

ing cost of new technology, which has meant reductions in actual force levels and readiness.

Having a publisher that could work in both English and French no doubt factored into Pannier's choice of Canada's McGill-Queen's University Press. *Rivals in Arms* fits nicely into its Human Dimensions in Foreign Policy, Military Studies, and Security Studies series, which focuses on contemporary topics. Pannier has also co-authored *French Defence Policy Since the End of the Cold War* published by Routledge in December 2020. Many of the same themes are covered in more detail on the French side. *Rivals in Arms* is recommended for a primarily academic audience with an interest in IR theory, contemporary military affairs, and European politics and diplomacy.

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Phillip Reid. *The Merchant Ship in the British Atlantic, 1600-1800. Technology and Change in History, Volume 18*. Leiden, The Netherlands: Brill Publishing, www.brill.com, 2020. 240 pp., illustrations, tables, appendix, notes, bibliography, index. US \$153.00, Euro 127,00 €, cloth; ISBN 978-90-04-42408-1. (E-book available.)

The subtitle of this book is *Continuity and Innovation in a Key Technology*, which leads one (reasonably) to expect that the book will be largely concerned with the tension between change and inertia over the indicated two-century period and have something significant to say in conclusion.

In the introduction, the author implies that this key technology has remained peripheral in British Atlantic history: "Archaeologists have worked on it, as have a few ship historians

concerned with technical matters, but a scholarly appreciation of this central technology has not yet taken its place upon the shelf." While this would seem (to this reviewer) to do a disservice to the works of Greenhill and McGregor (to cite only two authors who have written on the subject), in attempting to be *scholarly*, the author falls short of his (assumed) objective of saying something new and interesting.

Reid starts well, mapping his argument through the structure of nine recognizably suitable chapter headings: Introduction; The Ship: A Primer and Field Guide; From the Stocks to the Ways: Building a Ship from Contract to Launch; The Mysterious Art of the Shipwright: Deciphering the Merchant Ship Design; Merchant Venturers and Merchant Ships; Sailing and Surviving: People and Labour Abroad; Working the Ship: the Technology of Operation; Conclusion: The Merchant Ship in the British Atlantic, 1600-1800; and Epilogue: *Ann & Hope* in Canton—Beyond the British Atlantic.

Through these chapters he makes a number of points which relate to what an engineer might characterize as recognition of a system, with the inescapable corollary that all design is a compromise. Thus, in various places we hear the arguments that relate the evolution of merchant ship design to the wider milieu of geo-political risks (wars, privateering, the requirement for self-defence versus convoying), of economic risks (cargo capacity, economies of scale either via ship-size or distribution of risk via fleet-size, etc.), and of operational costs (manning and evolution of rigs in terms of numbers and sizes of sails and masts, and of configurations of fore-and-aft and square sails). There are many tantalizing mentions of the research possibilities of "experimental archaeology," the build-

ing and operation of authentic replicas as a means of understanding design intent, but disappointingly little in the way of clear conclusions regarding insight gained therefrom. There are also numerous mentions (21, 129, 224, 235) of the possible Dutch influence on English and French merchant ship design, in terms of wider beam and shallower draft, but it is not clear that this was the result of any performance edge rather than just the (typically-Dutch) operational imperative of serving shoal-draft ports in colonial rivers and estuaries.

Throughout the book, the author has an annoying habit of repeatedly posing a series of questions and then suggesting that some other research might answer this. A typical example is from the Conclusion (228): "Did the adaptations to rigs that we know occurred decrease or increase crew workload? ... Comparative experimental archaeology, using replicas of both earlier and later vessels, should help us answer that question.... Did the increased use of fore-and-aft sails, even on primarily square-rigged vessels, allow the same crew to work a larger ship with the same expenditure of effort? ... We need to determine the comparative workloads on similar vessels with different ratios of square to fore-and-aft sails, as well as comparative downwind *and* upwind performance, to determine the cost-benefit relationship of all three.... [C]ontinuing work in the archives, in the papers of ship's masters especially, may get us closer to a clear sense of that elusive primary causality." This technique occurs so often that the book reads more like a prospectus for where the research should have gone than a report on what the research has uncovered.

Ultimately, the book suffers from inadequate editing in its transition from a PhD thesis to a volume in the series *Technology and Change in History*. For

example, there are four passing references to the "Baconian Project" but no index entry or explanation of the term. One might argue that anyone interested in the history of technology should recognize and understand the reference, but it would also suggest that someone interested in the merchant ships of this era would not need to be told "The tiller is the handle used to turn the rudder to steer the ship. When the rudder was turned, all the force of the water flowing under the ship was applied to one side of the rudder, encouraging the ship to turn in that direction" (94). The addition of an 18-page glossary should have made such simplistic in-text explanations superfluous. On the one hand, there are numerous rather pedestrian technical explanations, such as "The less resistance presented to the water, the faster the ship will move under a given amount of sail power" (52), but when the author attempts to advance a more technical argument, he is quickly out of his depth: thus, his suggestion that flatter bottoms have greater initial stability but lesser ultimate stability. (134, footnote). He misses the point that the greater initial stability is a result of the cargo being carried lower in a flatter-bottomed hull, while ultimate stability is more a factor of freeboard (that is, above-water shape). Accepting that this is a historical work rather than a naval architectural one, if one is trying to explain the experiential insights of contemporary ship design expertise using modern terms (like metacentre), then those terms should be better understood. The book has a number of illustrations, including some from Chapman and pictures of various replica ships), but none were really needed. When Reid attempts to explain the geometric forming of the bends of a ship, the average reader would have been greatly assisted by the addition of an appropriate

figure from one of the many contemporary shipbuilding treatises mentioned.

In conclusion, while a promising title and subject, this is a very disappointing book and I can in no way recommend its purchase at the steep price indicated.

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Eric Rust. *U-Boat Commander Oskar Kusch: Anatomy of a Nazi-Era Betrayal and Judicial Murder*. Annapolis, MD: Naval Institute Press, www.usni.org, 2020. 384 pp., illustrations, notes, bibliography, index. US \$45.00, cloth; ISBN 978-1-68247-514-0. (E-book available.)

Military officers sometimes find themselves serving political masters whose political and ideological points of view differ radically from their own. In these cases, the struggle to find a personal “balance” between the duty to serve your country and your political and social ideology is often difficult, morally tumultuous, and potentially dangerous – especially in a state like Hitler’s Germany. This is the story of one man who faced this dilemma, and whose choice cost him his life. His story is all the more alluring because he was a U-boat commander in the German Navy, or *Kriegsmarine*, a service not known to harbour criticism of Hitler’s regime. Its author, Eric C. Rust, has previously published a critically acclaimed collective biography on one class of its Officer Cadets. This time, he has migrated from the macro to the micro, focusing on the career of one hapless German naval officer from that era. Like many academic works, Rust’s story had a long gestation from an initial idea to a published work. This explains why its thoughtful foreword was written by a famous U-boat

commander who passed away long before the book was finally published. This story is presented in 11 chapters of varying lengths, and the text is supported by a list of mostly *Kriegsmarine* abbreviations and a list of key individuals. Rust also provides a detailed index, notes, and an extensive bibliography. His primary focus is on the evolution of Oskar Kusch’s negative opinion of – and even aversion to – Hitler’s regime and the *Kriegsmarine*’s ultimate decision to execute him for voicing it.

Oskar Kusch had been an avid sailor and athlete from a middle class Protestant family with a good education with an artistic bent. With perhaps the exception of the latter, he was an ideal officer candidate for a *Kriegsmarine* that was in the midst of rapid expansion. Although he had some initial misgivings about Hitler’s regime, Kusch was not initially opposed to it because it seemed to have brought a semblance of order to a previously unsettled Germany. By all accounts, he was a professional officer who was genuinely concerned with the welfare and survival of his crew. He did not, however, shy away from sharing his increasingly negative opinion of the Hitler regime with his crew. In 1944, Kusch was brought up on charges because of a report filed by a former junior officer from his own crew. During his trial, Kusch adamantly refused to deny his anti-regime statements or offer any defence that could have alleviated their impact. Surprisingly, he was found innocent of all charges, except those regarding his “negative” opinions of the Hitler regime and its hopeless war, and was sentenced to death. The harshness of his sentence is the most striking aspect of his case because the *Kriegsmarine*’s Naval Court had only recommended a ten-year prison term.

The origins of the report that led to Kusch’s trial are well covered in the