Revisiting Naval Conceptualism with reference to Corbett and Mahan

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Abstract

This article revisits age-old tested naval conceptualism provided by Corbett and Mahan, and critiques as offered by Booth, Gray, Grove, Jones, Rubel, Sestak, Till and Turner. Examples are presented with reference to Israel as a small to medium state and the larger maritime powers of Britain, China, Russia, and the United States. The need arises because naval warfare is linked to and dependent upon technological innovations. Nuclear propulsion, missiles, drones and cyber have changed the nature of warfare and coastguard capability. The roles of naval fleets have also changed in both defense, deterrence, and the offense due to new situations exemplified by the Cold War, and asymmetric battles against violent and extremist organizations post 9/11. This has value for cadet training in the heritage of the profession, and the development of abstract considerations for a broad philosophical appreciation of naval and maritime affairs applicable when they become junior and inexperienced officers in planning, deployment, and operation. And beyond to ensure decisions and actions are a combination of experience and knowledge.

Keywords:
Naval Conceptualism; maritime strategy; Julian Corbett; Alfred Mahan; naval training; naval supremacy; naval control.

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Underlying the argument in this article is my personal view that conceptualism is the philosophical view that there is no reality independent of our conception of it. To prove this, I shall present a solid argument showing that consequently naval warfare rests upon the content of the teaching of it, its relevance, validity, and quality. The focus of this argument in this article is to examine how the process of education on maritime security, cannot be separated from and is an integral part of the operational implementation of tactics, strategy, doctrine, and policy. The value of educating on maritime security is because combat at sea is by no means a definitive device. Junior and senior officers, with minimal experience and those more experienced, need to make decisions based on a combination of knowledge and experience.

In this article I argue that a useful means to educate on maritime security is to examine some very important naval conceptualizations in the light of current events. That provides a guide for operational actions. In the process if doing so I shall show that inherently there is a reflection on the development of abstract considerations and a broad philosophical appreciation of naval and maritime affairs. This I propose is a vehicle for the developing and spreading sound strategic thought that contributes to present and future naval planning, deployment, and operations.

I contest that this education is a necessity as today, we are facing new maritime security situations that demand a constant revisiting of naval conceptualizations. The conceptualizations must be taken in context of the situation and threat environment. That means that the size or type of warships and naval fleets and their weaponry needs to be constantly reviewed based on the research findings of revisiting the naval conceptualizations. This is a constant process due to changing political situations after the Cold War. That includes additional threat environments after the terror attacks of 9/11 and the increase of violent extremist organizations (VEO) and non-state actors.

Emerging and evolving technologies also impact the nature of naval planning and deployment. For example, Heller (2019) describes how technological innovations progressively during the Cold War and after such as missiles, drones and cyber gave even a small littoral warship more firepower than the largest World War Two ocean going destroyer. However, this generated additional problems in the defense of warships when attacking. For example, land-based missiles granted defense capabilities to even the smallest of states or VEO against amphibious landings. Notwithstanding differences in capability Professor Colin Gray (1992, 21) who was a civilian educator but who also served as a defense adviser to both the British and American governments, notes that there are strategic advantages to states who have larger navies over those who do not.

Having made these initial observations to justify the topic of this article, I now turn to the solid argument of this article where my personal view is that the means
of educating is through the critique of certain naval conceptualizations for their validity. This educating has a three-fold value. The first of which is to improve the overall knowledge of any naval cadet about the field in which he will be employed and deployed. The second is because such knowledge of conceptualizations leads to a better appreciation and understanding of the origins and applicability of operational tactics and strategy. The third is when the cadets enter service as junior and unexperienced officers. Any action or decision they take will be based almost solely upon their studies and knowledge so these need to be focused. Even when they have minimal and more extended experience, their studies and knowledge will be a determining element in any decision and action. So, this process is applicable for even the most senior of ship captains and admirals.

I will use the methodology of focusing on the conceptualizations of two of many renowned and distinguished in the maritime security field. My personal views and selection of these are justified by Armstrong (2022, 18) as being Captain Alfred Thayer Mahan (1866-1898) and Sir Julian Corbett (1854-1922). He notes that while there are many more naval theorists and historians, they may well be the fathers of British naval power and maritime theory upon which many other countries navies were born and initially raised. Their writings were published during the zenith of the British Royal Navy (RN) incorporating thinking from the 17th, 18th, and 19th centuries. Both died before World War One.

The selection of these two is not random. They are different yet complement each other. Mahan was a naval officer whose writings were nearly 20 years earlier than Corbett who was a civilian. Corbett's theories had more historical foundation but agreed with Mahan that they were only useful to naval professionals if they understand how to adapt that theory. The vindication of my selection of these two is because their writings and theories are often taught at war colleges and staff colleges. Their observations lie at the foundation of many naval strategic writings and teaching even one hundred years after their deaths.

Throughout this article to test the validity of some of their conceptualizations I will examine and cite from examples stemming from lessons learned and applied historically with reference to Israel as a small to medium state and the larger maritime powers of Britain, China, Russia, and the United States. Sources quoted are both primary and secondary from serving or former senior naval officers and from recognized naval analysts and strategists. I use this wide selection of examples and sources to highlight that while each state faces different threat situations with different equipment, there are some commonalities relating to the conceptualizations that have stood the test of time.

This finding of commonalities and so their universal application is evident in the research of Marshall (2021) who describes that large navies alike will face similar operational deployments and challenges as will those who are only engaged in
coastal defense. An intrinsic element of the commonality is the relationship between naval power and defense and foreign policy. Broadly the outlet of this is evident in the type of navy. This can be divided between riverine and littoral applications (brown-water navy), open-ocean applications (blue-water navy), and something in between (green-water navy). The issues and topics discussed that I discuss in this article are applicable to all of these.

Such findings strengthen my personal view that maritime security rests upon the content of the teaching of it, including the relevance, validity, and quality of conceptualizations. The process of education on maritime security cannot be separated from and is an integral part of the operational implementation of tactics, strategy, doctrine, and policy. I will expand upon this in the following five sections: Selecting some conceptualizations of Mahan and Corbett. Revisiting some of Corbett’s and Mahan’s Conceptualizations, A Focus on Alfred Mahan, A Focus on Julian Corbett, Pursuing naval strategies from the conceptualizations and six sub-sections on Decisiveness, naval supremacy, and naval control, Control of all spaces, National security & constabulary, Secure Sea lines of communication, Power projection, and Naval diplomacy.

Selecting some conceptualizations of Mahan and Corbett

In my personal view educating maritime security with the solid argument that reality is not independent of our conception of it requires a selection of conceptualizations that this section will do from the writings of Mahan and Corbett. The starting point is provided by Captain Brian O’Lavin (2009, 17) of the US Naval Special Warfare Command who has written on the applicability of Mahan’s intellectual heritage on naval power. His focus is to link these to the reality of the context of the different international situations which have prevailed since World War Two. For example, Mahan’s theory that the concentration of a nation’s fleet is to seek out and destroy the enemy fleet in a decisive naval battle. Similarly, O’Lavin (2009, 22) who has written on linking the applicability of Corbett’s intellectual heritage on naval power to today’s world. For example, his conceptualization of securing the command of the sea or preventing the enemy from securing it.

Clearly then the selection of specific conceptualizations is significant when doctrine, tactics, and strategy are formulated and reviewed. That requires a constant critique of conceptualizations to ascertain and determine their applicability to effectively command warships. Otherwise, the tail will be wagging the dog as naval officers’ mindset will not be in harmony with the real world.

Large naval powers with blue-water navies and smaller with brown-water navies alike have recognized the need to constantly review and critique conceptualizations to synchronize them with deployments and operations. There is an importance of
accurate definitions in the conceptualizations for navies world-wide rely on a certain amount of theoretical training for all officers. For example, the United States Navy (USN) that is a blue-water navy uses the term Anti-Access/Area Denial (A2/AD). In 2016 the head of USN naval operations, Admiral John Richardson (2016), wanted to root it out. His reasoning was “To ensure clarity in our thinking, we will no longer use the term A2/AD as a stand-alone term (acronym) that can mean different things to different people.”

A reference to this process also comes for a brown-water navy for example Israel. While there is an overall military prowess of the Israel Defense Force (IDF) according to the 2022 Global Naval Powers Ranking (2023), Israel’s navy arm is not included among the world’s top 34 navies (unlike the navies of neighboring countries Turkey and Egypt). The reference is from Professor Dmitry Adamsky (2010, 173), who in addition to his academic career, has held positions in the Israeli Ministry of Defense and IDF including serving as assistant secretary of the committee charged with formulating Israel’s national security concept. There he addressed the importance of defining an accurate and applicable systematic naval conceptualization, especially when the nature of war changes due to technological innovations. He referred to the conceptual-organizational confusion that prevailed in the Israeli Navy on the eve of the Second Lebanon War in 2006.

Placing Adamsky and Richardson on conceptualizations in context of operational implementation with reference to Corbett and Mahan is to quote Dr Benjamin Armstrong (2022, 16-21), who is a former USN naval aviator and who has lectured at U.S. Special Operations Command, the Defense Entrepreneur’s Forum at the University of Chicago, and the U.S. Naval War College. He writes that Corbett agrees with Mahan that theories are only useful to naval professionals if they understand how to adapt them. If theories do not meet these criteria, then the conceptualizations are not fit for purpose and may well led to defeat rather than victory, or at least loss of ships and crew.

An applied example of this rationale for a conceptualization to be accurately defined, understood, taught, and learned before it is anchored operationally; and where the narrative leads in a coherent synthesis that builds into an outcome is given by Professor Efraim Inbar (1998, 100-112). He was the Chair of the University of Bar Ilan’s BESA Research Center. He describes the Israel Navy’s missile warships first commissioned in 1969. The first written manual for their deployment was like a Bible with a new tactical language and concepts in which the theoretical analysis of various battle situations was translated into do and don’t instructions. He adds that this was not sufficient as when they entered the 1973 Yom Kippur War four years later the lessons passed down orally from naval exercises generated a specific conceptualization of what they could achieve operationally and what was impossible. In parts that differed from the original written manual.
So far in this article I have justified the need to educate on conceptualizations and to whom, the necessity to constantly review and critique them, how to select those applicable to operational requirements and those relevant from the writings of Corbett and Mahan. I will continue along this theme in the next parts on 1) Revisiting Corbett’s and Mahan’s conceptualizations, and 2) Pursuing naval strategies. Examples are from Britain, China, Israel, Russia, and the United States. There are sub-sections in these parts to facilitate logical divisions.

**Revisiting some of Corbett’s and Mahan’s Conceptualizations**

To commence this section, I highlight why conceptualizations need to be taught, and in doing so revisit some of Corbett’s and Mahan’s conceptualizations. In doing so I will draw a historical line from the years following World War Two. I provide examples how operational reality has impacted the validity of conceptualizations deducted from previous operational realities that no longer prevail, necessitating new conceptualizations. This is because there emerged both new situations and new instruments in maritime security. The former largely dictated to by the latter for the size, shape, and functions of naval forces.

An example of this provided by Speller (2018, 19) as a catalyst was the advent of nuclear weapons and the strategy of deterrence. Warship deployment progressively became tools of diplomacy and deterrence rather than to engage the other side in naval combat as conceptualized by Corbett and Mahan. This is also exampled by Professor Geoffrey Till (1984, 60) about submarines. He is a British naval historian who has taught at the Britannia Royal Naval College, Dartmouth, Royal Navy College Greenwich and the Joint Services Command and Staff College educating cadets and both junior and senior officers. Till writes that nuclear powered with nuclear weapons submarines for example in the Royal Navy (RN) and the United States Navy (USN) provided a unique service in the Cold War and beyond. Deployed in the depths of the oceans and undetectable they guaranteed a nuclear second-strike capability with intercontinental ballistic missiles. Such a strategy of deterrence and naval deployment challenged the validity of conceptualizations of Mahan who had not noted the importance of technological developments.

Furthermore, since the end of World War Two there have only been two occasions when submarines attacked and sank another ship. One was the sinking of the Argentine Navy’s ARA General Belgrano (C-4), a light cruiser, on 2 May 1982 during the Falklands War. This was by the RN nuclear-powered submarine HMS Conqueror with a conventional warhead torpedo and the loss of 323 lives (Rossiter 2007, 34). The other was by the Pakistan Navy’s diesel powered PNS Hangor (S131) on 9 December 1971. It sank the Indian Navy’s INS Khukri (F149), an anti-submarine frigate, with one homing torpedo (Till 1984, 119).
A Focus on Alfred Mahan

I now delve into more depth with a focus on the conceptualizations of Alfred Mahan who was a naval officer especially relating to ocean battles. I also refer to submarines in this arena to ensure a full revisiting of his conceptualisations. In the section below I provide examples that could be used when educating on the topic as a starting point for creating awareness and for discussion by students.

The first example is by Goldrick and Hattendorf (1993, 78) who explain that submarines are not the only example of the changing role of naval forces as proxy land wars dominated the Cold War and not naval battles. Functions such as command of the sea and decisive battles (through which naval supremacy is supposed to be achieved) based Mahan’s conceptualizations were less dominate components of naval strategy for all warships than previously. When the Cold War ended in 1989 the United States Naval War College (USNWC) went so far as to teach that the USN should assume that it had command of the sea. It did not need to exercise control through constant naval presence.

Taking this onboard and besides the end of the Cold War Gustafson (2019, 483–485) describes two other events that led the USN to move away from Mahan’s conceptualizations of ocean battles. This eventuality guided the USN fleet in restructuring with new doctrine and strategy. The first was when Iraq launched two Exocet-type French made missiles on the American destroyer USS Stark that was sailing in the Persian Gulf in May 1987. How to defend warships from missiles, mines and artillery batteries located landward and indeed deploy amphibious landings facing the same threats became a priority.

Robinson (2023) provides the second example from experiences from the Gulf War of 1991 (Operation Desert Storm). It involved combined and joint operations with the primary role of the USN being support of landward operations. At the onset of battle the USN launched 12 Tomahawk cruise missiles against land targets from submarines while other naval surface ships launched 285 at the same time. Mahan’s naval warfare conceptualizations did not include such littoral or coastal warfare or such threats. These were all wake-up calls that conceptualizations such as Mahan’s of two fleets that duel until one of them wins were not applicable for contemporary naval operations. The U.S. Department of the Navy (2023) shows that it was acutely aware that warships and systems had to have additional roles of defending from land attack, striking land targets, and in joint with multi-service and combined allied action. Moreover, naval officers had to be trained for such diverse roles and functions.

Other examples that brought significance to these observations include the attack of an Islamic fundamentalist group Al-Qaeda by an explosive boat on the destroyer
USS Cole in October 2000 outside the port of Aden (Gustafson 2019, 485); and attacks on naval vessels along the coast of Yemen by Houthi rebels ongoing since 2004 (Buffaloe 2006, 9).

Such new situations and new instruments progressively led to an evolution in USN doctrine and strategy. This negated many of Mahan's conceptualizations and brought about a new size and shape of the USN. In 2023 Captain Drennan (2023, 245-264) of the USN whose sea duty assignments have included two Los Angeles Class Fast Attack Submarines and five Nimitz Class Aircraft Carriers, including Chief Engineer in USS Harry S. Truman (CVN 75) summed up such a USN evolution. He observed the post-Cold War and post 9/11 type of warfare as being fundamentally different from warfare on the open sea for two main reasons. Firstly, warships that can operate in littoral areas are limited in size, speed of movement, and dimensions (due to limited maneuverability). Secondly, there is a likelihood that the enemy will take advantage of his opponent's closeness to the shore to attack ships.

Such experiences and an evolution in doctrine and strategy are not confined to large blue-water navies. An example of this for a small brown-water navy was damage to the Israel Navy Ship (INS) Hanit in the Second Lebanon War 2006. It was hit a Chinese made land to sea missile launched by Hezbollah that is an Iranian proxy terror group, when it was close to shore supporting land forces (Cordesman 2006, 45). Conscious of the need for change the commander of the Israel Navy Admiral Eli Sharvit (2016-2021) identified the cause of the problem. He said that the navy was not capable of defending its ships from land-based missiles as coastal/littoral warfare and asymmetrical warfare had not been concepts in the doctrine and strategy and so captains had not been trained. A process to do so commenced (Eiran 2021, 49-72).

A Focus on Julian Corbett

In a comparative fashion I now examine in more depth the conceptualizations of Corbett who was a civilian compared to Mahan who was a naval officer. As with Mahan as with Corbett and the section below provides examples that could be used when educating on the topic as a starting point for creating awareness and for discussion by students. The first of these is about how new situations and new instruments also demand reviewing the conceptualizations of Corbett based upon his observations of the Seven Years War that took place been 1756 and 1763 (Corbett 1997). These should also be critiqued with those of Admiral Sir Herbert Richmond who was a naval officer and his only disciple as a naval historian and whose ideas have been shown to be similar by Hunt (1982). It could be argued they were as equally influential strategic thinkers on naval and maritime strategic matters as Mahan.

Yet Widen (2007, 109-127) shows Corbett’s writings are different from those of Mahan as he added the dimension of land warfare. He believed that total defeat or
subjugating the adversary could not be realized by naval warfare alone and required victory in land battles. Widen (2000, 106–124) describes how Corbett used Carl von Clausewitz's book On War as a heuristic point of departure. Clausewitz was a Prussian General and military strategist during the early 19th century.

Widen (2009, 170-185) further shows that at first glance it could be assumed that with this reference to land warfare that perhaps Corbett’s conceptualizations would be applicable to proxy wars in the Cold War and counterinsurgency against VEO after 9/11. However, Professor Jerker Widén of the Swedish Defense University who has studied Corbett says this is not the case. The reasoning is that Corbett did not address sea to land warfare but proclaimed land combat between the adversaries. The Cold War instruments in the form of nuclear weapons and inter-continental ballistic missiles with the doctrine of deterrence did not lead to direct land battles between America and the Soviet Union. Even wars between ideological proxies for example Vietnam highlighted that victory or loss in these did not result in total defeat of either side.

Similarly, Dr. Prakash Metaparti (2010, 723-736) an expert on logistics and maritime studies at the Hong Kong Polytechnic University informs that the dominate warfare post-9/11 is asymmetrical combat that does not postulate naval forces. Given their lack of roles against adversaries, the functions of navies have moved from naval warfare more towards maritime security.

In revisiting both Mahan and Corbett, it is Professor Geoffrey Till who is one of strongest advocates that the conceptualizations of Corbett and Mahan need to be revisited for the purposes of educating to link them to operational realities. His writings echo and were echoed by his teachings at the USNWC. Till (2006, 28) emphasized that the location of engagement with an adversary would define strategy. He pointed out that while the area of coastal areas is barely sixteen percent of the global maritime space, it has decisive importance. This is since all ports are in them as are the choke points that could restrict or limit access. That highlighted the importance of littoral areas to the economic well-being and security of countries. So, he placed the battle more inshore than in the open oceans.

**Pursuing naval strategies from the conceptualizations**

I now turn to the next section where I aim to examine that a useful means to educate on maritime security is to revisit the naval conceptualizations in the light of current events. That provides a guide for operational actions. The rationale is that I have already shown beyond doubt that there are new situations and new instruments since the conceptualizations of Corbett and Mahan were formulated. These have been elucidated both by naval officers, civilian researchers and theoreticians and professors at educating faculties. Hence the modern naval arena is not just a division
of open sea and coasts as in the days of Corbett and Mahan. It needs to also be divided into functions. Professor Ken Booth who educates at a university and has also been a visiting researcher at the USNWC provides three main categories of functions: military, policing, and diplomacy that he has called the Trinity of Naval Functions (Both 1997, 9).

Gough (1988, 55-62) describes how Booth’s categories merge with the legacy of Corbett’s and Mahan’s conceptualizations provide six topics. These are Decisiveness, naval supremacy, and naval control; Control of all spaces; National security & constabulary; Secure Sea lines of communication; Power projection; and Naval diplomacy. I devote a sub-section to each of these and in doing so I undertake an appraisal of which of Corbett’s and Mahan’s conceptualizations remain valid and those that do not. This process of revisiting the conceptualizations in conjunction to their application in operations is to place them in the context of pursuing and implementing naval tactics, strategies and doctrine. The underlying intent is to utilize them in educating.

Decisiveness, naval supremacy, and naval control

In this first sub-section, I prove that ideally cadets at military education faculties should spend their time in the class and library reflecting on what the strategic world looks like so that they are better prepared for how they could operate in that world thereafter. This provides a sound foundation for the first part of their careers where they lack operational experience or have only a minimal amount. I stress that there is no one means to achieve decisiveness, naval supremacy, and naval control yet the study of different views all contributes to doing so. To be sure Mahan and Corbett had different views, both valid for certain circumstances. Senior offices can also benefit by linking their experience with different concepts provided in literature and lecturers and in ongoing education of professional development short courses, seminars, and simulations. This will profess a diversity of thought all resting on sound foundations to provide a more holistic picture to taking decisions and actions.

The first example I take is from Vego (2009, 4) who describes how Mahan and Corbett differed on the decisiveness of naval power. On the one hand Mahan emphasized the victories achieved by the RN during the 18th, and 19th centuries were indeed in decisive battles and a series of naval blockades. These were intended to achieve naval superiority (command of the sea). Sprance (2004, 1-24) builds upon this saying that Corbett thought naval power was important, but not decisive, and argued that it rarely won wars by itself. They were not able to totally defeat or subjugate the adversary. To totally defeat or subjugate the adversary required land battle. He drew his assertion on historical evidence of Britain’s campaign against Napoleon’s army during the Peninsular War. Yet Corbett agreed with Mahan that there needed to be a focus on denying sea command to the opponent.
Hunt (1984, 86–107) places an accented reduction in the value of both Corbett and Mahan on this topic in the Cold War because there were no direct land or naval battles between the two sides that could have brought any decisiveness or victory. The Cold War was an ideological struggle between competing political and economic beliefs, philosophies, and systems. Frese (2020, 109-111) shows that from the 1960s on the Soviet Union looked towards global domination through revolutions and proxy wars to change leadership and political systems as called for by its President Nikita Khrushchev’s.

Intrinsically it won the battle by such means but eventually lost the war due to economic collapse in 1989. Progressively during the Cold War, the world had less states with electoral democracies. Only a handful of the tens of African, Asian, and Latin American states who attained sovereign independence after World War Two espoused electoral democracies. By the 1980s in the last days of the Cold War only 23% of the world’s states had electoral democracies. Even after the Cold War by 2016 this had risen to only 55% (International Institute for Democracy and Electoral Assistance 2017).

These were astute observations taken onboard by serving naval personal. For example, Stephen Jones (1955, 492–508), a USN officer added a professional weight to these observations. He informed considering new situations and new instruments that increasingly a navy’s traditional roles and tasks in supervision and surveillance of the seas and oceans was being performed by satellites and patrol planes. For this naval presence aka Mahan was not essential. Jones’ deductions from his naval experience remained consistent throughout the Cold War and after.

In line with practice the USN has an element of a bottom-up approach to educate and adjust doctrine and strategy. Adding to Jones’ observations for example in 1974 Admiral Stansfield Turner, president of the USNWC, published his critique of the conceptualizations of naval superiority of Mahan. Turner had numerous roles including shore bombardments in the Korea War, combat operations off the coast of Vietnam and monitoring Soviets fleets. In that article, Turner (1974, 2–17) referred to the missions of the USN, and claimed that the term naval superiority was outdated, and that it should be replaced by the concept naval control.

Till (2018, 115) says that another scholar Professor Barry Posen, who also worked as a consultant for the RAND Corporation and an analyst for the US Department of Defense, also commented on these views of serving officers and educators. He wrote that after his intensive research of both blocs in the Cold War that it was difficult to achieve naval superiority in the terms meant by Mahan and that of land warfare victories called for by Corbett. He reiterated Turner’s view that the purely military role of a navy conceptualized to achieve naval superiority or supremacy would decrease. In its place the role of naval control could be conceptualized.
A rejoinder came from Turner when he was appointed supreme commander of NATO forces in Southern Europe and later Director of the CIA. Turner (1990, 27-39.) wrote on the increasing significance of intelligence to determine the location and intent of the enemy fleet. If this was possible and successful, then naval control needs only be over limited areas in terms of territory for a limited period rather than complete supremacy over the ocean. Also, in analysis of the immediate post-Cold War period Gray (1994, 98) found that the shift from naval supremacy to naval control remained a valid shift. Gray argued that the goal of naval operations should be to support landward operations and not to be objectives in themselves.

A debate and discussion ensued on this topic of decisiveness, naval supremacy, and naval control between the critiques of Mahan and Corbett. Following this could well provide the basis for assigning a simulation exercise for naval cadets, and both junior and senior officers, in education faculties. To start the debate Professor Eric Grove further defined the term naval control. He was an educator at Britannia Royal Naval College, Royal Naval College, Greenwich and the University of Cambridge, a researcher at think tanks and consultant and coauthor for the first edition of the RNs The Fundamentals of British Maritime Doctrine – BR1806 (UK Defence Council 2004).

Grove’s (1998, 5-21) definition of naval control commenced with agreeing with Turner that it is the conditions under which one state entity has freedom of action to use the sea for its own purposes in a certain area and for a limited period. He contributed by defining five main categories of naval control: absolute control, working control, disputed control, actual control of the enemy and absolute control by the enemy. Till (2018, 151) further contributed to the debate by defining four purposes for naval control: to ensure the regular supply of the country’s industry; to strengthen or resupply the forces operating overseas; to supply the Allied forces overseas; and to ensure the operation of naval forces operating in the mission of power projection on the coast.

In 2015 Holmes and Yoshihara (2015, 23-51) describe how Professor (Emeritus) Robert C. Rubel, of the USNWC applied to a case this discussion with reference to Mahan’s and Corbett’s conceptualizations on defeat or subjugation. Kane (2016, 64) added that the case took a scenario where the main threat to America was China. It posed the question on how victory could be attained given Chinese naval strategy also has its origins in Mahan’s conceptualization. The conclusions were if China were to follow Mahan’s conceptualizations on decisive naval battles, then China could not attain victory. Even if China destroyed the USN they had not occupied America. Similarly, American victory could not be discussed as a purely naval victory following Mahan’s conceptualizations or with land victories following Corbett’s conceptualizations. Chinese naval and land forces could not be destroyed, and China could not be occupied. Decisiveness could only be attained by neutralizing China’s power projection globally by other means, be they economic or political.
Control of all spaces

In this second sub-section, I focus on the control of all spaces, showing the maritime security must look at the larger holistic picture of the overall threat environment. As a start I example the crux of the case about America and China as these like those discussed in the British maritime doctrine document of the RN published in 2017. A wide range of potential state and VEO adversaries were looked at. The conclusions were that victory could not be measured solely from naval or land combat. Decisiveness towards defeat of an adversary could be outlined when there was control of the maritime space (including the seabed), the airspace above it, and the landward coast - all no longer posing a threat (Ministry of Defence 2017, 27–47). In 2021 USN Admiral Joe Sestak (2021, 147-164) added to this thinking on decisiveness and victory. He pointed out that no country could achieve supremacy in maritime or air space without also controlling cyber space.

Such contemplations and thinking are not only applicable to the doctrine and strategy of large maritime blue-water navies for example Britain and the United States. They can also be found in the experiences, doctrine, and strategy of a small brown-water navy such as Israel. In 2016 the commander of the Israel Navy Admiral Eli Sharvit called for a strategic review given that a prerequisite for naval operations offshore required that a land-based missile threat must be neutralized. That meant control of the land adjacent to the coast (Eiran 2021, 49-72). In 2022 the current commander of the Israel Navy Admiral Sa’ar Selma added that naval control would be seen as serving a purpose within a battlespace and not an end. The battlespace was multi-dimensional, and victory was required in all - land, sea, air and cyber (Fabian 2022).

It is fair to state that these views of a wide range of battlespaces place the nail in the coffin operationally for Mahan’s and Corbett's conceptualizations of victory be it naval solely or naval and land. That does not mean that they should be ignored. It is important to educate on history that includes not only their writings but also to add their critiques. To this must be added real world contemporary cases as part of simulations to elicit and develop decision making skills for when they take command of warships. It would not be expected of cadets and even junior and senior officers to know and be capable of doing everything, given concern that this might lead them to be jack of all trades and master of none. More preferential would for each to specialize to be an expert in certain functions and roles. Yet an element of being an expert would require being aware of the function and roles of others to succeed in joint and combined operations in a multi-dimensional environment.

National security & constabulary

In this sub-section I delve deeper to show that educating on conceptualizations needs to also look at their origins from the political sphere. I take the first example from
Australian naval experts such as Money (2023) who writes that the maritime space is not just naval war but also has significant constabulary or policing roles. These have also been conceptually referred to as cognitive dissonance in certain academic literature. It might be cost effective to have the same ships undertake multiple roles and indeed they may have the capability to do by being platforms for an array of weapons and systems. However, the rules of engagement for different roles requires that the ships’ captains must be confident to make an array of decisions with the appropriate knowledge.

That necessitates a comprehensive education not only on tactics and strategy in naval warfare, counter-piracy and counter-terrorism but also coastguard functions that include: maritime safety; vessel traffic management; ship casualty and assistance service; fisheries inspection and control; border control; environmental protection and response; prevention and suppression of trafficking and smuggling and connected law enforcement; search and rescue; monitoring and surveillance; customs activities; accident and disaster response; maritime, ship and port security; and in protecting national assets in the maritime economic zone (European Fisheries Control Agency 2023).

A larger maritime country might have both a navy and a coastguard such as the United States. A singular national fleet tasked with overall naval control for warfare, national security, coastguard roles, and performing peacetime constabulary duties is more likely evident in small to medium countries (Bowers and Koh 2019, 30). An example of this is Israel because of budget constraints. It has only nine corvette/missile ships and forty-five patrol boats for a coastline of 273 km with three major ports, eight marinas and offshore gas fields. Almost seventy percent of Israeli citizens live in cities and settlements along this coast (Israel Navy Web 2023).

The lessons could start by a discussion on what transpires when a new situation arises and what they would do. That in essence is the theme of this article in reviewing the conceptualizations of Mahan and Corbett given new situations and new instruments. A case that could be applicable to is Israel’s experience of the defense of offshore gas fields. Israel’s experience that led to new instruments both in warships and weapon systems started in 2012 (Helfont 2022, 53-63). This unfolded against the background of the discovery of the offshore submarine gas reserves in the Eastern Mediterranean Sea off Israel, Lebanon, and Cyprus. The Israeli Cabinet tasked the navy with the task of protecting Israel’s sovereign and economic interests in these and not to set up a separate coastguard (Chorev 2017, 47-62).

For this purpose, Admiral Ram Rothberg commander of the Israel Navy (2011-2016), formulated a new operating concept that had two components. The first was how to protect the gas production platforms from rocket and missile attack. The defense industries responded by developing the naval C-DOME system. That is an advanced naval configuration of the land-based Iron Dome system has proven very successful protecting against thousands of rockets and missiles launched from Gaza and Lebanon in recent years (Editorial 2022).
The second component was to evaluate warships as platforms for the C-DOME. The navy evaluated and found that its existing fleet could not do this or even effect naval control of the sea surrounding the gas production platforms. These were further offshore than the navy had ever operated. Four new corvette type ships were specially constructed in German shipyards and entered service as the Saar 6 Magen class in 2021. These also gave the navy additional long-distance war fighting capability. So, the IDF Chief of Staff Eisenkot took advantage to add to the navy the role of striking VEO in foreign countries, protecting shipping lanes and supporting special operations throughout the Mediterranean Sea and deep into the Indian Ocean. Hence carrying a helicopter was added to the ship's design (Editorial 2022).

Whilst these were warfare and maritime security roles, an additional element emerged to the new situation and that was the authority over maritime economics. A private multi-national corporation (The Chevron Corporation) had the contract for the production facilities of the gas fields. But in times of conflict the navy was granted the authority to shut them down for security reasons. Naval officers had to be educated to be able to make such informed decisions. This was put to the test in May 2021 during a counter-insurgent operation in Gaza. Production from the gas fields was shut down by the navy for a few weeks due to threats of the gas production platforms being hit by missiles launched by the Hamas VEO in Gaza. The navy had multiple tasks simultaneously to protect these platforms with the C-DOME and at the same time land special operations ground forces as well as launch sea to land missiles (Segell 2022).

This example of protecting gas fields and production platforms is a case where a navy has been assigned a role to achieve national maritime security not addressed in the conceptualizations of Mahan and Corbett as they did not exist in their lifetime. For today's world the decisiveness they referred to has changed to one of ensuring defense and security short of combat but that is a form of victory. Another three dimensions that similarly are short of combat but require achieving decisiveness are the next three sub-sections on: secure sea lines of communication, power projection and naval diplomacy. In these elements of their conceptualizations are shown to retain certain validity.

Secure Sea lines of communication

In this sub-section I turn back to the main theme of this article to highlight that the purpose of revisiting Corbett's and Mahan's conceptualizations is also to examine where they remain valid in pursuing strategies with the goal of educating cadets and later in operations by both junior and senior officers. As the first example I take one of Mahan's arguments that certain functions cannot be replaced by any other means than a naval presence of ships. That is valid today for example, in addressing secure sea lines of communication (SLOC). The security of shipping lanes and keeping them
open is a constabulary function. It is essential to ensure trade, logistics, passenger ships and the movement of military forces between ports. These could be short lanes along coasts, through straits, harbor inlets, canals and bays or long sailing routes in the open sea (Mahan 1890, 9-16).

Whilst the function and role and the conceptualizations of such a necessity remain valid since Mahan’s and Corbett’s day new instruments have evolved. These take the form of diverse technologies some of which are not naval. This impacts the number and types of warships needed for SLOC. Stephen Woodall has looked at this. He served in the USN and has had academic and research positions. Woodall (1985, 362-69) wrote in his doctoral research that in World War Two a force of ten aircraft carrier battlegroups might have been required, with a strategy built around defensive barrier operations to protect the Atlantic SLOC. He compared this to the Cold War where this could have been achieved by three carrier battlegroups positioned near maritime chokepoints. The difference being the range and firepower of naval aircraft, cyber to detect the location of an adversary and missiles to strike them.

To facilitate education on such changes a simulation exercise could be given to cadets and junior officers to stand in the shoes of political decision-makers and senior warship captains. They will be provided with the outline of events and theories, asked to make decisions, and then see how the real-world situation evolves in comparison. Such an exercise would guide them in actions and decisions that they may have to take in the future. The results can be given to senior warship captains and Admirals to review as sometimes these can also provide new insights to them.

One such case of SLOC they could be asked to examine and simulate is the blockade of Ukrainian ports by the Russian Black Sea Fleet after the onset of hostilities in February 2022. The blockade prevented the export of wheat and grain and became one of the main challenges to global human security between February and July 2022. One option was to break the naval blockade by NATO fleets led by the USN. There were two dilemmas. One was that it would have drawn NATO into the war. The other was that it would have violated the (Montreux) Convention regarding the Regime of the Straits (1936) that restricts the entry of foreign warships into the Black Sea - the SLOC between the Black and Mediterranean Seas. The quandary was whether to abide by international convention and customary practices or whether to take military action for humanitarian purposes. If the latter path had been chosen there was a danger of escalation with many more casualties and states involved. If those in the simulation thought that naval means could resolve this SLOC conundrum, then they would have been mistaken. The solution achieved was a United Nations and Turkey led diplomatic effort to resolve the export blockade (Segell 2023).
Power projection

In this sub-section I focus on an additional element that cadets, and both junior and senior officers need to be educated about because they will encounter it. This element is that whilst securing and keeping SLOC open and defending ports and entire coastlines requires in part naval presence this might not be enough. What might be needed is taking the battle or the threat of battle to the territory of the adversary. The dictum being that the best means of the defense is the offense and not on one’s own territory. That is achieving decisiveness, naval control, or even victory without placing one’s own country and population in a position of facing an adversary’s firepower. Pursuing such a strategy could be by power projection and/or naval diplomacy. That means Mahan’s and Corbett’s conceptualizations that naval forces are a means of projecting power to, within, and from the maritime space remain valid (Nistor and Scipanov 2014, 2-9).

However, some new situations and new instruments require certain additions and modifications to their conceptualizations. Today power projection is more than just naval power even though a dictum could be that the more naval oriented the adversary state is, the higher the level of naval power projection will be required. A group of academic researchers and professors have examined many inter-state wars, proxy wars and VEO counter-insurgency operations including the most recent in Syria, Iraq, and Ukraine. They deduce that power projection can be separated into two categories. The first is when power projection is related to the combat component of the naval strategy. The second is related to the diplomatic component of the naval strategy. In the latter fleets can be used as a show of force to deter, dissuade, or persuade short of combat or to bring the war to an end (Jordan et al. 2016).

Examples of the first are provided by Till (2018, 115) who describes that during World War Two naval power projection included the destruction of enemy forces, logistical support, and amphibious assault operations. The landings in Normandy in June 1944 led to the end of World War Two. Another example is from the Cold War, that of the Inchon landings in the Korean War 1950. These two examples lend to naval involvement of power projection being the support of land forces as a strategic combat enabler.

Yet progressively during the Cold War and after, amphibious assault operations have become restricted due to new instruments. Owing to shore defenses by missiles, Till (2018, 276) concluded that the chances of carrying out successful major amphibious operations are low. A case on this to analyze is the Russia-Ukraine conflict since February 2022. The Russian Black Sea Fleet was not able to use its amphibious fleet to land ground forces on the shores of Ukraine. Terrain constraints, amphibious lift limitations, difficulty sustaining air dominance, and logistical issues all pointed to the chancy success of any amphibious operation (Ozberk 2022).
Clark and Sloman (2016, 12) add to the debate on power projection related to the combat component of the naval strategy with cases on VEO. They inform that it is easier than previously for navies to use a relatively small amount of force to attack long areas of the coastline in power projection. The range and firepower of missiles today are far superior to those of naval artillery of Corbett’s and Mahan’s day. But missiles can also be used by VEO and states as defenders to limit the attacker’s options to successfully carry out amphibious operations by defending the beaches with missiles.

To this can be added the experience and pursuit of strategies by a small state’s brown-water navy that is also its coastguard. That entails power projection as a prompt response to some potential flash point including against insurgents and wider problems of criminality and disorder at sea. Israel is an example with information provided by Admiral Yedidia Groll-Yaari, the commander of the Israel navy (2000-2004). He found that naval power projection for warfare and maritime security can be achieved by using warships offshore, naval based drones and cyber in the integration of systemic warfare. He introduced three battle-space operational concepts for this: control, attack, and sustainment (Groll-Yaari 1998, 29-48).

Dr Tim Benbow, who has lectured at the Britannia Royal Naval College Dartmouth and the Defence Studies Department at King’s College London where he is also the Deputy Director of The Corbett Centre for Maritime Policy Studies uses these concepts with cases. Benbow (2007, 80-95) shows that naval forces are well suited to coastguard type power projection operations on the spectrum of conflict intensity short of inter-state wars. He provides examples on control of the maritime space, attacking insurgents and criminal elements and sustaining secure SLOC for cargo and passenger vessels.

**Naval diplomacy**

In this last sub-section of this last part of this article I stress that naval officers need to be educated that inherent to any form of naval power projection is the political purpose and goal. The means must suit the ends. This relates to the diplomatic component of the naval strategy of power projection. Naval doctrine and strategy have an umbilical tie to defense and foreign policy and diplomacy. Navies are a tool and means to achieve these. That lends to another element of the conceptualizations of Mahan and Corbett that retains certain validity. Mahan commented on this with direct reference to Corbett’s study of the Seven Years’ War (1756-1763). Mahan (1911) wrote in a letter that the strength of English action in that war came from holding the three related functions of army, navy, and diplomacy in one hand.

Examples are provided by Sir James Cable, a British diplomat and naval strategic thinker who wrote a series of works published between 1971 and 1994 about gunboat
diplomacy. He defined it as the use or threat of limited naval force, otherwise than as an act of war, to secure advantage or to avert loss. He divided the examples of gunboat diplomacy into four categories: definitive, purposeful, catalytic, and expressive. All of them are tools of diplomacy as a means of coercion. That is more the threat of the use of force that resulted in not needing to use force because the objectives were achieved by this show of force or capability as a type of diplomacy (Rowlands 2012, 89–106).

Booth (1985, 121) added examples in the post-Cold War era. He informed that the diplomatic role of the navy was a part of a state's foreign policy. According to him, to keep essential shipping lanes unimpeded, such as those in the Persian Gulf, the foreign policy of the United States relies on the symbolic display of naval strength. He highlighted photos from the USN where in the caption that appears next to aircraft carries it is written 90,000 tons of diplomacy.

Naval diplomacy is as evident a role for small states with brown-water navies as it is for large maritime powers with blue-water navies. Kevin Rowlands, the head of the Royal Navy Strategies Study Center, surveyed 500 naval incidents from the post-Cold War era. He notes that both small, medium, and large maritime states procure vessels with different systems on them to suit a mix of doctrine and strategies including as a means of foreign policy and diplomacy. He identifies three types of naval diplomacy: cooperation, convincing, and coercion. These give warships and navies symbols of national sovereignty and power, and not only purely military roles (Rowlands 2018, 45-48).

An example for Israel comes from the IDF Chief of Staff Lieutenant-General Aviv Kochavi in 2019. He referred to the status of manned surface vessels. He stressed that despite the growing trend towards the development of unmanned vessels, they would be used mainly for deception missions, electronic warfare, counter-arming, and antiterrorist warfare. They could not and would not replace manned surface vessels as they are essential for naval control and naval diplomacy (Helfont 2022, 53-63).

This role of naval diplomacy places warships' captains as a feature and tool of civil-military relations (CMR). They must diplomatically coerce through their presence when projecting power but short of provoking an armed response. That leads to the need to educate the topic of international relations, political science and CMR at naval academies. The objective is to appreciate decision making and command and control as being a mix of: 1) the professional military expertise of the commander of a naval force in the field; 2) naval control resting with a joint branch headquarters that would have the relative advantage of monitoring, controlling and influencing the fire attack plans of all the forces (land, sea and air) and intelligence on the arrays of the enemy; and 3) power projection and naval diplomacy determined by the goals and objective of political elites.

Crucial to how this is undertaken from a technical point of new instruments is the Revolution in Military Affairs (RMA). It is an enabler of capabilities in their broad
sense of command, control, communications, computers (C4) and intelligence, surveillance, and reconnaissance (ISR) – in sum C4ISR. This also enables political elites to view the battle from afar making them better informed. This might be positive enabling the professional expertise of naval officers commanding warships to have an input to decision making (Sloan 2002, 103).

It might also be negative as political elites might wish to issue commands to the warship captains. A case study of China that is a blue-water navy state on this centralized control of forces has been undertaken by Professor Andrew Erickson from the USNWC. He and his co-author Chase (2010, 278) warns with examples that such over-centralization towards the direct involvement of political elites may harm the capabilities of the Chinese navy.

Similar positives and negatives apply for a small brown-water navy state such as Israel. Or Barak who is researcher at the National Security Studies Center at the University of Haifa informs that increased computerization has value because it enables the integration of military decision-making of different units at the tactical, strategic, and systemic levels. Barak (2021, 19-37) says it could lead to inexperienced and untrained civilian-political elites’ involvement in battlefield decision making. In sum there is a need at all levels to educate on such notions as how to project power and be diplomatic in CMR with their own political elites to ensure that the strategy pursued is a viable naval and maritime one.

**Conclusion**

I commence this last part that is the conclusions with a summary of all the research findings and then proceed to suggest future research directions. Underlying the argument in this article is my personal view that conceptualism is the philosophical view that there is no reality independent of our conception of it. In this article I have remained consistent to this central theme and thesis throughout and not deviated from it.

The goal of this article was to provide a means, through revisiting the conceptualizations, to educate. A leading purpose I emphasized throughout this article consistently was to ensure that cadets can make valid decisions in operational situations where they lack or only have minimal experience as junior officers. Moreover, this knowledge gained is also applicable to senior officers. Once they have more experience this knowledge would assist in planning and operations.

To undertake revisiting the conceptualizations I presented a structure of five sections with six sub-sections in the last. In each I built upon the previous, to construct a solid argument from many perspectives and on a wide range of topics. The conclusions shown in each is that there is an iterative process of education on maritime security, with that of the operational implementation of tactics, strategy, doctrine, and policy.
The foundation of each part of this solid argument is naval conceptualizations. The specific methodology I applied used the conceptualizations of Corbett and Mahan. That was in the context of the situation and threat environment and technologies including the size or type of warships and naval fleets and their weaponry. I provided examples from many states citing many renowned experts.

To conclude I now present a summary of all the research findings for each section and sub-section. In the section “Selecting some conceptualizations of Mahan and Corbett” the findings relate to the applicability of their intellectual heritage. I found that both Mahan’s “decisive naval battle” and Corbett’s “securing the command of the sea or preventing the enemy from securing it” have stood the test of time and remain valid. I also noted that to these must be added the threat environment of non-state actors and violent and extremist actors. They were not applicable during their time. In the section “Revisiting some of Corbett’s and Mahan’s Conceptualizations” I found that revisiting their conceptualizations also requires addressing new technologies. The examples related to submarines. Combined these two research findings are extremely relevant for both junior and senior officers relating to the size, shape, and functions of naval forces.

I then added two sections that respectively focused more in depth on Mahan and Corbett. The purpose was to show their continual relevance even after revisiting their conceptualizations in the current threat environments and with different technologies undertaken in the previous two sections. I examined in detail Mahan’s conceptualizations on ocean battles as opposing large naval forces has become less prevalent since World War II. More current is coastal/littoral warfare, asymmetrical warfare and combined operations with land and air forces. Yet when examining Corbett’s conceptualizations regarding the linkages between naval and land warfare I found that Mahan’s retains relevance for the control of naval choke points and ports. The research finding can be summarized as the location of battle engagement requires certain naval forces where there is no better alternative.

In the last section “Pursuing naval strategies from the conceptualizations” I expanded my focus of revisiting the conceptualizations of Corbett and Mahan to include as many as possible of new situations and new instruments since they were formulated. I divided these into the functions of military, policing, and diplomacy. I decided to do this because the modern naval arena is not just a division of open sea and coasts. My reasoning is that this adds value for educating cadets and for junior and senior offices to appreciate the daily applicability of the conceptualizations.

I structured this last section into five sub-sections. The first two relate to findings on military functions. In the first “Decisiveness, naval supremacy, and naval control” I found there is “no one solutions that fits all.” My research findings stressed that a diversity of thought resting on sound naval conceptualization foundations is essential to provide a more holistic picture to taking decisions and actions and ensuring
victory. In the second “Control of all spaces” my research findings ascertained that maritime security must look at the larger holistic picture of the overall threat environment to assign specialist roles and tasks and related equipment for combined sea, land and air operations.

The next two sub-sections relate to findings on policing functions. In the first on “National security & constabulary” my findings went beyond naval warfare to show why education and conceptualizations are essential for captains of ships in the rules of engagement for different roles including those of coastguard functions, against criminal elements and in rescue operations. In the second on “Secure Sea lines of communication” I found that this is an example of a function that cannot be replaced by any other means than a naval presence of ships.

The last two sub-sections relate to findings on diplomacy functions and in part expand also on “Secure Sea lines of communication.” The first is on “Power projection” where my research findings are that naval forces are one way of taking the battle or the threat of battle to the territory of the adversary. The dictum being that the best means of the defense is the offense and not on one’s own territory. That is expanded further in the last sub-section “Naval diplomacy” where my findings are that inherent to any form of naval power projection is the political purpose and goal. Naval doctrine and strategy have an umbilical tie to defense and foreign policy and diplomacy. Navies are a tool and means to achieve these.

Having provided a summary of all the research findings I now proceed to suggest future research directions. These directions stem from the title of this article that calls to revisit conceptualizations. This must be an ongoing process in future research. Everything is in the melting pot where new situations, new threats and new technologies are iterative to my personal view that conceptualism is the philosophical view that there is no reality independent of our conception of it.

I believe that paradigmatic shifts in naval affairs since Corbett and Mahan involve a revolution in military affairs in terms of technology, operating doctrines, strategies and tactics, joint and combined operations, and in the aspects of decision-making of civil-military relations in real-time. Future research directions need to increasingly ascertain how to deal with more emerging new situations and new instruments as technology evolves and changes.

Future research directions also need to engage education pedagogy. Cadets are students and students do not learn simply by listening. Junior and senior officers can tell them that cramming for tests, rote learning, and blind tradition of following traditional texts such as Corbett and Mahan need in addition a critiquing of, by, and for today’s world. They can also inform that learning also comes from experience and sometimes also errors. That means that any professional military education system requires a mix of a general education, with an emphasis on the individuality and
development of a cadet's critical faculties and continual professional development to reflect and review on experiences onboard ship.

Future research directions need to engage pedagogical approaches beyond lectures, articles, and books because they can but touch on the fringe of a subject. They can indicate certain points, draw out certain principles, excite interest—or otherwise. But they cannot replace the persistent study, and the discussion of views, from the operational experiences by which alone a professional's knowledge is to be distinguished from that of an amateur and limited experience.

To this end, a pedagogical approach could be a simulation exercise that might be undertaken at naval academies. The objective could be to get cadets to delve deep into the heritage of the profession, the development of abstract considerations including conceptualizations with a broad philosophical appreciation of naval and maritime affairs to determine the desirable characteristics of naval and maritime strategy for their future positions in the real world aboard ships. Junior and senior officers can also be given simulations in further shorter programs with specific objectives. Future research directions could focus on feedback from these simulations to examine gaps and what is needed to contribute to present and future naval planning, deployment, and operations.

I therefore conclude this article stressing that the potentials to be developed and to be realized are in the next steps in educating and in research. At the fore must be revisiting naval conceptualizations. Moreover, the nurturing of specialist think tanks for the development of concepts and doctrines specific could well follow the example of the USNWC, the Concepts and Doctrine Center in the RN, and the FRS Foundation for Strategic Research in France. To this should be added the bottom-up approach where captains of warships can contribute their experiences to be written into doctrine. For example, on counterinsurgent operations, coastguard and constabulary roles and geo-strategic shifts with new instruments such as missiles, drones and cyber. These are all topics for research directions.

The analogy I conclude with is that both educating and research might be akin to improving overall efficiency by promoting harmony between the quarter-deck and the boiler room and raising executive officers' awareness of the technical realities of the steam age. The alternative would end in blind herd instinct and battle failure. Beyond these beginnings, sooner or later naval officers at all ranks provided with the right directions in their education will light up a renaissance. And not just about points of view such as Corbett's and Mahan's conceptualizations on decisiveness, naval control, and victory. Being educated to look at the maritime space holistically with the full and proper examination of any conceptualizations tends towards serendipity when in combat or engaged in maritime security roles including naval diplomacy. The value of a maritime space also includes protecting the country's way of life and economic resources.
References


