

or further following people from the narrative past the end of the case study event to another engagement or into the post-war years (54-56). If these sections were perhaps reduced and moved to an endnote format, it would help improve the work's flow.

In terms of other possible improvements, several come to mind. The preface of the work could use an expansion along with a detailed introduction. There is currently no mention that this is a series of case studies except for on the book jacket, and there is no historiography or source discussion. This could be easily included in an introductory area. Edwards also has a tendency to make references to events or tactics that he does not explain elsewhere in the work. This includes offhand mentions such as using SS *Athenia* as the reasoning for a captain's actions without explaining why that ship's sinking was significant or SSS transmissions without explaining the significance of the three letter coding (24, 44). More pervasive is Edwards' mentioning of ship locations within convoy columns with no discussion of convoy layout or escort positions and tactics. The addition of a timeline, glossary, and convoy layout illustrations could fix a majority of these deficiencies. Citations in the work are also almost non-existent except for in-text comments, and the bibliography is rather scant and its primary source list is incredibly vague. The addition of endnotes and the expansion of the bibliography's "Other Sources" to have more detail beyond "The National Archives," "U-boat Net," and "U-boat Archive" would be greatly appreciated. Finally, given that each chapter is an engagement case study, maps of the battles would be helpful to illustrate the scope of various chases and convoy crossings.

*From Hunter to Hunted* is an in-

teresting recounting of the U-boat war at the ground level, showcasing how ships and crews played a deadly cat-and-mouse game against the backdrop of evolving technology and tactics. While not without faults, Edwards' case studies are a good introduction into the terrifying stresses and evolving situations of early to mid-war trans-Atlantic U-boat attacks. For those interested in merchant shipping, convoy attacks, and U-boat tactics, this work could act as a stepping stone to identifying ships and engagements for further study.

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Richard Endsor. *The Shipwright's Secrets. How Charles II Built the Restoration Navy*. Oxford, UK: Osprey Publishing, [www.ospreypublishing.com](http://www.ospreypublishing.com), 2020. 304 pp., illustrations, appendices, notes, index. US \$85.00, cloth; ISBN 978-1-4728-3838-3. (E-book available.)

In his first book, *The Restoration Warship*, Richard Endsor distinguished himself as a talented illustrator and a meticulous historical researcher, documenting the approval, design, construction, and service-career of *Lenox*, a Third Rate of Charles II's navy. In this successor volume, he outdoes his previous effort in documenting the business, the art, and the craft of the shipwrights who built the Restoration Navy. The link between the two books is through the Shish family of shipwrights (father and two sons) at the Deptford, Woolwich, and Sheerness yards. The 'Secrets' of the title refers to the contents of a small treatise that John Shish (the elder son of Jonas) sent to Samuel Pepys on 1 July 1674. This treatise, entitled *The Dimensions of the Modell of a 4<sup>th</sup> Rate Ship*, expounded on the method of

developing the ‘*modell*’ or draught of a ship.

To appreciate the element of mystery involved, it is necessary to understand the difference between the modern (pre-computer) system of determining ships’ lines, and the system in use in the Restoration period (and for some 150-odd years thereafter). Modern ship lines are defined by contours in three orthogonal (mutually perpendicular) planes. These contours (like the elevation contours on a topographical map) depict slices through the ship’s hull and are shown in three views: the Body Plan (hull cross-sections), the Half-Breadth Plan (waterlines), and the Sheer Plan (the profile, showing buttock lines). In the modern system, the curves in all three views are irregular, in the sense that they are not constrained to be of any particular mathematical form, and the only requirement is that they all be ‘fair’ and reconciled by projection from each view to the others. Before the computer age, ship lines were developed on paper, typically at the 1:48 scale and then offsets carefully ‘lifted’ and tabulated at full scale in triplet form of feet-inches-eighths. These offsets would then be used in the process of lofting (or full-scale plotting) and re-fairing to obtain the building patterns for the ship.

In contrast, in the period in question, the ship’s form at any section was defined by circular arcs which were tangent either to each other or to straight-line segments known as ‘flats’. This gave the apple-shaped cross-sections characteristic of wooden warships up until the early 1830s. The fore-and-aft fairness of the hull was governed by generating curves known as rising lines and narrowing lines which gave the critical arc radii and centres. Given the specification of rising and narrowing lines, the draughting of any particular

ship’s section (or ‘bend’) was then an exercise in practical geometric construction (by compass arcs) and could be done both simply and accurately. It was in the specification of the rising and narrowing lines wherein lay the mystery, and the art of the Master Shipwright. The art and craft of projecting these curves not only determined the form, and hence, the performance of the vessel, but also was essential to the accurate lofting of the frame bends.

Shish is thought to have produced his treatise at the urging of Samuel Pepys to add to a collection of works on shipbuilding that he was amassing, a collection which also engendered the well-known *Doctrine of Naval Architecture* (1670) by Sir Anthony Deane, the Master Shipwright at Harwich. Shish’s document was distinguished from other works on the same subject (both within Pepys’ collection, and subsequent ones) in that it presented the form of the ship, that is the definition of the rising and narrowing lines, not in draught form but rather in tabular, numerical form. The author notes that this was quite rare, bordering on unique, but provided him with the opportunity to rediscover Shish’s likely mathematical method through a process of reverse-engineering, testing various schemes of projection against the tabulated numbers. A full two chapters discuss this effort, the comparison with other sources, and the development of a new draught of the *Tyger*, a 4<sup>th</sup> Rate launched in 1681.

A further full chapter is devoted to the construction of the ‘New *Tyger*’. The “new” consisted in King Charles having discovered a wonderful solution for his ship-financing troubles: while approval of funding for new ships was problematic, customs revenue was available (without excessive bureaucratic process) for the “repair” of existing ships. Thus *Tyger*, a 4<sup>th</sup> Rate launched in 1647

and now laid up in ordinary (in reserve, or mothballed), could be “repaired”, even if in the end-result, only a few scraps of the original ship (and fewer of its dimensions) remained—such finessing of bureaucracy sounds very modern ... This chapter reveals further details of the shipwright’s craft, covering the process of lofting, and of the lifting and transference of moulds and bevels to the ship’s timbers. The author illustrates the process superbly through a sequence of 12 of his own drawings, as well as some reproductions of contemporary illustrations. In addition, the author presents a most interesting gantt chart, reconstructed from records, of the full build sequence over two years.

Whereas the illustrations in the previous volume (2009) are all in sepia tones (except eight pages of colour in the centre of the book), this volume is in glorious colour throughout, with numerous drawings and paintings by the author (including a dozen 1:72 scale fold-out plans), as well as a number of the Willem van de Velde drawings that are such a rich resource for ships of this period. This is a very handsome volume which complements well the author’s previous book and will be a valuable reference for ship-modellers and students of historical naval architectural practice.

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Marcus Faulkner and Christopher M Bell (eds). *Decision in the Atlantic. The Allies and the Longest Campaign of the Second World War*. Lexington, KY: Andarta Books, www.kentuckypress.com, 2019. 313 pp., illustrations, notes, index. US \$50.00, cloth; ISBN 978-1-94-966800-1.

There has been an “excessive focus” on

U-boat sinkings and convoy actions in studies of the long Atlantic campaign. That’s the view expressed by American academic Kevin Smith, one of the authors represented in this collection of ten papers. They set out to address this imbalance; most of them represent recent analyses of policy issues and the overall direction of the campaign from the perspective of the Allies. This is a rich collection of insights by recognized experts in Second World War naval warfare. Four are British, two each are American and Canadian, and there is a single Australian contribution.

The papers whose themes are the most removed from descriptions of operations are both by Kevin Smith. “Immobilized by Reasons of Repair” provides an analysis of the impact caused by large numbers of British merchant ships out of action at any one time because they were undergoing repair due to weather, overloading, maritime accidents, and enemy attacks. He writes that “Contextualizing maritime management and diplomacy with reference to grand strategy is ... essential.” (48). Having ships out of service due to repairs seriously limited the tonnage available both for transporting cargoes of all types and for military operations. Smith notes that in February 1941, *one quarter* of the UK’s active importing fleet strategy was awaiting or under repair. (62) This was one of the reasons that Churchill convened the high-level Battle of the Atlantic Committee. The causes were due to inadequate repair capacity in UK yards and inefficient responses. The lack of shipping tied up under repair hastened the decline of British clout in grand strategy. In the author’s words, “...the premier maritime nation [was forced] inexorably toward a humiliating logistic dependence upon the United States.” (71).

Supported by statistical tables,