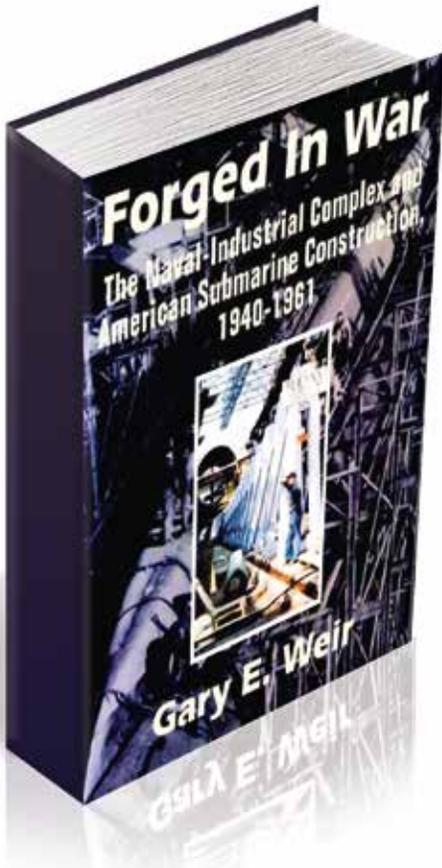


PROFESSIONAL READING LIST

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: DefenseARJ@dau.mil*.



Featured Book

Forged in War: The Naval-Industrial Complex and American Submarine Construction, 1940-1961

Author: Gary E. Weir

Publisher: Naval Historical Center

Copyright Date: 1993

Hard/Softcover/Digital:

Softcover, 314 pages, available online at <http://www.amazon.com/Forged-War-Naval-Industrial-Submarine-Construction/dp/0756766400>

Reviewed by: Stafford A. Ward, Department of Defense civilian at the Defense Security Cooperation Agency.

Review:

Gary E. Weir is an accomplished naval historian who has authored several titles on U.S., Russian, and German naval histories. In *Forged in War*, Weir tells a compelling story of how the U.S. Navy, defense contractors, and the scientific community worked together to form a naval-industrial-science complex to support America's entry into World Wars I and II. Reading *Forged in War* is akin to reading the U.S. Navy's history of submarine development and submarine strategic warfare from World War I to the early years of the Cold War. *Forged in War* aptly describes the evolution of the naval-industrial-science complex as a "command technology" of the U.S. Navy, directing and managing the acquisition process for U.S. industry. Weir uses mechanical and aerospace engineering concepts to explain technical details of how the naval-industrial-complex constructed submarines using advanced sonar, propeller, diesel-engine, and later nuclear-engine technologies. *Forged in War* also describes early uses of concepts that defense acquisition professionals currently use on a regular basis such as systems analysis, operations research, and project management methodologies.

Initial collaboration existed between the U.S. Navy's Bureau of Ships (BUSHIPS) and the defense industry to design and develop large warships and submarines to face significant threats from the German Kaiser's navy during World War I. The interwar years saw a dramatic decline in submarine orders from the U.S. Navy as a result of significant defense budget cuts from Congress. However, a decline in submarine orders would be short-lived after Hitler's armies raced across Europe in 1940, which prompted the Chief of Naval Operations and other senior U.S. naval officials to begin establishing the design requirements for defense contractors to once again build submarines to defeat both the German and Japanese war machines. In *Forged in War*, Weir focused exclusively on U.S. submarine and antisubmarine warfare (ASW) strategies against Germany during World War II, and later against the Soviet Union during the Cold War.

The introduction of the Woods Hole Oceanographic Institution and other members of the scientific community into the naval-industrial complex during World War II added an element of expertise that neither the U.S. Navy nor industry could devise on their own. The defense acquisition management system in use by defense acquisition professionals today has its foundations in the "command technologies" of World War II. In addition to the naval shipyards owned by defense contractors, such as the Electric Boat Company (now General Dynamics Electric Boat), BUSHIPS allowed defense contractors to use U.S. Navy-owned shipyards to maintain the high number of submarine orders as a result of the combined efforts of the

naval-industrial-science complex. The U.S. Navy benefitted significantly from German aircraft and naval technologies captured by the U.S. Naval Technical Mission in Europe, a group of special operatives who perilously followed the invading U.S. armed forces into Western Germany. During the early years of the Cold War, naval engineers and the scientific community integrated the captured German technology, which included conning towers; efficient diesel engines; and guided, cruise, and ballistic missiles onto U.S. submarines. These integration practices also reflected a shift from the U.S. Navy's strategic focus from offensive submarine warfare during World War II to defensive ASW during the Cold War.

However, the growing resentment of personalities between the U.S. Navy and defense contractors during the late 1950s severely hampered the positive collaboration of individuals that participated in the naval-industrial-science complex during World War II. In addition, the U.S. Navy began to oppose the technological enhancements suggested by the scientific community for the future of ASW warfare. Although it is beyond the scope of this book, *Forged in War* could have explained for today's defense acquisition professionals how systems analysis and the planning, programming, and budgeting system forever changed the dynamics of the naval-industrial-science complex from World War II to the early years of the Cold War.