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# Mahan's Forebears

## The Debate over Maritime Strategy, 1868-1883

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Benjamin L. Apt

**B**ETWEEN 1868 AND 1883, A NUMBER of American naval officers of various ranks, lamenting their service's decline, began to promote advanced military ship designs and equipment through organized publicity. They wrote articles, held lectures, and formed organizations that eventually helped to persuade Congress and the Department of the Navy to re-create the fleet. When the Navy did begin its restructuring in the early 1880s, the warships it ordered derived much from the ideas of these advocates of modernization.

The writings of the would-be naval reformers in the 1870s can be described as a "conversation," one in which they praised, debated, and built upon one another's arguments and tracked the extraordinary contemporary pace of naval science.<sup>1</sup> The source of this conversation was the intertwined interests that characterized the lives of these men. One of their concerns was to see the developing weapon technology of the day adopted by the U.S. Navy, just as it was being adopted—so argued the reformers—in several other countries. Interest in technology was a leading impetus behind those who sought an enlarged U.S. Navy following the Civil War.

A further motivation of the reformers was a correlative of their desire for an aggressive application of technology. They became exponents of an internationalist, ultimately imperialist, vision of America's role in world politics. Were the Navy rationally to plan and build an extensive fleet, the country would be able to rival European powers in the growing trade with the Near East and Asia. Before the Civil War, U.S. overseas shipping had sailed in the safety afforded by British control of the Atlantic and the Pacific oceans. This arrangement had suited both countries. England's policy was to retain unrivaled military

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dominance of the seas, which in turn had spared the United States the expensive construction and training of an oceangoing navy.

In the postbellum years, American naval reformers no longer assumed this division of roles. They foretold a United States that would be more competitive with the mother country, as well as with the European powers that were then expanding their own navies. But if the reformers doubted that Britain could continue to preserve its predominance, there is no suggestion of it in their central writings. What is evident, rather, is that the navalists simply wanted a more powerful navy, saw the means for developing it, and rationalized why the country would need one.

One can, therefore, speak of the navalists as early American imperialists. By the time a broad range of national politicians, the press, and industry called for stronger American assertiveness overseas, an imperialist view had already taken hold among the advocates of a new fleet, a force having ships with large, armored hulls, equipped with long-range, breech-loading guns, and prepared for distant operations. The navalists argued that the U.S. Navy must become an independently capable force. Whereas earlier American maritime strategy had stressed the guarding of American commercial shipping from pirates and antagonistic nations, now the reformers called for a fleet capable of opening the entire expanse of the oceans to American trade. For a growing American industrial economy, they argued, new sea routes would need to be carved out, then preserved from avaricious rivals. Yet this internationalist perspective did not arise from some perceived common interest between naval reformers and businessmen. The need of American manufacturers for ever-greater access to foreign markets was secondary for the reformers, a justification that was added conspicuously late to the rationale for a bigger navy. The predominant motivations were actually internal to the naval world.

Some present-day historians have argued that the reformers' campaign was stimulated above all by their interest in the status of their profession, that their background as naval officers formed in them a social identity they saw endangered after the peace in 1865.<sup>2</sup> The naval discussants were indeed concerned to protect their service branch. Congressional indifference in maintaining a large navy threatened both the promotion opportunities of young officers and their hope for identification with a powerful, world-respected corps.

One contemporary historian, however, has posed a different theory. Mark Shulman casts the reformers as ambitious men who were painfully aware of the contrast between the American industrial and naval potentials, as men who found their country primed to become an international political power—if only it would arm itself for the task.<sup>3</sup> While not unfounded, this thesis is too narrow. First of all, Shulman traces the imperialism of the navalists to the 1880s, whereas such thinking was already present in the writings of the same group

by the early 1870s. Secondly, he discounts the extent to which the drive for a new navy was a response to technological changes. That the U.S. Navy *could* be stronger became in itself a reason for being made so. The possibilities open to the Navy to construct ships of revolutionary designs, fitted out with tremendously destructive armament, was simultaneously the reason for and the goal of naval reform.

On the other hand, in a still influential work, Lance Buhl argues that earlier historians had adopted the bias of the navalists themselves by assuming that the years from 1865 to the mid-1880s were indeed a time of naval doldrums in the United States. Buhl's view is the opposite: that between 1865 and the 1890s the U.S. Navy was equipped just as it needed to be.<sup>4</sup> The country faced no envious or threatening enemies; American trade traversed the high seas safely. Congress and the nation were focused on domestic needs: first Reconstruction in the South, and soon thereafter internal expansion and business growth. In this view, the navalists of that era were making noise about a false problem. As we will see, though, this latter thesis is contradicted by real difficulties that the U.S. Navy encountered at the time.

All these interpretive challenges have the merit, however, of making plain that whatever the inadequacies of the Navy after the Civil War, they were not congruent with the extravagant cures put forth by the reformers. That movement expressed an exigency not supported by actual, contemporary international conditions. Navalist writings built upon one another, the urgency of their warnings to Congress spiraling progressively upward to the same conclusion: that the Navy must be extensively strengthened to guard America at home and its trade overseas. Yet these writings were in fact conjectural. They never examined—much less demonstrated—a glaringly critical assumption: that there was a valid maritime threat against the United States. The reformers generated speculative scenarios without substantiating plausible dangers, economic or territorial, that called for a new and powerful navy.

This thesis and those outlined above are not logically exclusive of one another. However, the arguments of recent (often to some degree sociologically oriented) historians do not explain enough. The conversation between the reformers was regular, detailed, and well informed; to explain it in terms of underlying political or social motives risks ignoring its intellectual content. The navalists' arguments may not have been grounded in an accurate world view, but they cannot be reduced to a simple set of responses. What specifically has not been taken seriously is the consistent preoccupation of the reformers with, especially, maritime inventions. Their proposed application of this technology to a fleet of large, well armed ships is fairly vague. But in their attempt to explain why the Navy should be revamped on their model, the navalists used a broad argument for competitive American involvement overseas. In this respect, the writers of

the 1870s were laying the foundations of later American imperial thinking, epitomized by the theories of Alfred Thayer Mahan.

That there was in fact a relationship between Mahan and his contemporary navalists has been noted by other authors.<sup>5</sup> What has not been brought out is how his thinking follows from certain presuppositions of the naval reformers in the 1870s. When he published his classic *The Influence of Seapower on History, 1660–1783*, in 1890, Mahan was but a latecomer to what had become a self-perpetuating strategic “city in the air.” Mahan’s success with a Congress newly ready for colonial adventures merely brought the movement to fruition. He helped make real what had existed only in the dreams of naval reformers.

### The American Navy after the Civil War

For a century afterward, the period from 1865 to 1883 was considered an embarrassment in the history of the United States Navy.<sup>6</sup> The American navy of those decades was portrayed as recalcitrant and backward. The Department of the Navy, along with the Congress, was regularly cast as having abandoned all interest in the new maritime technologies that fascinated many foreign navies. In fact, despite the Civil War achievements of the North’s turreted monitors and the South’s sloped casement hulls, the U.S. Navy turned away from armored ships and other technological advances after 1865. Future construction would return to wooden hulls, fitted with coal-burning steam engines but usually proceeding by sail, and armed with stationary or limited-pivot guns. Congressional reluctance to prolong high military financing was a major cause for this tendency, but successive secretaries of the navy also specifically discouraged applied inventiveness.<sup>7</sup>

It is here that the more recent view (of which, as noted, Lance Buhl was an early advocate) of the postwar U.S. Navy makes its contribution.<sup>8</sup> While European fleets experimented with new armored ships and better cannon, they also spent tremendous amounts of money building designs that either failed to function well or were advantageous for only a short time. The competition in naval technology was so rapid that new ships were often obsolescent before they first got underway.<sup>9</sup>

Congress and also many senior naval officers presented good reasons not to throw themselves into advanced construction. They maintained that the country could learn from European experiments without suffering the same expense. Should the time come for a sweeping reestablishment of the fleet, America could then adopt technologies already proven through foreign navies’ trials and errors. According to Buhl, this policy proved sensible: “The American navy, for all this ‘progress’ [overseas], did not fall far behind. When the decisions were made to build ships of new types and of competitive strength, American naval

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engineers had no difficulty making up whatever gaps existed. The argument was frequently and validly made among navalists and in Congress that the United States was wise to allow Europe to foot the bill for experimentation."<sup>10</sup>

The central question, in this view, is not whether the Navy met some ideal criterion of "modernization" but simply whether the force was sufficient for the practical demands it faced. The U.S. Navy of that time should thus not be set in theoretical competition against contemporary navies but against the nation's maritime requirements. In its hesitation to build a new fleet, Congress was simply prudent. Buhl concludes that "Congress reaffirmed and acted out, perhaps for the last time in American history, a classic definition of the doctrine of civilian control of the military. It refused time and again to accept the idea that military definitions of the nation's interest and circumstances should rule debates and decisions. Instead, members asked, 'a navy for what?' They trusted to their collective knowledge about domestic and international realities to determine sufficient answers to the question."<sup>11</sup>

Those international realities fell at the time into two categories.<sup>12</sup> On the one hand, it was acknowledged that the United States should continue its isolationist tradition in relation to European affairs. The country had no cause to compete with Europe, whose wars were frequent and rarely had crucial bearing on American activities. The second "given" was that the country would continue to expand its international commerce. In combination, these assumptions entailed a navy adequately equipped to protect and advance American trade abroad but that did not indulge rivalries with fleets it had no cause to fight.<sup>13</sup> Specifically, it was not the Navy's proper mission to compete with Great Britain's dominance of the open seas.<sup>14</sup> Congress purposely avoided funding a "British fleet." A recent historian of the U.S. Navy observes that the "imperial interpretation of the [post-Civil War] 'dark ages' assumes that in the twenty-five years from 1865 to 1890, Americans thought the same and had the same values as British and French people then and Americans today. On the whole, though, they did not, which is why their twentieth-century descendants . . . called the dark ages dark. Actually, that period may have been the brightest in U.S. history. After the terrible slaughter of the Civil War, with half a million dead, no one wanted another war; and with millions of square miles having been added to the nation, no one needed another war."<sup>15</sup>

Contemporary advocates of a larger and more modern navy maintained that the country's foreign trade would stand perpetually in peril if rapacious nations had nothing to fear from an inferior American fleet. The United States was becoming a great commercial force, prepared to expand into new markets; no doubt such efforts would provoke aggression from other countries seeking to

suppress them. But those who thought in such ambitious terms were “a small minority of Americans who advocated colonial adventurism.”<sup>16</sup>

If international and domestic realities were a source of bias against continuing development of ironclads, another was the experience of those vessels during the Civil War. Although the Navy did build a few oceangoing monitors after 1865, ironclad ships were still strongly associated with their useful, but limited, wartime roles as coastal and river craft. Naval officers commissioned before the war continued to think of open-ocean sailing as their true calling, one interrupted by the exceptional demands of intracontinental and littoral warfare. Ironclads were an expedient unlikely to be required in the future by the national navy. In addition, ironclads had earned a bad reputation during the war for being hot (especially, but not only, in the engine rooms), dark, confining, and fume-ridden.<sup>17</sup> Conditions within the traditional wooden men-o’-war were less oppressive.

If sensible choices had been made in these years, the U.S. Navy nonetheless had deficiencies, which became apparent when it was called upon to fight. In 1873, a private paddle-wheel steamer, the *Virginus*, was seized by the Spanish cruiser *Tornado* off the coast of Cuba. The captain and crew were tried for running guns to Cuban rebels; thirty-seven were quickly executed. Americans were outraged, and Congress dispatched two wooden warships to Santiago de Cuba. There was talk of war, until Spain suddenly reprieved the surviving fifty-one sailors.<sup>18</sup>

In the meantime, the U.S. government learned that the *Virginus* had been sailing under the American flag illegally. In any case, Congress and the Department of the Navy were relieved that Spain had accommodated the official American protest so promptly, for the American ships sent to the scene probably could not have withstood a fight with the Spanish armored vessels on that station. In Washington, even embarrassment over the illegal status of the *Virginus* paled next to the realization that the Navy would likely have lost its ships had a war with Spain begun.

The *Virginus* incident added weight to the navalists’ argument for an armored navy, and a number of critics used it.<sup>19</sup> But the event did not fully justify the extent of their response. The navalists were partially right, that America’s fleet at the time was an inadequate force, not just for a battle with Spain but for any confrontation with a modern opponent.<sup>20</sup> What the nation needed was not a navy “second to none” but, under even the most pacific strategy, ships better protected and armed than those it had.

The Navy did experiment with some new technology shortly after the Civil War. In 1868, a struggle to establish the primacy of steam power for its ships was unsuccessfully waged by Benjamin F. Isherwood, Engineer-in-Chief of the

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Navy from 1861 to 1869. For the USS *Wampanoag*, authorized in 1863 as the first of an intended (but controversial) new class of propeller-driven frigates but not completed until after the war's end, he had designed highly advanced propulsion machinery. The steam plant, one with improved heat and fuel efficiency, powered a main engine that drove the propeller shaft through a revolutionary reduction-gearing arrangement. Isherwood now took advantage of *Wampanoag's* sea trials to test—and advertise—the seagoing qualities of a large vessel whose outfit of sails was purely auxiliary to its machinery.<sup>21</sup> The trials (a cruise from New York to Savannah, Georgia) took place from 7 February 1868 to the thirteenth. Bad weather caused a pause, but the final leg saw the *Wampanoag* averaging eleven knots for almost thirty-eight hours without mishap. At times it was able to achieve in excess of seventeen knots.

This remarkable ship (which in addition to its advanced propulsion machinery had a clipper-like hull designed by naval architect B.F. Delano) proved not only that a steam engine could propel a large craft at high speed through fairly rough waters but that modern propulsion plants could operate more efficiently than their predecessors and endure long journeys.<sup>22</sup> The Board of Engineers reported its evaluation to Gideon Welles, Secretary of the Navy: "The maximum performance can easily be maintained during a passage across the Atlantic, or for any required service, and we are of the opinion that it is not equaled for speed or economy by that of any sea-going screw vessel of either the merchant or naval service of any country."<sup>23</sup> Despite its performance, however, the *Wampanoag* was rejected by the Board on Steam Machinery Afloat. The Board, established in 1869 primarily to evaluate Isherwood's project, deemed the innovative ship unsuitable for naval warfare.<sup>24</sup> Its decision may have been biased by limitations peculiar to the *Wampanoag*, which had not been built to carry arms, bear armor plating, or house a normal crew. Further, the Department of the Navy held coal power in disfavor; it found the speed and maneuverability of a steamship to be offset by the need to refuel. Of course, sailing ships were at the whim of the wind, needed arcanelly skilled crews, and could not carry infinite stocks of food and water; but unlike steamships they did not risk stopping dead in the water every time a (sharply limited) store of fuel was exhausted.

The debate over the merits of the *Wampanoag* continues in naval literature to this day, but its historical import is clear: while the ship introduced technology that would, years later, become a world standard, its official failure signaled the end of government-funded American experimentation with steam engines until the late 1870s. And yet this choice was not the obscurantist reflex it has often been represented to be. In the years just following the Civil War, to balance the contrasting attributes of speed and endurance in this way was a rational military calculation, particularly for a nation with worldwide trade but no overseas bases.<sup>25</sup>



## Naval Modernization: The "Conversation" Gets Underway

In 1873, to improve and disseminate knowledge among naval officers and the sympathetic sector of the public, a group of high-ranking naval personnel founded the United States Naval Institute. Although as a nonprofit private organization the Institute was independent of the government, its first president was Admiral David Dixon Porter, and naval affiliation was evident in the typically senior rank of the members.<sup>26</sup> The Institute served as an informal guild and lobbying body for career officers, who sought to protect their professional interests from an uninterested Congress. Another purpose was to promote a modernized American navy, which at the time meant a fleet comprising a far greater number of ships than existed in the U.S. inventory, with modern weaponry, iron (thereafter steel) hulls, full or partial armor, and steam propulsion. The Naval Institute criticized the desultory naval planning that was being perpetuated by successive presidential administrations. The Institute's main tool was publicity, by which it sought to engender public support and inform influential civilian government officials.

The Naval Institute soon found an ally in the newly established Naval War College, which taught its first class in 1885. The College was erected to offer to naval officers a broad education that would encompass the scientific discoveries of the day. Members of the Naval War College faculty gave lectures at and contributed articles to the Naval Institute.<sup>27</sup> In 1882, the Institute gained a second institutional supporter, the Office of Naval Intelligence. ONI was established by Secretary of the Navy William E. Chandler with the mandate of diligently gathering information on the latest technological developments abroad. ONI regularly presented its findings to Congress, but on occasion it also apprised the Naval Institute of new developments.<sup>28</sup>

The most important forum in which the reformers discussed maritime issues was *The Record of the United States Naval Institute* (shortly afterward renamed *The Proceedings of the United States Naval Institute*, and today published monthly as the U.S. Naval Institute *Proceedings*).<sup>29</sup> From its beginnings in 1874 *Proceedings* encouraged articles on technical developments and maritime engagements that were taking place around the globe.<sup>30</sup> Though the navalists did not restrict themselves to any one platform, the Naval Institute, through its sponsored lectures and the *Proceedings*, was the most influential of their available fora.<sup>31</sup>

The naval reformers grounded their appeal for an expanded and up-to-date navy in an argument that went beyond strictly naval concerns: they argued, in effect, for a national maritime policy. Navalists called for a concerted interjection of the United States into world affairs, rejecting what they perceived as an anachronistic isolationism that had pervaded the country following the Civil

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War. The reformers were influenced by reports of European naval experiments. In addition, they paid great attention to such events as the battle of Lissa of 1866 and the war between Chile and Bolivia (aided by Peru) in 1879.

As a body, the participants in this written dialogue presaged Mahan's vision of a salient international role for the United States Navy. Mahan later insisted that the United States could—and indeed, should—become the world's leading commercial and military power. He was to write that the Navy specifically provided the means to international dominance: "Is it meant, it may be asked, to attribute to sea power alone the greatness or wealth of any State? Certainly not. The due use and control of the sea is but one link in the chain of exchange by which wealth accumulates; but it is the central link, which lays under the contribution of other nations for the benefit of the one holding it, and which, history seems to assert, most surely of all gathers to itself riches."<sup>32</sup> As writings in *Proceedings* in the 1870s and 1880s show, similar views were being formulated years before their most famous collator and publicist found an enthusiastic and influential audience.

Open disagreement with trends in official naval plans appeared early. In number 5 of the first volume of *Proceedings*, Captain W.N. Jeffers recommended that the Navy "up-gun" its larger ships on the basis of an extensive comparison he had made of large-caliber weapons. Jeffers advocated the use of breech-loading pieces, such as those already devised by the Alfred Krupp concern in Germany. In the midst of his technical discussion Jeffers decried overall naval operational doctrine.

It is very right that when a vessel of war encounters a superior force, speed should be able to make her safe, but the necessary diminution of offensive power should not be so great as to disable a first-class steamer from matching any vessel of her own class of inferior speed, but provided with a proper armament; otherwise its usual business would be running—fighting [would be] the exception!

Although the large vessels of the *Tennessee* and *Florida* class were constructed on the theory of cutting up an enemy's commerce and flying from his cruisers, yet it is repugnant to our nation to employ such large and expensive vessels for this purpose.<sup>33</sup>

Captain Jeffers was thus taking issue not merely with the disproportionately puny armament on American cruisers but with contemporary U.S. naval strategy.

After the Civil War, as has been seen, the Navy envisioned no international conflicts that would require a large national maritime force. The large, ocean-capable monitors built in the late 1860s and early 1870s, such as the *Miantonomoh*—with a displacement four times that of the *Monitor*—were thought sufficient to defeat any alien battleships approaching the American coast.

However, the Navy Department considered its optimum wartime strategy to be commerce raiding (*guerre de course*)—although against whom could not be specified.<sup>34</sup>

Jeffers maintained that the country should build a navy properly equipped to stand up to the warships being constructed in Europe, and that the monitors could not be expected to do so. He did not suggest that war with any single European nation was imminent. In any case, there were no islands in the midst of the Atlantic or the Pacific oceans that could then provide fuel for European fleets. Spanish or British ships could store coal at possessions in the Western Hemisphere to make operations there feasible, but neither country was prepared to spare a large part of its fleet for operations near U.S. shores.

Thus Captain Jeffers's proposed naval policy was no better defined than that accepted in Washington. Inexact and for the most part implicit, Jeffers's notions nevertheless anticipated the Mahanian vision of America as a new world power and may have been the starting point for other early postbellum advocates of a stronger navy. Specifically, his concern about European naval might was to be influential in the American strategic debate.

An article by Commodore Foxhall A. Parker, printed, like Jeffers's, in *Proceedings* in 1874, evinces in retrospect an even more proto-Mahanian tone. Parker proposed a wide-ranging plan for the U.S. Navy.<sup>35</sup> He had come to his conclusions early that year after observing a naval exercise near Key West wherein the ships' performance had been disappointing. Describing Europe as a "vast military camp" in comparison with his country's reduced postwar forces, Parker offered two reasons to fortify the American navy: "for the maintenance of our national dignity at home and abroad, [and for] the protection of our commerce upon the high seas and our citizens in foreign lands." He was quick to note that the country did not need as large a fleet as England's, only to be able to guard its own interests.<sup>36</sup>

Commodore Parker's list of ships appropriate for a new navy derived from a theory of functional specialization, i.e., that the rapid advance of maritime technology necessitated ships designed to meet specific military roles. Rams, torpedo boats, frigates, and cruisers were increasingly growing apart in form as each was refined for its tactical purpose. Parker maintained, therefore, that the American navy needed to expand if only to encompass an adequate number of each important type of modern warship.<sup>37</sup>

Parker favored the ram as the most potent of these types. Indeed, for a short while (but probably longer than it deserved) the ram was widely considered a powerful weapon. It was really just a reinforced forward extension of the bow's forefoot, extending underwater a few feet forward of the upper part of the stem. In a close-in battle, cruisers equipped with ram-shaped bows would attempt to smash directly into the sides of enemy hulls. The tactics of the ram assumed that

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whereas shot would be ineffective against a heavy ironclad, no hull could withstand the force of a ram, delivering the full weight and momentum of the attacking ship. A number of nations were already building conventional warships with ram bows. Parker thought to pursue this idea to its ultimate form, using something a bit different from the usual argument for rams. He held that a true ram should be more than a feature of the bows of general-purpose warships: the entire ship should be conceived as a ram, designed for its single combat role. The ideal ram would be a vessel with a low hull, well armored to withstand a rain of shells as it neared its victim.

In the Civil War, Southern ironclads especially had been constructed to punch holes in wooden ships just below the waterline, and CSS *Virginia* had made a tremendous impression in March 1862 by sinking the USS *Cumberland* with its ram and forcing the USS *Congress* aground, then destroying the frigate with gunfire. But the ram's potential was not fully apparent until a year after the war's end. At the battle of Lissa, waged between Austria and Italy on 20 July 1866, the armored warships on both sides deflected many direct gunnery hits, but Italy's newest armored sail-and-steam frigate, *Re d'Italia*, caught at a dead stop, was rammed by the Austrian flagship *Ferdinand Maximilian* and sunk.<sup>38</sup> Certain American naval theorists were readily persuaded of the ram's worth and promoted it for years thereafter. Rear Admiral David Ammen's design for a ram—a vessel with a convexly rounded deck and a hull almost entirely below the water's surface—drew praise from other readers of *Proceedings*. For the most part, however, the specialized ram lost favor not long after its triumph in battle in 1866;<sup>39</sup> new cannon appeared that were able to destroy even a heavily armored craft that stayed close aboard long enough to attempt to ram.

The most lively argument in naval literature at the time, however, was that over mobility. For instance, although Commodore Parker did not insist that all naval craft be armored, he did agree that the steam-driven propeller constituted the most sensible form of propulsion for warships. In Parker's day and into the twentieth century, long-range guns were not terribly accurate, and for close combat, mobility was critical. Critics of steam propulsion claimed that in a good wind a well handled sailing ship could maneuver more rapidly than the best boilers, pumps, and gears in a steam ship allowed. Promoters of steam power, in turn, could point to the vulnerability of spars and rigging. Their strongest argument, though, was that the independence from the elements of a steam-propelled ship had become necessary in battle at sea. Sailing ships were simply being surpassed by the self-contained ability of steam-engined ships to maneuver in combat.<sup>40</sup>

A particular issue in this connection was the absence of American fueling depots overseas.<sup>41</sup> Admiral Porter had foreseen this disadvantage of steam power, but he held the evident solution—that the United States establish coal depots

in foreign ports—to be counter to American foreign policy interests. In Porter's time, the United States was proud that it was not a colonial ruler. He argued that any remote coal stores would be promptly seized should the country ever come to blows with the host nation. In general, he rejected this approach as involving relationships that were too entangling and dependent. Porter did not always find agreement with his opinion, but the country was slow actually to repudiate it.<sup>42</sup>

Even Commodore Parker's 1874 essay, cited in subsequent studies on the proper balance of ships in a future American fleet, was not the most iconoclastic of *Proceedings* offerings in the 1870s. Even more so was an article by Lieutenant T.B.M. Mason printed in 1876, comprising two exchanges of imaginary correspondence.<sup>43</sup> Mason set the first just four years in the future, during a war between the United States and an unnamed power. A fictional naval officer, whose ship has been sunk beneath him, complains to a comrade about the inferior quality of American ships; he decries the official shortsightedness that had tragically sent off so many American sailors in vessels primitive in comparison with those of their opponents. The second group of letters is placed in 1906. The "War of 1880" is long past, and the United States, having survived the earlier conflict, albeit with great losses, has prudently created a powerful, well armed, modern navy. Mason's main letter-writer describes the splendid ships lately commissioned. Yet these futuristic ships that Mason adventurously projected thirty years ahead were not unlike those being put forward by his contemporaries. He predicted continued use of rams, the outfitting of warships with both sails (with telescoping steel masts) and steam engines, and electrical firing mechanisms for both guns and torpedoes.<sup>44</sup> Most of these ideas were already being explored in the 1870s. This indeed may have been precisely Mason's argument: that the future was already at hand, if only Navy policy were more ambitious. For instance, the USS *Trenton*, which was being laid down as an experimental test bed, was to be armed with torpedoes, pivoting guns, and electrical firing systems for both types of armament.<sup>45</sup>

In 1877, Congress authorized and published a study of European and Russian naval developments. The report was technically thorough, with separate chapters for each major country surveyed. The author, Chief Engineer J.W. King, was at times critical of approaches being adopted by other navies elsewhere; an uninformed reader might have inferred that the sophistication of the U.S. fleet was already at least parallel to that of several European navies. But King's aim was not to make easy comparisons—rather the opposite. His critical evaluations of naval architecture assumed that Congress might soon fund new designs for a reequipped American navy. While he scrupulously avoided tendentious calls for a more aggressive U.S. naval policy, he nonetheless made clear what the most promising avenues for new construction seemed to be. He remarked, for

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instance, that France had not yet produced a turreted oceangoing ship; also, in his analysis of the Austrian fleet King commented that "in common with those of other European countries, [the Austrians] have paid dearly for the error of building wooden armored ships [i.e., with plating over wooden hulls]. . . . The decay of the wooden hulls, insufficient strength, and the advancement made in defense as well as offense of the modern fighting-ships, sometime since rendered these vessels useless."<sup>46</sup> In contrast, King wrote with admiration of the strength and organization of the English, German, and Russian fleets.<sup>47</sup>

Writing in 1878, Lieutenant John C. Soley summed up well the disappointment of the naval reformers with congressional restraints: "For many years, we have, perforce, remained comparatively idle, without making any improvement in our Navy, content that it should be so because the art of building ships of war was making such rapid strides that it was out of the question for us, with our small appropriations, to keep pace with European nations, and because we felt that it was just as well for us to save our money and to remain quiet observers, while a jealous watch was kept upon all improvements, and an intelligent body of officers was studying every step taken in advance, so that, when the time came for us to build, we might be warned by the mistakes of other nations and profit by their successes. Once we were pioneers in ship-building, now we are out of the race altogether."<sup>48</sup>

Lieutenant Soley took up the challenge raised several years before in *Proceedings* regarding the true purpose of the U.S. Navy.<sup>49</sup> He asserted that Great Britain was a prominent nation because its fleet consisted of mighty ships, in sufficient number to protect its maritime commercial trade routes. The Royal Navy did not comprise mere "vessels to prey upon an enemy's merchant ships and run away from his war vessels"—a characterization of the American navy as Soley saw it.<sup>50</sup> To play upon his American readers' nationalism, Soley referred to a recent article in an English periodical by an anonymous "distinguished writer" who maintained that the United States could not be allowed to acquire a fleet superior to the Royal Navy. Soley sought to persuade his readers that there existed real enemies plotting against America's welfare.

He was pressing for a more formidable strategy of national maritime defense. Making explicit an argument-by-analogy that he had used when discussing contemporary British naval dominance, Soley wrote, "If we look upon the vessels of our Navy as 'commerce destroyers,' we make a grievous mistake. Some vessels there must be whose mission is to 'sink, burn and destroy,' but that duty may be performed by swift, small vessels, armed with one or two heavy guns, in which every consideration is sacrificed to speed, but let the main duty of the navy be that of 'commerce protector,' a duty nobler in every sense of the word and one that more exactly fulfills the ideal of every true hearted sailor."<sup>51</sup>

In 1879, Lieutenant Frederick Collins issued yet another exhortation to the nation's policy makers. Collins, however, was more specific than other authors in listing the causes of American naval passivity. He began with a broadside, protesting that the Navy was insufficiently equipped for fundamental national needs: "In all nations commercial supremacy and naval power have gone hand in hand. That the former should precede and the latter follow is true; but we have once made the fatal mistake in this country of permitting our commerce to develop with no commensurate addition to our naval strength."<sup>52</sup> Collins viewed the Civil War as the first damaging blow to what had theretofore been unfettered American success in international trade. Had the North possessed a large navy in 1860, and had it used this seapower to seize Southern ports at the start of hostilities, the Federal government, argued Collins, could have extinguished the war quickly through a tight blockade.<sup>53</sup> Instead, the Federal navy had been initially weak—and so the war had dragged on for four years, steadily draining the country's wealth.

Like other contributors to the continuing debate, Collins treated strategy and ship design as associated issues. He claimed that not only were naval power and commercial seapower intertwined but that the country's re-creation of its navy was a proper goal in its own right. The types of warships, the number of each type, and planning for their effective deployment all bore heavily upon the degree of prosperity that America could expect to extract from its overseas commerce.

A problem for the reformists was that they could not agree among themselves on what a worthy navy should look like.<sup>54</sup> Lieutenant Collins addressed this absence of consensus directly. He explicitly drew from, and modified, the suggestions made by Soley and Parker in the pages of *Proceedings*. For example, Collins sustained their opinion that the Navy should build a fleet of unarmored, fast, and heavily armed cruisers that could destroy enemy ships from a distance. In addition, he agreed that the Navy should commission rams based on the "turtle-backed" design put forth by Rear Admiral Ammen.

On the other hand, a contemporary trend that worried Collins was an exaggerated popular trust in mines and torpedoes to defend harbors from invaders. He maintained that no single form of defensive weapon was impregnable. While these passive devices were certainly far cheaper than ships, they were not the be-all that many contemporaries thought. Collins's position was that the country was safe only so long as it combined defensive preparations with an offensive capability. As he noted, America's foreign trade necessitated protections that could reach well beyond the seacoast.<sup>55</sup>

Lieutenant Collins's numerous recommendations were supported by comments appended to his article, a practice often followed at the time by *Proceedings*. The most notable commentary was by Rear Admiral John Rodgers, who

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declared that the age of armored ships was already past, that rifled cannon had become powerful enough to penetrate any practicable amount of armor; steel protection, Rodgers concluded, "encumbers but will not protect."<sup>56</sup> Obviously, rams were but one type of ship that was doomed by the new guns. Just what Rodgers thought was the best available reply to these perfected cannon, however, he left unclarified.

Western nations were conducting elaborate tests of armor composition, durability, and resistance. Engineers in Collins's day had already invented compartmentalized hulls and double-layered, or "spaced," armor (Ammen's ram was to be so constructed), and they were formulating ever-tougher armor for their warships, alloys that could withstand all but the heaviest shells. Armor, despite Rodgers's prediction, remained so central to warship construction that in 1883 an entire issue of *Proceedings* was devoted to a single evaluative study of the subject.<sup>57</sup> Nor was this the last review of armor improvements that would appear in *Proceedings* during these years.

In 1879, a war in South America gave a boost to the advocates of a strengthened U.S. Navy. At this time, a number of South American countries had powerful fleets, shopping for their warships among the latest designs being produced in European shipyards. When war broke out between Chile and Bolivia over a strip of land on their common border containing vast copper fields, Peru (which had a better-equipped navy than Bolivia, as well as interest of its own in the disputed territory) joined in the conflict as an ally of Bolivia.

The crucial naval encounter of the war occurred between a number of Chilean warships and the *Huascar*, a single-turret Peruvian monitor manufactured in England. The *Huascar* damaged several of Chile's vessels, either by gunfire or ramming. Yet Chilean attacks caused no critical damage to the monitor, which was protected by speed and a low profile. Eventually, the *Huascar* steamed off, but two Chilean ships, the *Almirante Cochrane* and the *Blanco Encalada*, gave chase. Both of these ships had also been constructed in England, and they were armed with far heavier guns and armor than the *Huascar*.<sup>58</sup> Nonetheless, the Peruvian ship turned on the two pursuers and inflicted serious destruction until a shot penetrated its turret, killing most of the *Huascar's* crew.<sup>59</sup> The wreck later proved salvageable, and the *Huascar* was resurrected for use by Chile.

The battle had lessons for navies worldwide. It gave evidence of the continued value of strong armor: the *Cochrane's* thick plating had survived direct shots against its hull, while the *Huascar's* turret had ultimately been pierced; its armor was too thin. In turn, the *Huascar* had done damage by ramming, meanwhile surviving opposing fire.<sup>60</sup> Although guns had been achieving such size and force that ramming was quickly fading, the tactic now seemed still to have a real role. In this battle the guns of all the participant craft had missed far more often than



they struck; even at close quarters, weapons and ranging devices were very inaccurate (and would remain so for years to come). The most immediate upshot of this engagement was that armor had reaffirmed its worth. Modern American warships would have to resist large, high-explosive shells fired at velocities far greater than during the Civil War.

A few months after the war in South America, another young U.S. naval officer destined for a prominent career in the service, Lieutenant Charles Belknap, published an essay that won the annual Naval Institute prize for the finest submission in 1880. He proclaimed, with an assurance even more pronounced than that of his predecessors, that seapower was America's key to international prominence: "The extraordinary attention paid of late years by the leading powers of the world to the condition and efficiency of their navies leads to a belief that there is a growing tendency to greater reliance than heretofore, in case of war, upon this arm of a country's defence. . . . The navy appears to be the main weapon for offence or defence."<sup>61</sup> Belknap focused on technology rather than national political, economic, or defense needs, encapsulating thereby a new attitude driving naval reformists. Naval engineering had become so advanced that Belknap looked first to the technical means available before laying out a national strategy applying them. The machinery of war had crossed a threshold.

Traditionally, countries had (to the extent that they were rational actors) defined military strategies according to their understandings of their critical interests, drawing on science to aid in the achievement of these strategies, whether defensive or offensive. But military technological advances also arise without political stimulus. Individual inventors, visionaries—one thinks of Leonardo da Vinci—and whole industries often pursue projects hoping to inspire a demand where none previously existed. When such independent inventions show themselves to be practicable, governments may reevaluate strategies, and even national interests, accordingly. Subsequently, countries that do not yet possess the new weaponry realize that they must revise their own planning and military budgets to defend against the new potential threats.

In the late nineteenth century, the destructive power and the efficiency of naval weaponry were accelerating to such a degree that the armament was becoming a political factor in its own right. Military seapower, not maritime mercantile considerations, was beginning to direct the strategic decisions of the industrial nations. Countries started designing fleets less to protect their civilian shipping than to counter the mighty squadrons being assembled by their putative rivals. The reformers who wrote in *Proceedings* saw themselves as battling against their government's dangerous inattention to these technological changes. As promoters of modernization, they also conceived of new strategies, serving new

national purposes, to justify their calls for investment in complex, expensive equipment. In their enthusiasm, however, the reformers increasingly let their admiration for the glorious new hardware blur their perception of realistic national requirements.

Lieutenant Belknap, for his part, was concerned that the United States not lag behind its peers. His article reflected a view that was evident among his fellow proponents of a drastically rearmed American navy: the country could not continue to turn inward, or it would find its interests endangered by rapacious and capable foreign rivals. For example, a group of French officers had just published a new maritime strategy, and France was accordingly building a new fleet. This development disturbed observers both in England and among the reformers in the United States.<sup>62</sup> The concern for potential competitors that had characterized previous *Proceedings* articles was heightened for Belknap. He saw acceleration in armament design as dangerously destabilizing in its own right: no modern nation could ensure peace through mere indifference to possible rivals. In fact, Belknap and his contemporaries assumed that military capacity could become an independent engine, driving aggressive strategies. The very existence in, say, France, England, Germany, or Russia of a large, sophisticated navy meant that the American government would have to respond similarly or leave the country's security at risk. The difficulty with such arguments was that although some of the European nations did indeed have large, sophisticated navies, none had shown an intent to threaten either American shores or foreign trade.<sup>63</sup>

Excited warnings against French or British naval armament and strategy piled on one another in *Proceedings*, yet they were supported by no real study of the political aims of these nations. Were they true threats to American interests? British control of the seas was still strong in the early 1880s, despite progress in French and German naval yards; but for decades Britain had protected American merchant shipping, and it was not now evincing any strong disillusionment with this role. French construction, in turn, seemed more a defensive response to England and Germany than an expression of new offensive aims. This consideration gives color to suggestions that the navalists' push to improve the fleet stemmed partly from parochial interests; their career ambitions depended on the creation of a strong navy.<sup>64</sup> For instance, Belknap, who was calling for more articles on naval history and the "Navy's role in international affairs," was at the time the junior editor of the *Proceedings*.<sup>65</sup> It appears that these officers could not abide seeing their service branch allowed to degenerate by a policy choice.

The Americans writing for the Naval Institute seem less to have misperceived the European threat than simply not to have concerned themselves with the evidence. They willingly entered a contest of escalation without scrutinizing the purposes or realistic probabilities of the race itself. In common with

like-minded contemporaries (and many observers since), Lieutenant Belknap treated armaments as strongly indicative in themselves of a government's military aims. Moreover, he interpreted foreign military improvements as signs of aggressive intent. That is, Belknap wrote on the assumption that other countries did not (as, presumably, the United States did) purchase modern warships for defensive reasons alone.

Belknap set forth several specific arguments (drawing, like Mahan later would, on history) for an enlarged, technically advanced American navy. Ships had traditionally been relied on in cases of political unrest overseas. Belknap considered the protection of citizens in foreign lands—a traditional warship function—to be a type of policing and as such an insufficient reason to build a strong fleet. The lieutenant offered a more compelling role for the Navy—supporting the expansion of overseas trade. Belknap claimed that “the great commercial power of the world has always, for the time being, been also the great naval power, and history teaches us that when the naval supremacy of a nation has been overthrown the decay of its commerce has followed as an inevitable result.”<sup>66</sup> He also lamented the near-vanishing of the American merchant marine. Like many of his naval peers, he believed that it was commercial seapower that provided both the funds and the skilled manpower for an able navy. The navy was crucial, in turn, for protecting seaborne trade. Belknap viewed the two “Eastern Empires,” China and Japan, as the most promising future trade partners for the United States, for no European nation had yet deeply established itself in the Pacific region.

Americans, Belknap cautioned, ought not trust “too much to the manifest destiny of the Republic.” First, he believed the phrase referred not to continental westward expansion but to America's relations with eastern nations. Second, though the United States was blessed with geographical remoteness from continual European strife, international involvement would bring new risks, diminishing its isolation.<sup>67</sup> Consequently, the country must be prepared to confront foreign commercial rivals on the open seas with military might. Only thus could the country ultimately achieve “commercial supremacy of the world.”<sup>68</sup>

Belknap concluded, in an opinion shared by his colleagues associated with the Naval Institute, that America's growing involvement in international trade required that the Navy reconstitute its organization and mission. He gave concrete suggestions for a new “Naval Policy of the United States,” proposing a review board to “consider and determine” all plans for the construction, alteration, repairs, equipments, and armament of the vessels of the Navy; a system of rules and regulations for the governing and discipline of the service; and anticipatory strategies for naval campaigns, both offensive and defensive. Further, it was to collect information regarding the naval strength of foreign

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nations; lists of merchant vessels suitable for transport service or for conversion into light-armed cruisers, to be used in destroying an enemy's maritime commerce; and also data on the number and capacity of indigenous private shipbuilding yards, iron works, and rolling mills.<sup>69</sup>

As did a number of organizational recommendations that first appeared in the pages of *Proceedings*, Belknap's central idea may have had concrete effect. In June 1881, Navy Secretary William H. Hunt formed the Naval Advisory Board, chaired by Rear Admiral John Rodgers. The committee of fourteen drew up a plan, eventually adopted by the Department of the Navy, for an entirely remade, much more potent fleet.<sup>70</sup>

In 1884 the torch of advocacy in the papers of *Proceedings* passed from Lieutenant Belknap to Ensign W.I. Chambers. The latter's prize-winning essay was similar to Belknap's contribution, in that it was a consideration of the Navy's requirements, but it was not so wide-ranging. The junior officer confined his suggestions to naval strategy proper and to the types of warships he thought advisable for the national fleet. Presumably he agreed with Belknap's political-economic rationale, but in any case, by 1884 Congress was taking the call for a major navy to heart; in 1883 it had commenced funding a series of ships—the *Atlanta*, *Boston*, *Chicago*, and *Dolphin*—as the basis for a new steam and steel navy. Chambers may have intended to address the exigent question of the characteristics and quantity of ships now to be built, the basic themes of Belknap's theoretical argument having been, by and large, officially accepted.

Chambers began his assessment with a review of the Navy's full range of peacetime duties:

- To form a "nucleus" for the expansion of U.S. naval power for national defense in time of war;
- To guard the "prestige" of the flag, and command the respect of other nations in times of peace;
  - To maintain a "school" for the training and discipline of officers and men, and thus provide for the efficient expansion of personnel in time of war;
  - To further the "interests" of civilization and commerce, by affording protection or relief to American citizens domiciled under unstable governments or in undeveloped countries;
  - To "investigate the complaints" of U.S. citizens with interests abroad against alleged injustice on the part of distant nations;
  - To "aid or succor" whenever possible the distressed people of all nations, in the interests of humanity and courtesy;
  - To "observe" and "keep informed" of the progress of other nations in the science of warfare;

- To facilitate the “scientific investigation” of subjects connected with maritime and national interests, and to execute surveys of obscure harbors abroad and off the U.S. coast;
- To assist in suppressing “internal riot”; and
- To enforce the “laws of neutrality” and prevent other powers from doing it instead.<sup>71</sup>

The final item in his list had particular implications. Historically, England had provided a naval buffer ensuring America’s comfortable remove from European conflicts, but now the rising status of the United States as a world power would start to threaten England’s prosperity. Chambers warned, “If we subject our national neighbors to a physical examination we shall find that the nearest and most dangerous is England. . . . Is it not possible, . . . unless we are prepared to command the respect of this active and vigorous neighbor, our once disagreeable parent, that the friction resulting from his proximity may ere long cause the ‘electric current of imperial power’ to make its decomposing effect felt among the elements of our composition?”<sup>72</sup> Chambers saw American maritime expansion as analogous to the nation’s drive to settle the territories, a view reminiscent of Belknap’s use of “manifest destiny.”<sup>73</sup> The United States, he believed, was *fated* to be a world power—perhaps one day the predominant power. Its ineluctable growth would compel the presently dominant countries to oppose, even attack, it. While their attempts to keep the United States constrained would be in vain, war, for a period, would be very probable.

Much of Chambers’s article was devoted to analyzing the performance of the heavy guns then available. But he recognized certain limits, cautioning against an unchecked commitment to the “race between guns and armor.” Italy had just constructed two monstrous battleships, leaving other countries in momentary awe. Chambers pointed out that these ships, though powerful, were not invulnerable, whatever the thickness and composition of their armor. Gigantic ships were difficult to maneuver, a disadvantage in close fighting. American naval efforts would be better devoted to building a diverse fleet than to deploying a few extravagant warships.<sup>74</sup>

Notwithstanding, Chambers also asserted as a principle to guide the Navy’s future acquisition of warships that “no ship should be built that is not superior, or at least full equal, to those of any other nation, of the same type, contemporary with it.”<sup>75</sup> But he seems to have been calling only for ingenuity in the design of war vessels. The fundamental theme of Chambers’s suggestions was efficiency through specialization and training. A powerful nation did not make do with accumulated older craft simply because they were at hand but rather constructed its navy according to explicit strategic requirements. Specialization allowed for complicated and subtle tactics, which in turn were critical in battle.

Indeed, the "Discussion" section following the Chambers article records favorable comments from a number of high-ranking naval officers. It is telling that no one questioned his lengthy disquisition on a possible war with Great Britain. Rather, the comments centered on Chambers's ideas for a Naval Review Board and the particulars of the fleet he had sketched out. A most revealing observation came, however, from a fellow reformer, T.B.M. Mason (still a lieutenant nine years after publication of his own *Proceedings* article discussed above): "A 'peace navy' every thinking man knows to be a farce. A navy must be created gradually, and cannot be improvised, except to oppose an enemy laboring under similar disadvantages. Like a fire brigade, the naval force of a country, be it large or small, must always be prepared for action. It must be thoroughly equipped, manned and disciplined, so that at any moment and from any cruising distribution it may enter upon active operations against an enemy."<sup>76</sup> Thus the importance of an American "fleet-in-being," to be emphasized eventually in the writings of Mahan, was already becoming apparent to the promoters of American maritime greatness.

In 1889, Congress issued a new general policy for a "reconstructed" navy. Nonetheless, fundamental questions continued to rage among the reformers. In that year Rear Admiral Stephen B. Luce, in a contribution to *Proceedings*, extolled the worthiness of the battleship, a vessel he found underrepresented in plans for the new fleet.<sup>77</sup> He was applauded in the associated "Discussion" by Captain Alfred Thayer Mahan, who observed, "If I am right in my opinion . . . that a war against an enemy's commerce is an utterly insufficient instrument, regarded as the main operation of war, though doubtless valuable as a secondary operation, the United States and its people are committed to an erroneous and disastrous policy. No harm has been done in building the new cruisers, for ships of that kind are wanted; but great harm has been done by the loss of so many years in which have not been built any battle-ships, which are undoubtedly the real strength of the navy."<sup>78</sup>

In 1890, the Navy Department commissioned a study by the Policy Board of the Navy. The immense report that resulted incorporated many of the suggestions put forward by the officers reviewed here. The navy these officers had striven for over the previous two decades was finally at hand, taking a form that was recognizably Mahanian.

### A Self-Perpetuating Concern

In the 1870s and 1880s, a number of freethinking U.S. naval officers, including several of senior rank, persistently advocated a reconstructed American navy. Their understanding of the proper course for naval strategy was greatly colored

by the accelerating technical advances then taking place in naval engineering worldwide. In large part, these officers' proposals were meant to take advantage of new inventions, but they also had a more visionary prospect for the Navy. They saw their service as the vanguard of a new international strategy. The navalists were certain that a modernized navy was essential to advance American influence around the world—through strengthening national defense, protecting shipping on the oceans, and spreading American political and commercial influence. Their way of thinking would become near-orthodoxy during the presidency of Theodore Roosevelt.

Just why the country should become a leading international political participant remained unexamined. The navalists justified the national importance of expansion by two questionable notions. The first was, as has been seen, an exaggerated idea of European designs on not just American overseas trade but the country's very territory. The second was that a large navy was necessary for any nation that would exercise imperial aspirations. In addition (as historian Mark Shulman emphasizes) the spirit of nationalism was a leading factor behind their efforts. For them, to some extent, navalism was linked to a "flexible, aggressive politics . . . [for] a great navy makes a nation great."<sup>79</sup> Yet it is now clear that immediately following the Civil War the United States was, though economically strained, poised to become a great industrial power. The nation's industry had greatly grown (in the North) during the war years, and its natural wealth remained largely untapped. The country was in fact not in danger of being swallowed up or of losing its international trade to some rapacious rival. Indeed, American commerce began to prosper after the war through exploitation of the domestic market. The country could become a strong trading partner without achieving international military dominance. It is arguable today, in retrospect, that economic growth did not have to coincide with imperialism; there was no necessary parallel between commercial and military prowess. Even in the 1870s, without the benefit of hindsight, it was not obvious, or even broadly accepted, that the reverse was true.

A possible motivation that we have discussed is that of the authors' social identity. Their writings reveal how closely they identified with their vocation and the subculture in which they lived, and their desire to serve a better trained, more professional—and splendidly equipped—navy. As has been argued, these "officers, their professional careers threatened, drew analogies between their own conditions and what they deemed to be the precarious state of the Navy itself."<sup>80</sup> This explanation too is helpful, but insufficient. It imputes a calculating political self-consciousness that is often not evident in the writings we have reviewed. And where did their internationalist notions come from?

The reformers were fascinated by military technology, which they could not but observe being rapidly advanced by other navies of the world. It had a

dynamic of its own. What was less certain was whether military capability should determine national strategy. The development of remarkable ships and powerful fleets was not an end in itself but a means to some end. The navalists seldom asked whether the possession of a great fleet of modern warships was essential to America's goals in the last quarter of the nineteenth century.

In the end, these officers were writing for one another, giving their talks before audiences of familiar colleagues, and immersing themselves in familiar and congenial strategic or scientific literature. Thus the absorption with strategy and ship design was ultimately a self-perpetuating concern, arising from an inner circle of common intellectual interest. The exercise of strategy and ship design was in itself an absorbing game. Use of the term "game" here implies nothing pejorative. The reformers were not naïfs, sporting in the fields of military affairs; what they were doing was by no means child's play, and the naval advocates came to believe their work was of enormous import in the service of their nation. Their world of thought and social activity was the realm of strategic debates. The work intrigued them and was thus the engine for its own perpetuation. It is not to be wondered at if they lost the ability to judge its realistic political pertinence.

Their answers were rooted in certain habits of understanding, training, and experience. Thus military advances abroad, whether or not necessarily a threat to the United States, had to be scrutinized with both suspicion and envy, and the seeming inadequacy of the U.S. Navy led to distress. The navalists were indeed nationalistic. They did urge their country to become more aggressive, and, in contrast to Congress in the 1870s, they had no qualms about an American colonialism. The reformist officers were also preoccupied with advancing their own possibilities in an enlarged navy. But blended with these tendencies a third interest can be distinguished: the navalists' earnest, if ultimately exaggerated or unrealistic, immersion in creating for the United States, using the remarkable means that had come to hand, new naval strategies—or perhaps "proto-strategies," for they were not oriented to existing, specific, and defined national goals, nor were they supported by elaborated justifications.

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### Notes

1. I use "naval reformers" and "navalists" interchangeably in this paper to refer to those who worked for a large and modernized American navy after the Civil War, notwithstanding the tendentiousness of both terms.

2. Peter Karsten, *The Naval Aristocracy: The Golden Age of Annapolis and the Emergence of Modern American Navalism* (New York: The Free Press, 1972).

3. Mark Russell Shulman, *Navalism and the Emergence of American Sea Power, 1882-1893* (Annapolis, Md.: Naval Institute Press, 1995).

4. Lance C. Buhl, "Maintaining 'An American Navy,' 1865-1889," in *In Peace and War: Interpretations of American Naval History, 1775-1984*, ed. Kenneth J. Hagan, 2nd ed. (Westport, Conn.: Greenwood, 1984).



5. Mahan's various predecessors and colleagues are described in Lawrence Carroll Allin, *The United States Naval Institute: Intellectual Forum of the New Navy: 1873-1889* (Ann Arbor, Mich.: University Microfilms International, 1982); Shulman, p. 101; Walter R. Herrick, Jr., *The American Naval Revolution* (Baton Rouge: Louisiana State Univ. Press, 1966), p. 47; and Karsten, p. 334, footnote.

6. There is still no straightforward consensus on the quality of the U.S. Navy in the postbellum years. Reasonable arguments that the Navy remained too primitive can be found in, for example: Michael E. Vlahos, "The Making of an American Style," in R. W. King, ed., *Naval Engineering and American Seapower* (Baltimore: Nautical and Aviation Publishing, 1989), p. 25; Edward L. Beach, *The United States Navy: A Two Hundred Year History* (Boston: Houghton Mifflin, 1986); Karsten, pp. 277-8; and Herrick. A venerable study that holds this view is Harold and Margaret Sprout, *The Rise of American Naval Power, 1776-1918* (Princeton, N.J.: Princeton Univ. Press, 1942).

7. See, for instance, Paolo E. Coletta, *A Survey of U.S. Naval Affairs, 1865-1917* (Lanham, Md.: Univ. Press of America, 1987), pp. i, 32.

8. Buhl, p. 149.

9. The problem continued into the twentieth century. The "Great White Fleet," sent by President Theodore Roosevelt on a worldwide tour in 1907, comprised model warships when it set out but was outdated by the time it returned two years later. See Robert Greenhalgh Albion, *Makers of Naval Policy, 1798-1947* (Annapolis, Md.: Naval Institute Press, 1980), pp. 213, 337.

10. Buhl, p. 148. For a thorough historical summary of the contest between ever-improving steel armor and the advances in naval gunnery, see Benjamin Franklin Cooling, *Gray Steel and Blue Water Navy: The Formative Years of America's Military-Industrial Complex 1881-1917* (Hamden, Conn.: Archon Books, 1979), pp. 22-8.

11. Buhl, p. 151. For additional analysis of the civilian-military contest over determination of naval policy, see Robert W. Love, Jr., *History of the U.S. Navy, 1775-1941*, vol. 1 (Harrisburg, Penna.: Stackpole Books, 1992), pp. 327-30.

12. Kenneth Hagan specifies four general assumptions that were prevalent among the navalists at the time; they are curiously similar in central aspects to the views of those who cautioned against a larger navy. The differences are that the navalists anticipated angry economic competition arising from European and American trade with new territories. Kenneth Hagan, *American Gunboat Diplomacy and the Old Navy, 1877-1899* (Westport, Conn.: Greenwood Press, 1973), pp. 7-9.

13. Buhl, p. 153.

14. The British navy remained the predominant naval force until the final decade of the century, when Russia, Germany, and France all developed more powerful craft to protect their colonial adventures. See John Keegan, *The Price of Admiralty: The Evolution of Naval Warfare* (New York: Viking, 1988), pp. 111-2.

15. Stephen Howarth, *To Shining Sea: A History of the United States Navy, 1775-1991* (New York: Random House, 1991), p. 225.

16. Buhl, p. 158.

17. Beach, p. 318.

18. Love, pp. 335-7.

19. Commodore Foxhall A. Parker, at the time chief of staff to Admiral David Dixon Porter, was openly critical of the Navy's ships off Cuba. He was also, it should be noted, one of the leading navalists and an early supporter of the U.S. Naval Institute. Curiously, Porter himself, though prominent in naval affairs in Washington both during the Civil War and for many years afterward, was viewed by the navalists as being to some extent an opponent of naval innovations. For Parker's reaction to the *Virginus* affair, see Love, p. 336.

20. Herrick, p. 23.

21. A lucid account of the technical problems Isherwood confronted and the solutions he invented can be found in Beach, pp. 323-8.

22. Frank M. Bennett, *The Steam Navy of the United States* (Pittsburgh: W.T. Nicholson, 1896), pp. 551-73.

23. *Ibid.*, p. 567.

24. Sprout and Sprout, p. 169.

25. *Ibid.*, pp. 166-7. Notwithstanding their unreserved criticisms, the Sprouts' own account shows that the Department's decision was reasoned rather than merely reactionary.

26. Shulman, p. 43; and see Allin, pp. 17, 23-5. The Naval Institute has always enjoyed a close relationship with senior naval officers. The editorial board continues to comprise, in significant part, members of the Navy's upper ranks.

27. For a review of the history of *Proceedings*, see Allin. For an account of the founding and purposes of the Naval War College, see John B. Hattendorf et al., *Sailors and Scholars: The Centennial History of the U.S. Naval War College* (Newport, R.I.: Naval War College Press, 1984), esp. pp. 11-37.

28. Herrick, p. 54.

29. Lieutenant Theodorus B.M. Mason, USN, spoke of the Naval Institute as the "bureau of [public] information of the navy" (quoted in Karsten, p. 303).
30. *Proceedings* began to run competitions for original essays in June 1878. See Allin, pp. 26-33.
31. The U.S. Naval Institute continues to see its roots in the struggle to overcome outmoded thinking. See its present introductory membership flier, "The Benefits of Membership: U.S. Naval Institute," 1996.
32. Quoted in John B. Hattendorf, ed., *Mahan on Naval Strategy: Selections from the Writings of Rear Admiral Alfred Thayer Mahan* (Annapolis, Md.: Naval Institute Press, 1991), p. xxvii.
33. W.N. Jeffers [Capt., USN], "The Armament of Our Ships of War," *The Record of the United States Naval Institute* [hereafter *Record* (under this title)], 12 March 1874, p. 118.
34. Norman Friedman, *U.S. Cruisers: An Illustrated Design History* (Annapolis, Md.: Naval Institute Press, 1984), p. 2. For other detailed histories of the strategy of *guerre de course*, which had been employed by the U.S. Navy before the Civil War, see: Allin, chap. 4; Buhl, p. 157; and Shulman, pp. 96-7, 104. George Baer's study of the American navy from the turn of the century to the present explains the abandonment of this tactic—best accomplished by small, fast craft—as the slower and larger battleships became the Navy's capital ships; see George W. Baer, *One Hundred Years of Sea Power: The U.S. Navy, 1890-1990* (Stanford, Calif.: Stanford Univ. Press, 1994).
35. Foxhall A. Parker [Cmdr., USN], "Our Fleet Manoeuvres in the Bay of Florida, and the Navy of the Future," *Record*, 9 April 1874.
36. *Ibid.*, p. 171.
37. *Ibid.*, p. 173.
38. William G. Gibbons, "The Marine Ram, as Designed by Rear Admiral Daniel Ammen, U.S.N.," 4 May 1882, *Proceedings of the United States Naval Institute* [hereafter *Proceedings* (under this title)], pp. 209-19.
39. *Report of Chief Engineer J.W. King on European Ships of War and Their Armament, Naval Administration and Economy, Marine Constructions and Appliances, Dock-Yards, Etc., Etc.* (Washington: U.S. Govt. Print. Off., 1877), Appendix A, "Chronology of Naval Engineering," p. 405.
40. Parker, p. 173.
41. See comments of Lieutenant McLean and Commander McNair in the "Discussion" section following Commodore Parker's article, p. 178.
42. Hagan, pp. 18-20.
43. T.B.M. Mason [Lt., USN], "Two Lessons from the Future," *Record*, 3 April 1876.
44. *Ibid.*, pp. 60-1. Mason's curious retention of rigging and sails may have been influenced by the standing order issued by Admiral David Dixon Porter in 1869 requiring all American naval ships to be capable of sailing. For a sympathetic analysis of Porter's possible reasoning, see Buhl, p. 148.
45. The *Trenton* was reviewed in Charles A. Stone [Lt., USN], "A General Description of the Ordnance and Torpedo Outfit of the U.S.S. 'Trenton' (2nd rate)," *Record*, vol. 3, no. 6, 1877; and George W. Baird, "The U.S. Ship Trenton," *Record*, 11 October 1877. (Baird's article continues in "The U.S. Ship Trenton: A Supplement," *Proceedings*, 8 May 1879.) The USS *Alarm*, constructed two years after the *Trenton*, incorporated further technological advances; the *Alarm* was to be a torpedo-equipped ship, with an armored hull as well as a sloped deck and a low silhouette above the water, an approach that was also being widely applied to ram architecture at the time. For a study in detail of the torpedo boat *Alarm*, see R.M.G. Brown [Lt., USN], "The U.S.S. Alarm," *Proceedings*, 16 October 1879.
46. King, p. 175. A similar international review, although more historical, was published in *Proceedings*. See Jacob W. Miller [Lt., USN], "The Development of Armor as Applied to Ships," *Proceedings*, 20 November 1879.
47. However, King was doubtful about, though not derisive of, Russia's two (later three) circular, six-screwed, coastal-defense ironclads, of which he had seen models in London. Their circular hulls were intended to ease steering but proved to have the opposite effect. For technical histories of these individual ships, see the separate entries in: Alfred Dudzus and Alfred Köpcke, *Das große Buch der Schiffentypen: Schiffe, Boote, Flöte unter Riemen and Segel, Dampfschiffe, Motorschiffe, Meerestechnik* (Augsburg: Verlag, GmbH, 1995). For a somewhat sarcastic summary of the failures of the design, see "Weiche Birne," *Der Spiegel*, no. 9, 26 February 1996, pp. 241-2.
48. J.C. Soley [Lt., USN], "On a Proposed Type of Cruiser for the United States Navy," *Record*, vol. 4, no. 8, 1878, p. 127. I have not been able to determine whether the lieutenant was related to James R. Soley, a professor at the Naval War College at the time and a supporter of naval reforms.
49. Some quite influential pieces were written by junior officers who later became leaders in the expanded Navy. However, the low rank of many participants in this conversation is misleading. In the 1870s and early 1880s, the officer corps of the American navy was small, and lieutenants often commanded warships. This stemmed partly from a congressional policy first enacted on 15 July 1870 that strictly limited the number of officers in higher grades. See Karsten, pp. 280ff.

50. Soley, p. 128.
51. *Ibid.*, p. 129.
52. Frederick Collins [Lt., USN], "Naval Affairs," *Proceedings*, 27 February 1879, p. 161.
53. *Ibid.*, p. 162.
54. *Ibid.*, p. 168.
55. *Ibid.*, p. 167.
56. John Rodgers [RAdm., USN], in "Discussion," *Proceedings*, 27 February 1879, pp. 178–9. He may have misunderstood the relation of weight and size to speed. While a heavier steam-powered ship would require more fuel than a lighter vessel, it would also be faster and more stable in open seas. This suspicion of armor, and metal ships in general, persisted in the American navy, in part because the service had not had much practical experience with heavy armored ships.
57. E. W. Very [Lt., USN], "The Development of Armor for Naval Use," *Proceedings*, vol. 9, no. 3, whole no. 25, 1883. Very also published a survey of contemporary naval construction, *Navies of the World*, in 1880. At the time, a number of such books were being produced, in America and abroad, for a civilian market intrigued by the new technology. John C. Reilly, "U.S. Naval Intelligence and the Ordnance Revolution, 1900–1930," in Robert William Love, Jr., ed., *Changing Interpretations and New Sources in Naval History: Papers from the Third United States Naval Academy History Symposium* (New York: Garland, 1980), p. 327.
58. Allin, p. 51.
59. The performance of the *Huascar* was widely remarked upon in naval literature for a number of years. While the war was still proceeding, *Proceedings* carried an article about the ship's successes against various Chilean antagonists. See J. F. Meigs [Lt., USN], "The War in South America," *Proceedings*, 9 October 1879, pp. 461–78. The battle is also briefly recounted in S. Eardley-Wilmot, *The Development of Navies during the Last Half-Century* (New York: Charles Scribner's Sons, 1892), pp. 284–6.
60. Hagan, p. 140.
61. Charles Belknap [Lt., USN], "The Naval Policy of the United States," *Proceedings*, 18 February 1881, p. 373.
62. Allin, pp. 177–93.
63. For a thoughtful analysis of the historical proximity of technology and strategy, see Colin S. Gray, *Weapons Don't Make War: Policy, Strategy, and Military Technology* (Lawrence: Univ. Press of Kansas, 1993).
64. Karsten, p. 301.
65. *Ibid.*, p. 304.
66. Belknap, p. 374.
67. *Ibid.*, p. 383.
68. *Ibid.*, p. 391.
69. *Ibid.*, p. 389.
70. Shulman, p. 102.
71. W. I. Chambers [Ens., USN], "The Reconstruction and Increase of the Navy," *Proceedings*, 3 April 1884, pp. 7–8. As for "suppressing 'internal riot,'" Chambers seems not to have noted the passage in 1878 of the Posse Comitatus Act, essentially barring this function. Certainly the use of armed forces to control a riotous public had had a long history in the United States, going back to Shay's Rebellion of 1787. There had been several instances in the Civil War, including the 1863 New York City draft riots and—pertinently, due to the involvement of U.S. Marines—the capture of John Brown at Harpers Ferry in 1859.
72. *Ibid.*, p. 8.
73. Chambers implied a comparison between the railways, which were opening up the western regions of the United States and Canada to settlement and trade, and modern oceangoing commercial and military ships. See *ibid.*, p. 11.
74. *Ibid.*, p. 26.
75. *Ibid.*, p. 36. (Original italics removed.)
76. T. B. M. Mason [Lt., USN], "Discussion," *Proceedings*, 3 April 1884, pp. 70–1.
77. Stephen B. Luce [RAdm., USN], "Our Future Navy," *Proceedings*, vol. 15, no. 4, whole no. 51, 1889, pp. 541–53. (Originally published in *North American Review*.) Despite its broad title, this article focused on the special advantages of a battleship-weighted fleet.
78. A. T. Mahan [Capt., USN], "Discussion," *ibid.*, p. 554.
79. Shulman, pp. 7–8.
80. Karsten, pp. 288, 301. For an account of the modernization that was beginning in certain sectors of the U.S. Navy toward the end of the period under review, see William H. Thiesen, "Professionalization and American Naval Modernization in the 1880s," *Naval War College Review*, Spring 1996, esp. pp. 35–45.