

is useful in terms of the pre- and post-war chapters of his life, but the insertion of these unrelated elements in the main narrative of his naval life is less so. That aside, this is an engaging and most interesting book about an aspect of naval warfare that is not well addressed in standard accounts. It is evident that Wright himself was a prominent figure within the RN's coastal forces, who has been virtually invisible in the years since the war. This omission has been suitably rectified by O'Flaherty, and now his story is available to contemporary audiences. This book will be of value to any who study coastal forces as well as those interested in naval biographies.

While the author does acknowledge the book's lack of academic citation apparatus, there is some limited footnoting and a comprehensive bibliography that will be of value to researchers. Unfortunately, there is no index. The account is peppered with suitable diagrams of the more significant actions with which Wright was involved, as well as family photographs and images from the Coastal Forces archive.

Anyone who may be interested in exploring further the RN Coastal Forces Museum in Gosport is encouraged to check their website. ([The Coastal Forces Heritage Trust \(coastal-forces.org.uk\)](http://TheCoastalForcesHeritageTrust.coastal-forces.org.uk))

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Vincent P. O'Hara and Leonard R. Heinz. *Innovating Victory. Naval Technology in Three Wars*. Annapolis, MD: US Naval Institute Press, www.usni.org, 2022. xiv+301 pp., illustrations, maps, tables, notes, bibliography, index. US \$36.95, cloth; ISBN 978-1-68247-732-8. (E-book available.)

Technology and its resulting innovations have played an ever-increasingly important role in modern naval warfare but, strangely, we still seem to lack a comprehensive evaluation of the process of innovation itself. While neither of the authors are well-known military scientists, they are accomplished naval historians. Of the two, Vincent O'Hara, author of several historical studies, is perhaps the best known. His co-author,

Leonard Heinz, who has written articles on naval history, is a noted naval war game developer. The publisher, the US Naval Institute Press, is a reputable publisher that has never shied away from printing titles that challenge our understanding of naval and military history.

This limited study attempts to elucidate the process of innovation by examining the evolution of six carefully chosen aspects of naval warfare. To do so, it focusses on selected technological innovations from three major conflicts

between 1905 and 1945. Two of the three conflicts that form the backdrop for this study, the First and Second World Wars, are both obvious choices and relatively well-known. Including the Russo-Japanese war of 1905 may strike some readers as an odd choice. It did, however, feature the dawn of radio use and naval mines in wartime, so it is quite fitting. Choosing these distinct conflicts also allows the authors to trace the featured military innovations throughout the first half of the twentieth century. Having selected the wars, the authors then focus on three different pairs of naval technologies, namely “weapons”, “tools” and “platforms”. The weapons pair consists of perhaps the oldest naval technologies that are still extant today, mines and torpedoes. Tools are represented by radio and radar while weapon platforms are represented by aircraft and submarines.

Naturally, not all of these came to the fore in every conflict; however, they do represent how ever-evolving technologies led to new technical innovations. The processes by which the various naval forces sought, sponsored and adopted technological innovations were certainly prevalent in all three conflicts and are adequately covered in the volume. Indeed, the three selected pairs of sub-topics are representative of the overall process for all of the major naval powers. As expected, weapon innovations were not usually limited to one player, so the authors discuss how different navies attempted to innovate and the divergent choices they made. They also discuss the strengths and weaknesses of the new developments and emphasize the benefits and hazards each one presented to combatants. Every subsection comprises a relatively detailed essay which clearly outlines why this particular innovation came to be desired and, where applicable, how other powers adopted or countered it. For example, while long-range wireless radios made it possible for naval commands to communicate with their occasionally far-flung naval assets, using radios actually put warships at risk of exposing their position. Strangely, during the Battle of the Atlantic, the Kriegsmarine chose to disregard this danger and continued to communicate with its U-boats by radio. Once the Allies developed ways of detecting these radio signals, the U-boats found themselves at a severe disadvantage. Another example is use of radar in during the Second World War. While the Kriegsmarine was a major player in the early development of naval radar technology, they quickly lost their technological lead. Among other reasons, the authors suggest that the German navy had also recognized early on that radar transmissions could be tracked. Consequently, they devoted more effort to detection rather than improvement, making them less prone to use their radar proactively. This reluctance may partially explain why during the Battle of North Cape, the Royal Navy caught the *Scharnhorst* by surprise on at least two occasions. An earlier example is when the Germans deployed their new magnetic mines prematurely, enabling the RN to devise

effective counter-measures before the mines could be fully deployed. When the Germans eventually developed an effective acoustic mine, they were so afraid of using it prematurely, that they never fully deployed it prior to D-Day. This paralysis deprived Germany of the opportunity to inflict potentially crippling losses on the Allied invasion fleet. According to the authors, another issue that delayed or hindered the introduction of new technical innovations is the inert conservatism that was a hallmark of most naval services, partially fueled by the budgetary restraints that are often placed on navies in times of peace. In general, they preferred to invest their limited funding on existing, rather than new, technologies. Finally, as the section on the pair of weapons platforms shows, both submarines and aircraft only came to the fore once they received better weapons.

Overall, the authors have succeeded in detailing how technological innovations dramatically improved the effectiveness of military weapons in these three conflicts.

They have provided a highly readable account of this process and their success is all the more remarkable given their non-technical background. Moreover, their observations can be easily applied to other weapons systems from all the military branches.

Consequently, this book is highly recommended to anyone with an interest in the process of applying new technology to meet military needs.

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Joshua M. Smith. *Making Maine: Statehood and the War of 1812*. Amherst, MA: University of Massachusetts Press, www.umasspress.com, 2022. xii+312 pp., map, notes, index. US \$34.95, paper; ISBN 978-1-62534-701-5.

For many secondary and undergraduate students and cable TV/armchair history enthusiasts, early American wars are understood as a series of temporally- and spatially-bound battles fought by the professional armies and navies of combatant countries, scattered across the North American landscape. For the War of 1812, fought between the United States and Great Britain between 1812 and 1815, relatively contained battles punctuate its beginning, such as the Battle of York (27 April 1813) and its end, the Battle of New Orleans (8 January 1815). Other famous War of 1812 battles include the Battle of Lake Erie (10 September 1813), the burning of Washington City [D.C.] (24 August 1814), and the Battle of Baltimore (13 September 1814) for which the Star-Spangled Banner was written. No early American war fought on the