

Hone, Thomas C., Norman Friedman, and Mark D. Mandeles. *American and British Aircraft Carrier Development, 1919-1941*. Annapolis, MD: Naval Institute Press, 1999.

Thomas Hone, Norman Friedman and Mark Mandeles are recognized scholars who have made singular contributions to the literature of naval institutions, naval assets and naval doctrine. Now, together, they have produced a compressed historical volume that contrasts British and American experience in carrier aviation. Their book, *American and British Aircraft Carriers, 1919- 1941* is both fascinating and provocative - fascinating because of the authors' extensive archival research, and provocative because of the conclusions the authors derive from their findings.

This historical study of naval aviation embraces not one, but several intriguing issues. For example, why did the US surpass the British in carrier aviation? There is general agreement that by the end of World War I, the Royal Navy's aviation unit enjoyed world leadership. The Royal Naval Air Service introduced the first torpedo plane; engaged in tactical support of British ground troops; launched the first strategic bombing raid on German Zeppelin sheds; and introduced the world's first aircraft carrier. In tactics, organization, administration and assets, the Royal Navy stood preeminent.

Between the two world wars, however, Britain forfeited its naval aviation lead. The culprit turned out to be an aviation merger - a belief that an amalgamation of army and naval air units would yield both technical and operational economies. Executed by the Lloyd George coalition government in April 1918, "aviation unity" was a reaction to a 1917 zeppelin raid on London's Victoria station. The raid and its civilian casualties precipitated a series of events that led to the creation of the RAF, the Royal Air Force.

In reality, Britain's aviation merger turned out to be a hostile RAF takeover of naval aviation. Committed to the bomber and the long distant strike in the interwar period, the RAF neglected naval aviation. And, apparently, so did the British admiralty. By the time war clouds descended upon Europe in 1939, British naval aviation was dominated by cloth-covered biplanes capable of speeds slightly in excess of 100 knots per hour. The Royal Navy's Fleet Air Arm was embarrassingly reminiscent of 1918 vintage planes.

US naval aviation came perilously close to replicating the British aviation model. Indeed, some 17 congressional bills called for a comparable move to "aviation unity," encouraged by General Billy Mitchell in the 1920s. That siren call was blocked by both the Harding and Coolidge administrations. The Harding administration, in fact, enjoined not only any aviation merger, but secured an institutional home for aviation within the US Navy Department, the Bureau of Aeronautics. The authors' detail of this sequence of events makes for riveting reading.

A second question focuses on the evolution of US naval aviation between the First and Second World Wars. Here, Hone, Friedman and Mandeles isolate several key variables. For one thing, the Bureau of Aeronautics was blessed with outstanding leadership. The choice of Admiral William Moffett, as the Bureau's first director, was nothing less than inspirational. But Admiral Moffett was not alone. The authors observe that Admiral

Joseph Reeves compressed deck landing and take-off cycles aboard the experimental carrier Langley, an exercise that gave hint of the power of the massed plane strike. And it was Admiral Reeves who, during fleet maneuvers in 1929, permitted a high speed night run on the Panama Canal by the carrier Saratoga, an event often cited as the inauguration of what was to become the carrier task force concept some 13 years later.

Hone, Friedman and Mandeles acknowledge the contribution of the Naval War College to naval aviation's cause. Admiral William Sims, college president, encouraged fleet gaming exercises that bequeathed strategic concepts to future fleet admirals. The authors also note that the navy's bureau system, the chiefs of naval operations, and the General Board, contributed to the integration of naval aviation to the surface fleet. In buttressing their case, the author's mine the rich veins of naval archives files.

A third question turns on the matter of naval doctrine. Why, on the eve of Pearl Harbor, was the US Navy so committed to the battleship as its capital weapon. Stated differently, did not the navy squander millions of dollars on a weapons system destined to become obsolete? It is the authors' response to this question that is bound to be controversial. True, they argue, the luxury of hindsight does suggest that pursuing a battleship doctrine might appear to have been wasteful. But in 1941, America's impending adversary, Japan, was constructing battleships; technical changes between battleships and carriers offered no clear weapons choice; and in an environment of risk and uncertainty, an expenditure on battleships was not only both rational, but prudent.

Other scholars, notably Waldo Heinrichs, Vincent Davis, Desmond Wilson and William McBride, have rendered a less charitable assessment of US naval thinking and concepts. The navy as an institution, they observe, was hardly forward looking or perspicacious. Rather the navy establishment remained between the wars, insulated, parochial and bureaucratic; preparing for another Jutland. And these critics proffer a harsh bill of particulars. The navy bureau system? Dominated by the ordnance bureau with its faith in the 16 inch gun. The navy General Board? Admirals with one foot in retirement, who recommended accelerated battleship production after Pearl Harbor. The chiefs of naval operations? Powerless brokers vesting an interest in getting along. Admirals Standley, Leahy and Stark? Members of the "Big Gun Club," committed to the offensive capability of the flying boat or automatically building battleships as the fleet's capital weapon. The Bureau of Aeronautics? A repository of aviation exiles with minimal hope of ever attaining flag rank. Naval officers of enterprise and risk? Post-1929, Admiral Joseph Reeves was little heard of, and his chief of staff, Commander Eugene Wilson, convinced that his innovative concept of a Panama carrier run had ruined his career, resigned from the navy. The Naval War College? According to Admiral Nimitz, fleet logistics was dropped from the curriculum in 1921. Critics of US battleship doctrine will surely assert that Hone, Friedman and Mandeles, however articulate and well documented their case, essentially construct a brief on behalf of institutional status quo.

Fourth, what undermined the primacy of battleship doctrine in the 1940s? To the extent that American and British Carrier Development ends its analysis in 1941, that issue is not developed in detail. Many students of naval history cite Pearl Harbor, the Gulf of Siam

(Thailand), Coral Sea and Midway, as defining moments that preempted conventional ideology and academic war gaming. And not a few historians have asserted that naval leadership, failing to anticipate the potential of carrier aviation, neglected both the concept of a fast carrier task force and its logistical appendage, the fleet train.

Fifth, what factors, then, rejuvenated the navy after Pearl Harbor? Certainly one candidate was Admiral Ernest King. It was King, in August 1942, who rejected the General Board's battleship construction program and switched priorities to aircraft carriers. Bountiful congressional appropriations also played a role. But oddly enough, other institutions came to the navy's aid. The US Maritime Commission's program to construct tankers, cargo ships and carrier escorts, laid the groundwork for fleet logistics in the Western Pacific in 1943 and thereafter. Joel Davidson, in a recent analysis, has observed that a national steel shortage in 1942 carried unintended consequences. Steel plate shortage curtailed battleship building and favored carrier construction. Finally, one school of thought contends that the unprecedented productivity of private ship yards, the automobile and other industrial sectors poured arms and armaments to the navy by 1943. This last school implies that prewar naval doctrine was literally bailed out by the private sector of the US economy.

But those matters go beyond the immediate thrust of Hone, Friedman and Mandeles. Their central point remains unassailable, Britain's policy of aviation merger arrested the Royal Navy's lead in carrier aviation and naval doctrine. However, conditioned by tradition, at least the US Navy, by retaining its aviation unit, preserved the opportunity for a revolution in naval tactics and doctrine that was to occur under the imperative of battle.

And at least the US Navy preserved its prewar fleet exercises for study and assessment. The Royal Navy, by contrast, "pulped" its fleet documents and historians can only surmise the content of British fleet tactics. In sum, Hone, Friedman and Mandeles have written an important and insightful volume. The authors have documented, analyzed and presented their case forcefully. Their analysis of the US Navy's and British naval aviation is, however, unlikely to go unchallenged. Indeed, one would not be surprised if a rebuttal is not now in the works.

Manley R. Irwin

University of New Hampshire