Rutherford Birchard Hayes*. Columbus, OH: F. J. Heer Printing Company, 1924.

Williams, William Appleman. *The Tragedy of American Diplomacy*. Cleveland, OH: World Publishing Company, 1959.

Willmott, H. P. *The Last Century of Sea Power, Vol. I, From Port Arthur to Chanak, 1894-1922*. Bloomington, IN: Indiana University Press, 2009.

Wimmel, Kenneth. *Theodore Roosevelt and the Great White Fleet: American Sea Power Comes of Age*. Dulles, VA: Brassey's, 2000.

ARTICLES

Albion, Robert G. "The Naval Affairs Committees," *Proceedings of the United States*

Naval Institute 78, no. 2, (November, 1952): 1227-1237.

Angevine, Robert G. "The Rise and Fall of the Office of Naval Intelligence, 1882-1892: A Technological Perspective." *The Journal of Military History* 62, no. 2 (Apr. 1998): 291-312.

Apt, Benjamin L. "Mahan's Forebears: The Debate over Maritime Strategy, 1868-1883." *Naval War College Review* 50, No. 3 (Summer 1997), pp.86-111.

Bailey, Thomas A. "America's Emergence as a World Power: The Myth and the Verity." *The Pacific Historical Review* 30, no. 1 (Feb. 1961): 1-16.

Braisted, William R. "The Philippine Naval Base Problem, 1898-1909," *The Mississippi Valley Historical Review* 41, No. 1. (June, 1954): 21-40.

_____. "The United States Navy's Dilemma in the Pacific. 1906-1909." *The Pacific Historical Review* 26, no.3 (Aug. 1957): 235-244.

Buhl, Lance C. "Marines and Machines: Resistance to Technological Change in the American Navy, 1865-1877." *Journal of American History* 61 (Dec. 1974): 703-727.

Conroy, Robert, "Only Luck Kept the United States from Being Occupied by Kaiser Wilhem II's Army between 1899 and 1904." *Military History* 19 no. 3 (Aug. 2002): 18-22.

Fels, Rendig. "American Business Cycles, 1865-1879," *The American Economic Review* 41, no. 3 (June, 1951): 325-349.

Field, James A., Jr., "American Imperialism: The Worst Chapter in Almost Any Book," *The American Historical Review* 83, No. 3 (Jun., 1978): 644-668.

Fitzgerald, John C. *The Writings of George Washington*. Vol. 20. *September 6, 1780 December 20, 1780*. Washington, D.C.: Government Printing Office, 1937.

Friedman, Norman. "Transformation a Century Ago," *Naval History* 19, no. 2 (April 2005): 32-37.

Gates, Robert M. "A Balanced Strategy: Reprogramming the Pentagon for a New Age." *Foreign Affairs* (Jan./Feb. 2009): 28-40.

Goldberg, Joyce S. "Consent to Ascent. The Baltimore Affair and the U.S. Rise to World Power Status." *The Americas* 41, no. 1 (July 1984): 21-35.

Grenville, John A. S. "Diplomacy and War Plans in the United States, 1890-1917." *Transaction of the Royal Historical Society* 8 (1961): 1-21.

Hammett, Hugh B. “The Cleveland Administration and Anglo-American Friction in Hawaii, 1893-1899.” *Military Affairs* 40 (Feb. 1976): 27-32.

Hattendorf, John B. “In a Far More Thorough Manner.” *Naval History* 19, no. 2 (Apr. 2005): 38-43.

Harrison, John P. “Science and Politics: Origins and Objectives of Mid-Nineteenth Century Government Expeditions to Latin America.” *The Hispanic American Historical Review* 35, no. 2 (May, 1955): 179-80.

Harrod, Frederick S. “New Technology in the Old Navy: The United States Navy during the 1870s.” *American Neptune* 53, no. 1 (Winter 1993): 5-19.

Karsten, Peter “The Nature of ‘Influence’: Roosevelt, Mahan and the Concept of Sea Power,” *American Quarterly* 23, No. 4. (Oct., 1971): 585-600.

LaFeber, Walter. “Notes on the ‘Mercantilistic Imperialism’ of Alfred Thayer Mahan.” *The Mississippi Valley Historical Review* 48, no. 4 (Mar. 1962): 674-685.

LaFeber, Walter and Robert L. Beisner. “American Imperialism: The Worst Chapter in Almost Any Book – Comments.” *The American Historical Review* 83, no. 3 (Jun. 1978): 669-678.

Livermore, Seward W. “American Naval Base Policy in the Far East, 1850-1914.” *The Pacific Historical Review* 13, no. 2 (June, 1944): 113-135.

_____. “The American Navy as a Factor in World Politics.” *The American Historical Review* 63, no. 4 (July 1958): 863-879.

_____. “American Strategy Diplomacy in the South Pacific 1890-1914.” *The Pacific Historical Review* 12, no. 1 (Mar. 1943): 33-51.

_____. “Theodore Roosevelt, the American Navy, and the Venezuelan Crisis of 1902-1903.” *The American Historical Review* 51, no. 3 (Apr. 1946): 452-471.

Maurer, John H. “Fuel and the Battle Fleet: Coal, Oil, and American Naval Strategy, 1898-1925.” *Naval War College Review* 34, no. 6 (Nov.-Dec. 1981): 60-78.

Merrill, James M. “The Successors of Mahan: A Survey of the Writings on American Naval History, 1914-1960.” *The Mississippi Valley Historical Review* 50, no. 1 (Jun. 1963): 79-99.

Morrison, Elting E. “The War of Ideas: The United States Navy 1870-1890.” *The Harmon Memorial Lectures in Military History*, Number 11, U.S. Air Force Academy, CO, 1969.

Patterson, Thomas G. “United States Intervention in Cuba, 1898: Interpretations of the Spanish-American-Cuban-Filipino War.” *The History Teacher* 29, no. 3 (May 1996): 341-361.

Paullin, Charles O. “A Half Century of Naval Administration in America, 1861-1911,” *Proceedings of the United States Naval Institute* 38 (December 1912): 1309-1336, and 39 (March 1913): 735-760.

Pomeroy, Earl S. “American Policy Respecting the Marshalls, Carolines, and Mariannas, 1898-1941.” *The Pacific Historical Review* 17, no. 1 (Feb. 1948): 43-53.

Reynolds, Clark G. “American Strategic History and Doctrines: A Reconsideration.” *Military Affairs* 39, no. 4 (Dec. 1975): 181-191.

Sandler, Stanley. “A Navy in Decay: Some Strategic Technological Results of Disarmament, 1865-69 in the U.S. Navy.” *Military Affairs* 35, no. 4 (Dec. 1917): 138-142.

Seager, Robert II. “Ten Years before Mahan: The Unofficial Case for the New Navy, 1880-1890.” *Mississippi Historical Review* 40 (Dec., 1953): 491-518.

Shulman, Peter A. “Science Can Never Demobilize: The United States Navy and Petroleum Geology, 1898-1924.” *History and Technology* 19, no. 4 (2003): 365-385.

Smith, Gene A. “Thomas ap Catesby Jones and the First implementation of the Monroe Doctrine.” *Southern California Quarterly* 76, no. 2 (Summer 1994): 139-152.

Smith, Gene A. and Larry Bartlett. ‘“A Most Unprovoked, Unwarrantable, and Dastardly Attack’: James Buchanan, Paraguay, and the Water Witch Incident of 1855.” *The Northern Mariner* 19, no. 3 (July 2009): 269-290.

Smith, Geoffrey Sutton, “The Navy before Darwinism: Science, Exploration, and Diplomacy in Antebellum America.” *American Quarterly* 28, no. 1 (Spring 1976): 41-55.

Soodalter, Ron. “To the Brink in Cuba 1873.” *Military History* 26, No. 4 (October 2009): 62-67.

Symonds, Craig L. “Milestones along the Path to World Power,” *Naval History* 19, no. 6 (Dec. 2005): 42- 47.

Vlahos, Michael. “The Naval War College and the Origins of War Planning Against Japan.” *Naval War College Review* 33, no. 4 (Jul.-Aug. 1980): 23-41.

Walker, L.W. “Guam’s Seizure by the United States, 1898.” *Pacific Historical Review* 14 (Mar. 1945): 1-12.

Wicks, Daniel H. “The First Cruise of the Squadron of Evolution.” *Military Affairs* 44, no. 2 (Apr. 1980): 64-69.

Worcester, Donald E. “Naval Strategy in the War of the Pacific.” *Journal of Inter-American Studies* 5, No. 1 (Jan., 1963): 31-37.

Dissertations and Thesis

Allen, John M. “Corporate Values Invade the Navy: The Growth of Modern Sea Power, 1861-1882.” Ph.D. Dissertation, Syracuse University, 1976.

Chadburne, Charles C. “Sailors and Diplomats: U.S. Naval Operations in China, 1865-1917.” Ph.D. Dissertation, University of Washington, 1976.

Crumley, Brian T. “The Evolution of the “New” American Navy and the Naval Aspects of the Spanish-American War.” MA Thesis: University of Louisville: Louisville, KY, 1997.

_____. “The Naval Attaché System of the United States, 1882 – 1914.” Ph.D. Dissertation, Texas A&M University, May 2002.

Paullin, Charles Oscar. “The Navy of the American Revolution: Its Administration, its Policy and its Achievements.” Ph.D. Dissertation, University of Chicago, 1906.

Pedisich, Paul Everett. “Congress Provides a Navy: The Emergence of a Modern Navy as a Force in Congressional Politics, 1882-1916.” Ph.D. Dissertation, State University of New York, Stony Brook, 1998.

Sexton, Donald J. “Forging the Sword: Congress and the American Naval Renaissance, 1880-1900.” Ph.D. Dissertation, University of Tennessee, 1976.

VITA

Personal Background	Laurence Wood Bartlett III Born June 16, 1951, Richmond, Virginia Son of Laurence Wood Bartlett Jr. and Virginia Lee Bartlett Married Debra Ann Hurd June 21, 1975 Three children, two grand children
Education	Diploma, Burges High School, El Paso, Texas, 1969 Bachelor of Arts, Economics, Texas A&M University, College Station, 1973 Master of Arts, History, University of Colorado, Colorado Springs, 2003
Experience	Commissioned Officer, United States Army, 1973-1977 Owner and President, Lube ‘n Go, Inc., 1977-1999 Teaching Assistantship, University of Colorado, Colorado Springs, 2001-2002 Lecturer, University of Colorado, Colorado Springs, 2002 2003 Teaching Assistantship, Texas Christian University, 2003 2007 Adjunct Instructor, University of Texas, Dallas, 2007
Professional Memberships	North American Society for Oceanic History Society for Historians of American Foreign Relations Society for Military History

ABSTRACT

NOT MERELY FOR DEFENSE
THE CREATION OF THE NEW AMERICAN NAVY, 1865-1914

by Laurence Wood Bartlett III, Ph.D., 2011
Department of History
Texas Christian University

Dissertation Advisor: Gene A. Smith: Professor of History

Between 1865 and 1882 the United States Navy experienced both a quantitative and qualitative decline. The navy faced dramatically reduced appropriations following the Civil War as it returned to its traditional peacetime missions and fleet dispositions. Those missions included the promotion and protection of American commerce, protecting American citizens and their property overseas, and acting in support of national policies. The navy accomplished these missions by dispersing its ships, singly and in small squadrons, to areas around the world where America had interests.

Beginning in 1873 a series of war scares convinced American naval officers that the navy had fallen hopelessly behind the navies of other countries. A revolution in naval technology, which had begun in the 1860s, continued at an accelerating rate. Officers argued that navy could no longer fulfill its missions and desperately required rehabilitation. Concerned officers called on Congress to build a larger, modern navy. Their efforts bore fruit with the authorization of the ABCD ships in 1883.

As the navy rebuilt, furious debates racked the officer corps. The proper role of technology lay at the heart of most of the debates. One of the most serious revolved around the use of steam power. The navy had been using steam power in an auxiliary role

since the 1840s. At issue in the 1880s was whether it should remain an auxiliary power source or assume a primary role. The answer had profound strategic ramifications. An all steam navy would require coaling stations in its areas of operation. For those stations to be of use in wartime they would have to be sovereign U.S. territory. Another debate addressed the navy's core missions. By the 1890s the navy had defined a new national security mission and a new force structure centered on battleships.

Despite their apparent success, proponents of naval expansion found they had limited influence. Funding never matched requests, resulting in the creation of an unbalanced fleet with an inadequate logistical infrastructure.