Quintin Barry. *The Battle of Lissa 1866: How the Industrial Revolution Changed the Face of Naval Warfare.* Warwick, UK: Helion & Company, www.helion.co.uk, 2022. 256 pp., illustrations, maps, notes, bibliography, index. UK £35.00, cloth; ISBN 978-1-914059-92-6.

Today, the clash between the Italian and Austrian navies off of the island of Lissa (modern day Vis) in July 1866 is best remembered for its role in enshrining one of the great technological dead ends in modern naval warfare. At a time when armour enjoyed a temporary ascendancy over the gun in their ongoing struggle for supremacy, the future of tactics seemed to sink into the past, as steam propulsion made it possible once more to use a ship's hull to sink an enemy vessel. First demonstrated in the American Civil War, at Lissa, the Austrians successfully attacked the Italian fleet by ramming, thus ensuring that for the next half-century, warships would be designed with ram bows jutting outward, even if these ended up sinking more friendly ships by accident than they ever would against the enemy in combat.

Despite Lissa's outsized influence on naval tactics and design, however, only a handful of books have been written about it. Of these few, Quintin Barry's is the first English-language book dedicated primarily to the battle, which on this basis alone makes it a noteworthy achievement. His approach to describing the battle is also interesting, as he situates it within the ongoing developments in naval technology during the era. In doing so, he broadens his focus from the ways in which Lissa influenced naval warfare to how the battle embodied the vast array of changes that were taking place in during the midnineteenth century, all of which contributed to the unique nature of the clash.

The examination of the technological context for the battle takes up over half of the book. He begins with a brief description of the less-famous battle of Lissa that took place in 1811, between a British frigate squadron and a mixed force of French and Italian vessels, using the ships and tactics that were hallmarks of the age of sail. This would prove one of the last such battles, however, as experiments with steam-powered vessels were already underway in Great Britain and elsewhere. Barry presents the technological innovations and the arms race that followed primarily as a competition between Great Britain and France, who from the 1820s onward introduced steam power, screw propulsion, armour-plating, and more powerful ordnance to the designs of their warships. While ships bearing a mix of some or all of these innovations were in commission by the end of the 1850s, it was not until the American Civil War that the navies of the world had the opportunity to witness the full impact of this new technology. The steam-powered Confederate ironclad Virginia made short work of the more traditional warships it faced, only to be stalemated in battle by the similarly equipped USS Monitor. The lessons

were clear, and by 1866 the number of steam-powered ironclad warships in European navies rose rapidly.

Among those hurriedly acquiring these new warships were the Italian and Austrian navies. It is here that Barry narrows his focus to the combatants in the battle, showing how both of them were adapting to a variety of changed circumstances. His presentation of the *Regia Maria*, a product of the recent merger of the kingdoms of Piedmont-Sardinia and the Two Sicilies, is not a flattering one. The Italian Navy suffered from irregular political attention and petty infighting among its leading officers. In this respect, the Austrian Navy was much better off. Though it had also undergone recent transformations with its shift from a force staffed by Italians to one based more heavily on Austrians, it enjoyed the support of Emperor Francis Joseph's younger son, Archduke Ferdinand Max (the future ill-fated Emperor Maximilian I of Mexico), who threw himself into developing the navy. Among Ferdinand Max's contributions was his patronage of the dynamic Wilhelm von Tegetthoff, who was appointed commander of the Austrian fleet on the eve of the Austro-Prussian War.

Six weeks later, Tegetthoff was confronted with Italy's declaration of war. Though the Austrian Navy was ill-prepared for war, the Italians were not in much better shape. The differences began with their respective responses. Whereas the commander of the Italian fleet, Carlo di Persano, was content with inactivity, Tegetthoff threw himself into preparing his fleet, setting an example for the men in his command. While Barry is sympathetic to Persano's situation, ultimately he cannot excuse the admiral's poor leadership, which contributed to the tactical disorganization displayed in the battle. Pressured to attack Lissa so as to maximize Austrian concessions in the peace negotiations, Persano's mixed force of ironclads and wooden vessels conducted an ineffective bombardment of the Austrian fortifications for two days. The arrival of Tegetthoff's fleet on 20 July forced a confrontation that resulted in the loss of two Italian ironclads, both of which were sunk by ramming.

For all of the lessons that Lissa supposedly offered, Barry notes that many of them would soon be rendered obsolete by continuing innovations in naval weaponry and warship design. It is a conclusion that underscores the accelerating pace of change that navies faced over the course of the nineteenth century and supports nicely his approach to his subject. It is not an original work, nor does Barry make any pretense to having written one. Yet while specialists will find little information within its pages that they do not already possess on their shelves, it is nonetheless, a useful account of the battle of Lissa, and one that, hopefully, will inspire further English-language studies that draw upon the materials in the Austrian and Italian archives to give it its proper due.

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