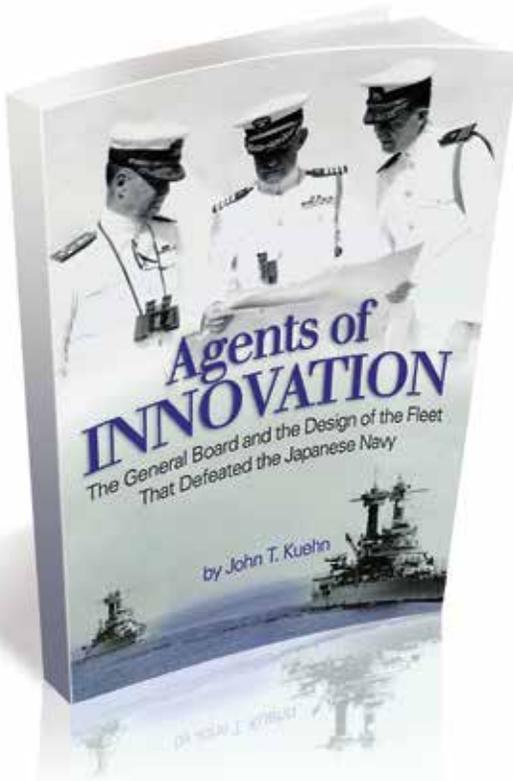


PROFESSIONAL READING LIST

The Defense Acquisition Professional Reading List is intended to enrich the knowledge and understanding of the civilian, military, contractor, and industrial workforce who participate in the entire defense acquisition enterprise. These book reviews/recommendations are designed to complement the education and training that are vital to developing the essential competencies and skills required of the Defense Acquisition Workforce. Each issue of the *Defense Acquisition Research Journal (ARJ)* will contain one or more reviews of suggested books, with more available on the *Defense ARJ* Web site.

We encourage *Defense ARJ* readers to submit reviews of books they believe should be required reading for the defense acquisition professional. The reviews should be 400 words or fewer, describe the book and its major ideas, and explain its relevance to defense acquisition. Please send your reviews to the Managing Editor, *Defense Acquisition Research Journal*:
Norene.Fagan-Blanch@dau.mil.



Featured Book

Agents of INNOVATION: The General Board and the Design of the Fleet That Defeated the Japanese Navy

Author(s):

John T. Kuehn

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Reviewed by:

Robert G. "Bob" Keane

Mr. Keane is currently the President of Ship Design USA, Inc.

Review:

Innovation during the period between World Wars I and II? How could that be? The Nation could little afford to build new warships. Treaties limited the number, type, and size of capital warships as well as fortifications in the Western Pacific. Yet, the Navy knew it had to implement new, emerging technologies such as naval aviation and undersea warfare. Navy leaders recognized they had to look for innovative ways to overcome the decreasing strength of their fleet relative to Japan's. As Professor John Kuehn emphasizes, this multidimensional threat drastically altered the way the Navy viewed the application of sea power. The simple premise of this brilliant book is "the U.S. Navy's contributions to victory in the Pacific...can be understood only by studying how the General Board...constructed the 'treaty navy' during the period between the wars."

The General Board was established as an advisory body by the Secretary of the Navy in 1901. Its members were senior- and mid-level officers with proven experience and promise. The Board hastened collaboration between the Naval War College, the Bureaus (now the Systems Commands), and the Chief of Naval Operations. It held iterative deliberations concerning naval warfare strategies, new technologies and systems, and the structure and size of the U. S. Navy Fleet. The Board collaborated closely with the Bureau of Construction and Repair (BuC&R)—now the Naval Sea Systems Command (NAVSEA)—tasking BuC&R to conduct extensive ship design studies to determine the size and structure of an affordable fleet. Although the Board's official role was advisory, its actual influence was much greater. It had the final word on ship design decisions, including critical operational requirements and costs. Professor Kuehn provides a captivating description of how the Navy was transformed from a battleship-centric Fleet to an efficient treaty Fleet, designed to operate at extreme distances without available bases, that by 1937 also included aircraft carriers, cruisers, destroyers, submarines, and new types of logistics support ships.

All defense acquisition professionals should study this exceptional book, which describes the elements and processes for successful acquisition outcomes. Professor Kuehn stresses the General Board's collaborative process demonstrates that innovation can occur in the face of constraints. MIT's Eric von Hippel, who has done pioneering research in new product innovation, emphasizes that one of the most important steps to innovative concept development and cutting concept development time and cost is for lead users—users like senior Fleet operators at the leading edge of products—to assess their own needs and create the design concept that satisfies their own needs. His research validates

what Professor Kuehn discovered: that there are very few—maybe even no—conditions under which properly equipped users engaged in open innovation cannot outdo closed, manufacturer-based innovators. This same “open innovation” process was also followed by successor boards such as the Ship Characteristics Improvement Board (SCIB) during the build-up to a 600-ship Fleet in the 1980s and 1990s. Unfortunately, the SCIB was abolished around 2000 and has not been reconstituted. The Performance Assessment and Root Cause Analysis (PARCA) Office within the Department of Defense Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, recently highlighted the root causes for major defense acquisition programs with critical cost growth as part of the Nunn-McCurdy breach certification process. PARCA emphasized that unrealistic estimates are generally caused by the invalidity of major assumptions *not* methodological errors. This has led to what PARCA referred to as “framing assumptions” early in an acquisition program, which put the program on an initial path for success or failure. The common incorrect framing assumption made by acquisition programs with critical cost growth was the “Design is mature.” In his book, Professor Kuehn has captured how the General Board managed technical risks to ensure a mature design before entering into a shipbuilding contract. Again, this is a must read for you “back-to-the-future” types.

Mr. Robert G. “Bob” Keane is currently the President of Ship Design USA, Inc. Prior to starting his own consulting firm, he worked at the Naval Sea Systems Command for 35 years. He was a member of the Senior Executive Service for 21 years and rose to the senior executive leadership positions of Chief Naval Architect of the Navy and the Navy’s Chief of Ship Design.