

Trial by Fire – The 1866 Battle of Lissa and the Implications for the Future of the Royal Australian Navy

The Battle of Lissa was a fleet engagement fought off the Adriatic island of Lissa (now Vis) between the Royal Italian Navy and that of the Austrian Empire in 1866. The battle saw the unexpected defeat of the Italian fleet and the Kingdom of Italy learn hard lessons from the unforgiving teacher that is armed conflict. One may well ask what possible implications an engagement fought at the dawn of the ironclad era in the narrow confines of the Adriatic could have for the 2019 Royal Australian Navy? This however would be to ignore several lessons which the battle offers the current and future Royal Australian Navy, insights that this essay will explore. This essay will contend that despite the passage of years the Battle of Lissa continues to hold implications worthy of examination and reflection, lessons about the importance of leadership, training, and learning. Lessons from the past, which remain timely and relevant for the future.

The Battle of Lissa took place on the 20th of July 1866, and was fought between two forces utilising cutting edge technologies during an era of rapid technological innovation which outpaced traditional strategic and operational thinking. The two fleets present at Lissa numbered twelve Italian and seven Austrian ironclad warships as well as a number of older wooden ships. The entire ironclad force consisted of new ships constructed rapidly at great expense which incorporated some of the latest designs and technology of the day. The twelve Italian¹, and seven Austrian² ironclads all being launched between 1861 and 1865. This rapid innovation had been spurred on by the beginning of the ironclad era with the launch of the revolutionary French ironclad *Gloire* in 1859, and the famous clash between the USS *Monitor* and CSS *Virginia* at Hampton Roads in 1862.

The Austrian fleet at Lissa faced several disadvantages that should have left its chance of securing victory slim. It was outnumbered and the construction of many of its ships had been rushed, with some having to put to sea without their full planned armament.³ The Austrian ships and crews also suffered from pre-war neglect,⁴ and in technical terms appeared outclassed by the warships available to Italy. The Italian fleet at Lissa, as well as having a numerical advantage, could deliver double the weight of shot of the Austrian fleet and had a significantly higher number of more modern rifled guns, compared to the obsolete smoothbore guns which largely equipped the Austrian fleet.⁵ The Italian fleet, on paper at least, also included ships of the latest designs sourced from foreign yards, including French and American built ships, as well as the iron hulled British built turreted ram ironclad *Affondatore*. This made the Kingdom of Italy's navy one of the most modern afloat in 1866. All was not as it appeared however, many of the new technologies such as iron armour, rifled guns, and steam engines were unfamiliar, and Italian crew training and leadership were not to prove the equal of their Austrian opponents.

¹ Aldo F. Ordovini, Fulvio Petronio and David M Sullivan, *Capital Ships of the Royal Italian Navy, 1860-1918: Part 1: The "Formidabile, Principe di Carignano, Re d'Italia, Regina Maria Pia, Affondatore, Roma", and "Principe Amedeo" classes*, Source: Warship International, Vol 51, No. 4 (December 2014), pp 323-360

² R. F. Scheltema de Heere and C. W. Wright, *Austro-Hungarian Battleships*, Source: Warship International, Vol. 10, No. 1 Special: Austro-Hungarian Battleships, 1973, (Published by: International Naval Research Organisation), pp. 13-19

³ Ibid, pp. 19

⁴ Colonel W. G. Caples, *Some Lessons from Lissa*, Source: The Military Engineer, Vol. 23, No. 131 September-October, 1931 (Published by: Society of American Military Engineers), pp. 420

⁵ Ibid, pp. 419

Just like the Royal Italian Navy of 1866, the Royal Australian Navy of 2019 also finds itself in a time of growth, development, and rapid technological innovation. The Royal Australian Navy of the future is likely to find itself remaining in an era of increasing technical sophistication and complexity. Ships are growing larger, more capable, and becoming truly multirole in the battlespace, including the electromagnetic sphere. The Royal Australian Navy has a proud history as a force that has punched above its strategic weight, of professionalism and seamanship in the face of adversity, in short as a fighting navy. The current rush to technical excellence however is occurring at a time where practical war experience and the ability to analyse the impacts of new technology on naval warfighting is sparingly available. In addition, many of the rapidly developing technologies, and even well-established naval systems remain largely unproven in a fleet action, a trial by fire.

Large-scale naval actions between peer competitors are rare in recent history outside of the battles of the Second World War, and these are as far removed in time and technology to us today as the Battle of Lissa was to those who fought in the Second World War. The late 20th and early 21st Centuries have seen the proliferation of accurate long-range ‘smart’ weaponry, integrated battle management systems and advanced sensors to the point where these are becoming commonplace across navies globally. As the Royal Australian Navy looks to the future, acquires its next generation of warships, and trains its next generation of sailors and leaders, it is worth pausing to remember that there has never been a peer on peer conflict in recent decades, since the dawning of the age of mutual precision. New training technologies like virtual simulation, bespoke physical training environments, and complex exercises have been developed to enable the effective utilisation of these complex systems, however what will happen in a naval conflict utilising today’s plethora of technologies thankfully remains to a degree subjective.

This was the situation in which the Italian fleet found itself on the 20th of July 1866 off the Island of Lissa. To make matters worse for the Italian fleet many of its advantages had already been squandered before battle was even joined. Clear intelligence on the movements of the Austrian fleet had been ignored by the Italian commander, Admiral Count Carlo di Persano, leaving the Italian fleet unaware of Austrian movements and unprepared.⁶ The impact of this was compounded as the fleet was also divided, ships being deployed to support an attempt to seize the island by a series of amphibious assaults.⁷ The softening up of the islands defences, having commenced two days prior to the arrival of the Austrian fleet⁸, also had an adverse impact on the Italian fleet. When the Austrian fleet was sighted, the Italian commander could only call upon ten of his twelve ironclads, with one that had been damaged from shore batteries (the *Formidabile*) busy transferring casualties to a hospital ship, and another (the *Terribile*) having engine troubles, both taking no active part in the battle.⁹

The Italian fleet hastily formed into a line of battle, but detailed planning for a fleet action had largely been neglected, and “*beyond this crude order of battle there was no plan, and*

⁶ Admiral S. B. Luce U.S.N, *Naval Warfare under Modern Conditions*, Source: The North American Review, Vol. 162, No. 470 Jan. 1896 (Published by: University of Northern Iowa), pp. 73

⁷ Ibid, pp. 72-73

⁸ Colonel W. G. Caples, *Some Lessons from Lissa*, Source: The Military Engineer, Vol. 23, No. 131 September-October, 1931 (Published by: Society of American Military Engineers), pp. 421-422

⁹ Aldo F. Ordovini, Fulvio Petronio and David M Sullivan, *Capital Ships of the Royal Italian Navy, 1860-1918: Part 1: The “Formidabile, Principe di Carignano, Re d’Italia, Regina Maria Pia, Affondatore, Roma”, and “Principe Amedeo” classes*, Source: Warship International, Vol 51, No. 4 (December 2014), pp 325-326

none of the [Italian] captains knew the intentions of the commander-in-chief.”¹⁰ In contrast the plan of the Austrian fleet commander, Admiral Wilhelm von Tegetthoff, was simple and well understood. He had briefed his captains on his intended plan, and that once they engaged that they were to close with the enemy and ‘ram everything grey’. The Italian ships being painted grey compared to the black of the Austrian ships.¹¹ To compound earlier errors as the Austrian fleet bore down upon him Admiral Persano made the decision to shift his flag from his current flagship, *Re d’Italia*, to the *Affondatore* (which had only joined the fleet the day before the battle) while Italian line of battle was still forming without informing his captains.¹² This decision resulted in confusion¹³, and the resultant slowing of ships to allow the transfer to take place also caused the Italian line to become even more disorganised and opened a gap between the van and middle divisions that the Austrians were to fully exploit. Seizing the initiative Admiral Tegetthoff had formed his fleets into three consecutive wedge formations, ironclads in the van, and advanced on the enemy. With echoes of Nelson at Trafalgar, Admiral Tegetthoff allowed his ‘T’ to be crossed, and braving a storm of Italian fire the Austrian fleet split the partly formed Italian line of battle through the gap opened by Admiral Persano’s blundering and forced a general melee.

What followed was a clear demonstration of the differences between the two opposing forces. The Austrians utilised superior seamanship, tactics, and individual daring and initiative to outfight, out manoeuvre, and out sail their numerically and technologically superior opponents. During the melee, which devolved into a number of smaller engagements, the Austrian ships managed to avoid all Italian attempts to ram and demonstrated an aggressive desire to close with the enemy. One obsolete Austrian wooden battleship (the *Kaiser*) engaging four Italian ironclads singlehandedly, including ramming one, albeit ineffectually.¹⁴ Despite at times bitter close quarters fighting obscured by heavy smoke and supreme bravery and sacrifice on both sides, at the end of the battle the Italian fleet withdrew from Lissa in disarray, the Italian attempt to seize the island in tatters. Italian casualties amounted to the loss of two ironclads sunk, four badly damaged, and 619 men killed and 39 wounded.¹⁵ The Italian defeat so total that Admiral Persano was disgraced, and later convicted of, “*incapacity and negligence, as well as disobedience to orders.*”¹⁶ By contrast Admiral Tegetthoff was lauded as a national hero in Austria, and total Austrian casualties numbered only 39 men killed, and 149 wounded.¹⁷ So, with the navy of the Kingdom of Italy defeated and scattered, and the forces of the Austrian Empire triumphant, what implications can we draw for the future of the Royal Australian Navy?

¹⁰ Admiral S. B. Luce U.S.N, *Naval Warfare under Modern Conditions*, Source: The North American Review, Vol. 162, No. 470 Jan. 1896 (Published by: University of Northern Iowa), pp. 74

¹¹ Ibid, pp. 75

¹² Aldo F. Ordovini, Fulvio Petronio and David M Sullivan, *Capital Ships of the Royal Italian Navy, 1860-1918: Part 1: The “Formidabile, Principe di Carignano, Re d’Italia, Regina Maria Pia, Affondatore, Roma”, and “Principe Amedeo” classes*, Source: Warship International, Vol 51, No. 4 (December 2014), pp 325-326

¹³ Jack Greene, *The Re d’Italia*, Source: Warship International, Vol. 13, No. 4 1976 (Published by: International Naval Research Organization), pp. 311

¹⁴ R. G. Grant, *Battle at Sea: 3,000 Years of Naval Warfare*, 2008, (published by Dorling Kindersley Limited), pp. 219

¹⁵ Spencer C. Tucker, *The Roots and Consequences of Independence Wars: Conflicts that Changed the World*, 2018 (Published by: ABC-CLIO LLC), pp. 199

¹⁶ Jack Greene, *The Re d’Italia*, Source: Warship International, Vol. 13, No. 4 1976 (Published by: International Naval Research Organization), pp. 313

¹⁷ W. Thomas Newmarch, *Central Statistical Commission of Austria; Analysis of Report for 1866*, Source: Journal of the Statistical Society of London, Vol. 30, No. 2 (Jun., 1867), pp. 331

Firstly, the impact of superior Austrian leadership, seamanship and tactics was decisive, despite the numerical odds. This being mirrored by the failure of Italian leadership, tactics and training. This was recognised in the decades after the shock Italian defeat at Lissa, one professional naval officer describing the Italian defeat as an example of,

“...how a want of discipline, inattention to drills in naval tactics and gunnery, and a disregard for the most elementary principles of the science of war, must inevitably lead to disaster”.¹⁸

The Battle of Lissa demonstrated clearly that leading in technology is not enough to dominate the battlespace, and that maintaining the culture of a fighting navy provides significant advantages that must not be lost or subordinated in the race to achieve technical supremacy. To this end, the future Royal Australian Navy must strive to reinforce and reinvigorate the traditional skills and philosophy of naval warfare, such as adept and flexible leadership, decentralised command, and seamanship combined with the ethos of the profession of arms. These must be retained, even as new skills are required, weapons evolve, and change continues its relentless advance. This will not be an easy task, even for an organisation as steeped in tradition as a navy. The society the Royal Australian Navy has to recruit from is changing, and Australia has never possessed a large maritime culture to draw upon, this despite undeniably being a naval power and a nation dependent upon the sea. This is a challenge that the future Royal Australian Navy must clearly identify and commit resources to addressing if it is to avoid losing the winning qualities it requires to face the challenges of the future.

Secondly, the Italian experience at the Battle of Lissa demonstrated that technology means nothing without the training and skills to use it effectively. As one observer of the Italian debacle at Lissa noted dryly, *“...the Italian minister [of Defence], seemed to consider buying ships enough, and teaching anyone how to use them a needless expense.”*¹⁹ The future Royal Australian Navy must continue to prioritise the capability of its people and build success upon the foundation of its human capability. Training and individual acumen cannot be substituted for by technology, and the Battle of Lissa shows clearly that technology without a finely-honed human element to wield it is no guarantor of victory. Training and polished skills are especially critical in the context of naval conflict as warlike experience amongst naval personnel is generally rare, one naval historian noting,

*“...it must be kept in mind that navies do not have the same level of experience of combat to hone their tactics that armies do. This has led to a tendency to let the qualities of naval weapon systems dictate the nature of naval tactics.”*²⁰

The future Royal Australian Navy will operate one of the youngest and most modern fleets in the world by the time the next generation of Hunter class frigates and Attack class submarines enter service. Having the right people with the right skills and innovative approaches able to apply varied and advanced technologies in fluid warlike situations where threats can come from multiple avenues may prove to be the critical determinant between

¹⁸ Admiral S. B. Luce U.S.N, *Naval Warfare under Modern Conditions*, Source: The North American Review, Vol. 162, No. 470 Jan. 1896 (Published by: University of Northern Iowa), pp. 70

¹⁹ Colonel W. G. Caples, *Some Lessons from Lissa*, Source: The Military Engineer, Vol. 23, No. 131 September-October, 1931 (Published by: Society of American Military Engineers), pp. 419

²⁰ James P. Levy, *Royal Navy Fleet Tactics on the Eve of the Second World War*, Source: War in History, Vol. 19, No. 3 July 2012 (Published by: Sage Publications, Ltd), pp. 394

victory and defeat. This was a lesson dearly purchased by Royal Italian Navy at the Battle of Lissa and one that Royal Australian Navy would be wise to heed.

Thirdly, the aftermath of the Battle of Lissa also demonstrates the difficulties that the future Royal Australian Navy will face as it considers how to best respond to emerging threats and effectively integrate cutting edge technologies. Both naval architects and experienced naval officers drew conclusions from the Battle of Lissa, a common lesson taken away was that, “*the ram and the locomotive torpedo are both likely to play an important part in naval battles of the future.*”²¹ With the benefits of a century and a half of hindsight we can see that the torpedo evolved into a deadly and versatile weapon that played a role in every subsequent major naval conflict, while the naval ram was quickly outpaced by advances in both warship speed and the range at which effective gunnery could be conducted. The naval ram being later dubbed, “*...a dogma which prevailed for half a century and which never had any real substance in fact.*”²² The focus on the ram by a generation of naval experts shows the allure of ideas, and that ideas must be tested, and re-tested, less scarce resources and effort be wasted pursuing technological dead ends and preparing for the wrong battle.

The future Royal Australian Navy must endeavour to not only be a centre of technical and maritime warfare expertise, it must strive to be a thinking navy as well as a fighting navy. It should seek to encourage open and robust discourse and debate in areas relevant to naval warfare, strategy, tactics, ship design, technology, history, and related disciplines. Discussion should be promoted both within the Navy and broader Australian Defence Force, and military professionals should engage the public at large and academia. As a national institution, the future Royal Australian Navy must have an academic weight that matches its strategic weight, and support future thinking to support the future navy.

This essay has sought to highlight three key implications from the Battle of Lissa for the future Royal Australian Navy. Firstly, the importance of maintaining and nurturing the core qualities and culture of a fighting navy, secondly that investment in technology requires equal or greater investment in human capability, and thirdly the challenges of the future will require a navy that thinks as well as it fights. The Battle of Lissa may seem distant to the modern naval battlespace and its sophisticated technology, but as this essay has sought to demonstrate, its relevance and implications remain as relevant today as they were after the smoke settled on the 20th of July 1866. Perhaps the ongoing relevance of the Battle of Lissa is best stated by the successor of the Royal Italian Navy, the modern Italian Navy, the *Marina Militare*, which describes the failure at Lissa as being caused by an, “*...Italian Navy [which] lacked a cohesive national officer corps, homogeneous crews, an[sic] appropriate training to experiment the new naval doctrines required to operate with the new types of vessels: the ironclads.*”²³ To this author the implications for the future Royal Australian Navy are clear.

²¹ Wood Pasha (Sir Henry Felix Woods), *The Naval Tactics of the Future*, Source: The North American Review, Vol. 141, No. 346 Sep. 1885, (Published by: University of Northern Iowa) pp. 269

²² Dr Bernard Brodie, *Characteristics of a Sound Strategy*, Source: Naval War College Information Service for Officers, Vol. 4, No. 10 June, 1952 (Published by: U.S. Naval War College Press), pp. 72

²³ Italian Ministry of Defence (*Ministero Della Difesa*), Italian Navy (*Marina Militare*) website, ‘*Our History - From the Royal Italian Navy to modern Navy*’ webpage. Accessed 12th June 2019
http://www.marina.difesa.it/EN/history/our_history/Pagine/royal_navy.aspx