

Chapman's continuing narrative of Lowther's life after his purported death in 1723, which not only grips your attention but also rewrites history.

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**Cooper, Iver P. *Work at Sea: The Evolution of Shipboard Technology*
McFarland & Company, 2026**

297 pp., illustrations, appendixes, bibliography, index

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Across human history, maritime activity has played a central role in shaping economic systems, cultural exchange, and technological innovation. The development of watercraft, whether for fishing, transport, longdistance trade, or specialized diving and salvage operations, required not only ingenuity in design but also the creation of tools, novel methods, and practices capable of meeting the demands of work at sea. Ships function simultaneously as vehicles and as complex sites of labor involving anchors to be handled, rigging managed, cargoes loaded and secured, and vessels navigated through unpredictable environmental conditions. As maritime networks expanded, effective communication between ships and with coastal communities became essential. The technologies that emerged to support these tasks were shaped by evolving priorities of efficiency, safety, labor management, and, in modern contexts, fuel economy. To understand the thesis of Cooper's work it is necessary to consider the author's unique background as a maritime historian. Having graduated from a prestigious technical university with a degree in physical science, he then obtained a law degree and specialized to become a patent attorney. He went on to become a published historian sharing his historical scientific and mechanical information. The breadth of this far-reaching book takes the reader into areas that many like this reviewer had not considered, such as the most efficient fish nets and why, the origin and evolution of oar propulsion, the history of cargo towage and transport, then on to the components and complex anatomy of various ropes, winches, and windlasses, all the way up through cranes and derricks. As a literary break from this sometimes-colorless chapter he includes wonderfully fitting lines from Willam Falconer's 1762 poem, "The Shipwreck":

Roused from repose aloft the sailors swarm,
And with their levers soon the windless arm
The order given, upspringing with a bound,

They fix the bars, and heave the windless round;
At every turn the clanging pawls resound;
Uptorn reluctant from its oozy cave,
The ponderous anchor rises o'er the wave. (91)

Occasionally the writing reads like a mechanical engineering textbook, however there is an erudite section on the physics employed in various rudder designs. In a minor gas exchange physiology departure Cooper discusses human blood chemistry related to oxygen carbon dioxide ratios and safe balance as background information as the author explores the multifaceted chapters concerned with underwater diving, rescue and object recovery, which are very well done.

Thus, this work offers an examination of the dimensions of maritime work from both scientific and historical perspectives, investigating the evolution of maritime technologies – above and below the waterline – while elucidating the scientific principles that underpin their operation. Author Cooper traces the development of tools, mechanisms, and operational techniques across centuries of seafaring, presenting a detailed and well-illustrated account of how maritime practices have adapted to changing technological possibilities and environmental constraints. His analysis centers upon functional and mechanical explanations, how these technologies work and why they evolved through the application of specific scientific principles, rather than on their social or environmental implications and ramifications. By integrating historical narrative with technical explanation, Cooper's book is an outstanding contribution to maritime history scholarship, narrating the saga of maritime technology, and finally its many applications to marine science. This scholarly work offers researchers, students, and everyday readers a clear and accessible framework for understanding the technological systems that have shaped human engagement with the sea. Specifically, it places these diverse complex systems within the broader context of scientific and engineering innovation. *Work at Sea* can be a challenge to read because of the often-specialized language Cooper employs. He touches upon many technical aspects of the development of maritime-related inventions and their sometimes-convoluted evolution. With this minor note of caution, this well-referenced work is a highly rewarding read, destined to become a valued source for those who wish to follow down the multitude of rarely considered paths discussed by the author.

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