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"Technology, Culture, and the Modern Battleship"

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Jon Tetsuro Sumida

O'Connell, Robert L. *Sacred Vessels: The Cult of the Battleship and the Rise of the U.S. Navy*. Boulder, Colo.: Westview, 1991. 409pp. \$24.95

According to the book summary after the endnotes, *Sacred Vessels* "is an irreverent account of the modern battleship and its place in American naval history from the sinking of the coal-fired *Maine* in Havana Harbor in 1898 to the deployment of the cruise missile-armed *Missouri* in the Persian Gulf in 1991." Yet, of the ten chapters of text (excluding the introduction and conclusion), three are devoted to matters prior to 1898, one is given over entirely to the Battle of Jutland, and of the remaining six, five cover the period from 1898 to 1922. For the remaining three-quarters of the period supposedly under examination, Robert L. O'Connell gives us but a single chapter. O'Connell's main subjects are actually the nature and implications of the naval technological changes that came with industrialization, the mentalité of the American naval officer corps as determined by the late nineteenth-century experience, the influence of Alfred Thayer Mahan on American naval thought and culture, the history of the battleship during the first two decades of the twentieth century, and the public controversy that surrounded the battleship first at the peacemaking conference at Versailles in 1919 and later at arms limitation negotiations at Washington in 1922.

The main arguments of *Sacred Vessels* are that "the vaunted battleship was in fact never an effective weapon of war, even before developments in aircraft and submarine technology sealed its doom," that social and cultural factors born of naval tradition and the special daily circumstances of naval life blinded naval officers to the obvious shortcomings of the battleship and the true worth of alternative weapons systems, that this blindness was shared by the civilian leaders of the major naval powers, and that the result was the construction of huge fleets that cost enormous sums but were proved to be virtually worthless in the great

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conflicts of the twentieth century. This story is offered as “a cautionary tale” to contemporary makers of defense policy, who under the present and likely future circumstances of “severe cost constraints and dramatically changing threats” must make wise investment choices in new weapon systems and thus would be well advised to avoid the putative sociological and psychological mistakes of previous naval and civilian elites.

O’Connell’s proposition that social and cultural factors determined the course of American naval policy is based on the writing of Elting E. Morison, who maintained that “military organizations are societies built around and upon the prevailing weapon system,” societies that are inherently opposed to change on social and cultural grounds, and that therefore resistance to change in weapons technology can be explained by social and cultural conservatism (*Men, Machines, and Modern Times*, 1966). The problem with this line of reasoning is not that it is out-and-out wrong but that it is at best a partial, not a complete, explanation of so-called military technical conservatism. Armies, navies, and air forces are not only social entities but strategic, tactical, logistical, technical, economic, financial, and administrative entities as well. Social and cultural factors might be the dominant forces in determining the outcome of a particular decision, but they are never the only agents at play. Common sense should be sufficient to credit the others with equal if not greater influence in many, if not most, cases.

Sacred Vessels is further compromised by O’Connell’s reliance on other false syllogisms that underline his exposition. These may be paraphrased as follows: “the image of battleships was unsinkability, they were not unsinkable, therefore their operational value was problematical”; “battleships did not win decisive battles, warships to be useful must win decisive battles, therefore battleships were useless”; and “battleships were preeminent in the age of sail because they were virtually invulnerable, the steam era witnessed the introduction of new kinds of naval weapons that made the battleship vulnerable, therefore the placement of battleships at the top of the warship hierarchy was mistaken.”

Reductionism of this kind does not require elaborate refutation, and the following should suffice. In the first place, demonstrating that the battleship failed to live up to its public-relations presentation or even to widely held sentiments of the naval officer corps is not the same as proving that its drawbacks outweighed its virtues. Weapons may be deeply flawed and still be desirable or even necessary. Second, the worth of a battle fleet may not be measurable in terms of the number of decisive battles fought. This is because a close balance of forces might result in a largely uncontested stalemate leaving one side in a position of significant strategic advantage, such as occurred during World War I. Moreover, battleship warfare in the twentieth century was hardly less productive of decisive engagements than in the age of sail, a period when inconclusive actions were the rule. And finally, that battleships became vulnerable to other naval weapons systems did not also mean that these other weapons systems were capable of exercising

all the functions of sea control on their own. What the advent of new naval weapons in the early twentieth century did require was the integration of the line, of cruisers, and of flotilla craft into a combined-arms force (a balanced fleet), in which for some years to come the battleship played a reduced but nonetheless essential and even leading role.

O'Connell's analysis of major technical issues is also unduly simplified, and thus seriously flawed. He dismisses heavy-caliber naval gunnery, apparently unaware that the introduction of increasingly sophisticated centralized systems of gunlaying and sight-setting over the course of the first four decades of the twentieth century resulted in substantial advances in hitting under realistic battle conditions. O'Connell also does not appreciate the fact that limited range, small load-carrying capacity, and mechanical unreliability of aircraft, as well as the difficulties of operating and navigating them over the high seas, especially in the dark and in bad weather, meant that surface capital ships were probably superior to aircraft carriers at least through the 1920s if not well beyond (Geoffrey Till, *Air Power and the Royal Navy, 1914-1945: A Historical Survey*, 1979; Wayne P. Hughes, *Fleet Tactics*, 1986).

O'Connell's discussions of the early development of the submarine and the nature of submarine warfare in World War I are no better informed than those on battleships and carriers. Before war broke out in 1914, most submarines were slow, short-ranged boats with poor seakeeping characteristics. They were inhabitable only for brief periods. These qualities constituted major obstacles to the deployment of submarines as effective weapons, and naval leaders were correct in fearing that the costs of developing improved models would be substantial. In spite of these factors, naval interest in submarines was considerable—greater in America and far greater in Britain than O'Connell supposes. Indeed, the failure to anticipate the use of the submarine as a commerce raider was, in the case of the Royal Navy, in part attributable to a preoccupation with the development of a fast warship that could work with the battle fleet rather than simple indifference to underwater craft altogether (Nicholas Lambert, pending D.Phil. dissertation, Oxford University).

The failure, common to both naval officers and civilians, to grasp the commerce-raiding potential of submarines can be blamed primarily upon almost universally held expectations that the next great war would be decided quickly. Britain, with half the world's ocean-going tonnage and more shipbuilding capacity than all the rest of the world put together, had little to fear during a short conflict from attacks on her merchant ships by submarines or any other source of danger. This probably explains why the German Admiralty did not consider using submarines to attack merchant ships until the war was quite some months old.

As the war dragged on, it began to create complex, unforeseeable economic conditions that greatly magnified the vulnerability of Allied shipping to

disastrous disruption. By 1917, after British industry had focused for two and one-half years on meeting the urgent war requirements of the army and navy, the building and maintenance of British merchant ships had been severely curtailed. This led to shortages in British shipping nearly equal to the losses caused by the U-boats that year, the year in which the U-boats gained their greatest successes. Administrative inefficiency and incompetent direction in the use of resources exacerbated the crisis. Thus Britain was brought to the brink of defeat, but by the combination of circumstances we have just related (and more), not just by sheer stupidity and blindness to the obvious.

Sacred Vessels is afflicted by many questionable and outright faulty representations of general naval history. According to O'Connell, the Revolutionary War's *Alfred*, a lightly armed converted merchantship, was America's first battleship (p. 22). He believes that the defeat of the Spanish Armada in 1588 established English naval supremacy until the first half of the twentieth century (p. 30), which ignores post-Armada Spanish naval development and later successes of the Dutch and French in the seventeenth century. O'Connell's discussions of eighteenth-century naval life (p. 19), warship design (p. 32), naval tactics (p. 34), and naval gunnery (p. 35), of nineteenth-century torpedo development (pp. 141-143), and of twentieth-century matters such as the American construction of the carriers *Lexington* and *Saratoga* (p. 283), and War Plan Orange (p. 300) are not totally wrong but are incomplete or oversimplified to the point of error. But perhaps most revealingly, O'Connell conflates gunsights and rangefinders when describing German fire control equipment during the First World War.

These defects of historical conception, judgment, and accuracy are probably the result of the author's inadequate familiarity with the literature. For example, no reference can be found to the work of Norman Friedman: not to his *Battleship: Design and Development, 1905-1945* (1978), not to his *U.S. Naval Weapons* (n.d., but c. 1983), and not to his *U.S. Battleships: An Illustrated Design History* (1985)—all of which are obligatory reading for one who proposes to instruct others on the subject. Neither can one find reference to *Battleships: United States Battleships in World War II* by Robert O. Dulin and William H. Garzke, Jr. (1976), an important technical study.

Basic handbooks such as the various editions of the U.S. Navy's *Naval Ordnance and Gunnery* and Alexander Gleichen's *The Theory of Modern Optical Instruments* (1918) are not listed as having been consulted, nor does O'Connell seem to have read such secondary works as Peter Padfield's *The Guns at Sea* (1974), still the best history of naval gunnery. Although whole chapters are given over to the Battle of Jutland and the Washington Naval Conference of 1922, O'Connell appears to have overlooked John Campbell's *Jutland: An Analysis of the Fighting* (1986) and Roger Dingman's *Power in the Pacific: The Origins of Naval Arms Limitation, 1914-1922* (1975), both outstanding accounts of their subjects.

Those who are inclined to check sources may doubt that even books that are cited were used carefully. For example, a fragment of Admiral "Jocko" Clark's reminiscence about the poor reception given him as a naval aviator when he reported to the *Mississippi* in 1926 is quoted to describe the kind of reactionary intransigence of battleship officers when it came to the subject of airplanes. Clark's complete account, however, indicates that the ship's captain had good grounds for unhappiness with his particular aviators; after a change of personnel among them he adopted a more favorable view of the use of aircraft (Admiral J.J. "Jocko" Clark, *Carrier Admiral*, 1967, pp. 19-23). It should be noted, in addition, that while air spotting for heavy-caliber naval gunfire—by no means a simple activity—had at that date been accepted in theory, there is evidence to suggest that its practical particulars had yet to be worked out and that captains of the day, therefore, had at least some reason to believe that they had been oversold on its virtues.

Still, the text of *Sacred Vessels* is supported by nearly 1,500 notes, many of which are references to documents. These bear the cachet of original scholarship. The suggestion of quantitative and qualitative strength, however, is deceptive. The primary materials used are a serious—but by no means a comprehensive—effort to come to terms with the original sources as they pertain to American battleship technology. Unfortunately, O'Connell seems to have left unread those papers on technical and tactical questions to be found among the holdings of the National Archives and the Naval War College, even though they discuss these matters at length and in greater detail than the papers he does cite.

Clearly, O'Connell's massive citations do not compensate for the author's failure to use standard secondary sources that are directly concerned with his subject.

Finally, *Sacred Vessels* is blemished by rhetorical excess. O'Connell writes that senior American naval officers were "beleaguered sloths" (p.86) and "inexperienced with the ways of technology" (p. 146), tied to a naval tradition that "was founded on a profound misperception of water" (p. 139), prone to the intoning of "liturgical chants of the orthodox" (p. 277), and governed by subconscious libidinous urges, battleships being "the consummate symbol of potency and machismo" (p. 85) and dreadnoughts a "fetish" (p. 27). Blanket character assassination in this form, which combines name-calling, overstatement, and innuendo is not just irreverent but self-indulgent, indiscriminate, and polemical. Discourse of this sort may be objected to not because it offends the dignity of admirals but because such language does violence to the notion of historical investigation as a serious enterprise and in particular may discredit the efforts of others engaged in the study of the relationship between technology and culture as it pertains to military subjects.

That naval officers were culturally predisposed to favor the battleship may be accepted for the most part on its face, but O'Connell fails to make the case that

this single factor distorted fundamentally the weapons procurement process. For this reason *Sacred Vessels* has little if any relevance to current debates about defense policy. Expert readers may derive some benefit from O'Connell's use of primary sources related to early twentieth-century American naval policy and politics, but in general the defects of this monograph overwhelm its positive aspects. Navies are complex institutions whose history as such can only be understood through scholarship that takes into account the full range of technical, tactical, strategic, administrative, economic, financial, political, sociological, and cultural characteristics that define their nature and function. Grasping the nettle requires intelligence, imagination, and hard work. Even good-faith failure in the attempt is preferable to extravagant and unsubstantiated theorizing masquerading as historical inquiry.

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