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**NAVAL WAR COLLEGE
Newport, R.I.**

**MARITIME SHIPPING PROTECTION: A VITAL MISSION STILL NEGLECTED
AND UNDERPREPARED TO EXECUTE BY THE UNITED STATES**

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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Abstract

Both maritime nations and operational level commanders depend upon the sea for a number of important reasons. Maritime nations rely heavily upon the uninterrupted flow of shipping to ensure economic prosperity and operational level commanders depend upon it to move and sustain large joint forces within their areas of operations (AORs). Regrettably, protection of the nation's shipping is not always thoroughly considered by current operational commanders. Historically, maritime trade protection has been neglected, and continues to suffer a similar fate today. Inexcusably, the U.S. is quick to forget about lessons learned from the past. As a result, operational commanders place too little emphasis on shipping protection and are underprepared to protect and defend it from attack. Today's commanders take access for granted, the current state of Anti-Submarine Warfare (ASW) and Mine Countermeasures (MCM) is less than desirable, and current guidance and doctrine on the protection of shipping is weak. For these reasons, change must occur to ensure the nation's shipping stays afloat. Current doctrine should be re-written, operational commanders must be proactive, the U.S. Air Force should be more thoroughly integrated into the maritime domain, adding protective measures to merchant shipping should be considered, the Joint Intelligence Operation Center (JIOC) should be integrated with the Maritime Domain Awareness (MDA) aspect of NCAGS, and convoy operations should be practiced.

Introduction

Joint Publication 1-02 defines protection as, “Preservation of the effectiveness and survivability of mission-related military and nonmilitary personnel, equipment, facilities, information, and infrastructure deployed or located within or outside the boundaries of a given operational area.”¹ As a rule, human beings tend to take good care of those items they deem most important to them, whether that is their car, home, or finances. Protecting themselves, their loved ones, and their most valuable possessions is an instinct ingrained in their minds from day one. Unfortunately, people also have a tendency to let their guard down and take protection for granted. When this occurs, those items considered irreplaceable become highly vulnerable to damage and/or destruction.

Maritime nations are no exception to this rule when it comes to protecting one of their most vital commodities –their maritime trade –to include their commercial and military shipping. In fact, history is replete with examples of nations (including the U.S.) who, at great cost, failed to adequately address this most crucial task. The economies of maritime nations such as the U.S. and many of its key allies rely heavily on the uninterrupted flow of shipping throughout the world. For example, the U.S. depends upon maritime trade routes to the Middle East and Africa for 41% of its oil.² This is just one side of the equation.

Not only do maritime nations depend upon the sea, but U.S. operational level commanders often tasked with executing major operations or campaigns, also rely on the sea to move and sustain large joint forces. Therefore, it might be assumed that operational commanders would consider protecting and defending these assets against attack to be of the utmost importance. However, protection of sustainment assets is not always thoroughly considered by current operational commanders.

Historically, maritime trade protection has been neglected and continues to suffer a similar fate today. George Santayana famously stated, “Those who cannot remember the past are condemned to repeat it,”³ and the U.S. seems destined to fulfill this proverbial statement as they are quick to forget about lessons learned from the past. As a result, operational commanders place too little emphasis on shipping protection and are underprepared to protect and defend it from attack. It is evident, in fact, that commanders take maritime access for granted creating the illusion that sea control will not be contested in the future. Additionally, current doctrinal publications place too little attention on the mission of protecting shipping against attack and do not provide sufficient guidance on how to perform this mission. It is possible that this has directly resulted in the atrophy of two of the most important skill sets that are needed to effectively protect shipping against attack, Anti-Submarine Warfare (ASW) and Mine Countermeasures (MCM). With this in mind, it is critical for operational level commanders to understand why they must devote significant time and resources to the protection of shipping.

Discussion/Analysis

The Important Why

Tenets of operational art describe the importance of “operational protection” to the operational commander. In his book titled *Operational Warfare at Sea*, Dr. Milan Vego states that operational protection “pertains to a series of synchronized actions and measures conducted in peacetime, crisis, and war intended to preserve the effectiveness and survivability of military and nonmilitary sources of power deployed within the boundaries of a given maritime theater.”⁴ U.S. shipping is an acknowledged source of national power; thus, operational commanders should exercise all available means to protect and defend it from

attack within their respective areas of responsibility (AORs). If this is the case, why has this mission been ignored over the years? A historical perspective will help answer this question.

Historical Perspective

During a lecture presented to Maritime Advanced Warfighting School (MAWS) students, Dr. Milan Vego stressed the importance of military leaders being students of history. A study of history allows commanders to develop lessons learned from history, and then apply those lessons to prevent repeating the same mistakes others had made in previous conflicts.⁵ While this appears to be perfectly logical, history shows that leaders of the U.S., U.K., and Japan have not been good students of history when it comes to protecting their shipping. Instead of being proactive, these countries have usually been reactive (i.e. protection of merchant shipping was not a priority until their merchant ships began to be attacked and sunk).

During World War I, 12.85 million tons of British shipping was sunk by German U-Boats⁶ because operational commanders failed to directly protect it. Twenty years later, U.S. and U.K. commanders were again surprised when Germany waged a U-Boat campaign in the Atlantic against merchant shipping. Because these countries ignored previous lessons learned, and initially neglected the need to protect their merchant shipping, 14.69 million tons of merchant shipping was sunk during the war.⁷ Today, the U.S. appears to have all but forgotten the lessons from these wars. Despite these historical examples that offer clear evidence for the need to protect shipping, the U.S. is still underprepared to execute this mission today.

Geoffrey Till provides some insight to help answer why the U.S. is not primed to protect its shipping. He states, “because of the contemporary preoccupation with maritime

power projection, amphibious warfare vessels, aircraft carriers, tomahawk-shooters, and powerful general purpose sea control ships are all the rage rather than oceanic escorts.”⁸ Essentially, the idea of devoting resources to protecting shipping does not line up with the offensive mindset of the U.S. As a result, the U.S. places much less emphasis on this so-called defensive mission. Dr. Vego sees the problem relating back to Alfred Thayer Mahan; he argues that naval leaders blindly followed Mahan’s offensive-minded teachings to the neglect of his other lessons on how critical merchant shipping was to a sea power.⁹ Tragically, according to Vego, “This offensive spirit still permeates the U.S. naval leadership today. Although the protection of shipping is one of the Navy’s core missions, far more attention and resources are given to offensive missions such as strike warfare and ballistic missile defense.”¹⁰

This is evident in the Navy’s current and planned force structure. The U.S. Navy is focused on high-end ships such as the aircraft carrier and Aegis destroyer to the detriment of the frigate, a ship traditionally utilized for escort duties. In fact, the U.S. Navy plans to retire the last of its 26 remaining OLIVER HAZARD PERRY (OHP) class guided missile frigates by FY 2015¹¹ and replace them with the LCS.¹² However, the LCS is considered to be inferior to the OHP frigate. According to Ronald O’Rourke, it has limited endurance and is incapable of performing area air defense.¹³ Furthermore, “The LCS weapons array also compares unfavorably with comparable-sized frigates that can perform the full array of anti-submarine, fleet air defense, and naval combat roles.”¹⁴ This leaves the U.S. Navy Aegis surface combatants as the most viable option for escort duties. However, the “AirSea Battle” concept stresses that these ships would be required for other pertinent missions.¹⁵ Therefore, it is not surprising that Geoffrey Till maintains “that even the most capable of the world’s

navies could not protect shipping in a serious way even if they wanted to –on their own at least.”¹⁶ This offensive-centric approach has painted the U.S. Navy in a corner and has also led to operational commanders taking access for granted.

Access Taken For Granted

Since the end of the Cold War, the U.S. Navy has enjoyed an unprecedented period of command of the sea throughout the world’s oceans. Robert C. Rubel highlighted this when he stated, “The year 1990 was a significant one in naval history. It marked the transition from a world in which the oceans were contested to one in which one navy had uncontested command of the sea.”¹⁷ Regardless of the mission (e.g. OIF, OEF, HA/DR response operations ISO Haiti, Japan, Pakistan, Thailand) the U.S. Navy was able to proceed where and when it wanted, virtually unimpeded. As such, operational commanders have grown accustomed to naval vessels and merchant shipping traversing freely throughout their respective AORs.

Although the U.S. Navy has enjoyed freedom of the seas for such a long period of time, this has potentially created an improper mindset that the U.S. will continue to enjoy unfettered access for the foreseeable future. This is a dangerous attitude for operational commanders to take towards operational protection of shipping. As countries like China and Iran continue to modernize and build up their naval fleet and apparently develop their anti-access/area-denial (A2/AD) strategies, the days that Robert Rubel referred to might be coming to an end. As such, the U.S. is underprepared to protect its shipping because current operational commanders are out of practice when it comes to sea control. As Robert Rubel surmised, “since 1990, however, the Navy has again focused on power projection and, again, has lost the discipline of sea control.”¹⁸ It is time for operational and joint force commanders

to begin strategizing how to protect shipping in a contested environment where just the presence of the U.S. fleet will not suffice.

However, Robert Rubel's views are contradictory to those expressed in "A Cooperative Strategy for 21st Century Seapower." Quite boldly, the strategy states, "We will be able to impose local sea control wherever necessary, ideally in concert with friends and allies, but by ourselves if we must."¹⁹ This statement is a byproduct of the U.S. currently not having a peer competitor capable of challenging the U.S. Navy for control of the sea. Unfortunately, statements such as the one above tend to give operational commanders the illusion that sea control will be automatic.

The U.S. might be approaching a time when another belligerent will be able to compete with the U.S. for sea control. This is emphatically pointed out by pundits of "AirSea Battle." After the authors highlight the traditional tenets of the "American Way of Power Projection", they express, "Having enjoyed success with this approach for such an extended period of time, some U.S. planners seem to take as a given uncontested air superiority, unimpeded flows of personnel and equipment to and within the theater of operations,...and robust military and civilian logistics."²⁰ Will the U.S. be ready to compete for and win control of the sea in order to protect its shipping? Looking at the current state of ASW and MCM, the answer is an emphatic no.

Diminished ASW and MCM Skills

In terms of establishing sea control and providing operational protection, two of the primary warfare missions that must be emphasized and planned for by operational commanders are ASW and MCM.²¹ Submarines and mines pose extreme threats to both military and commercial shipping. As such, U.S. forces must be prepared to execute these

missions effectively to ensure its shipping stays afloat. However, the U.S. Navy's ASW and MCM skills have atrophied since the end of the Cold War. Furthermore, the emphasis on these missions has also waned. This is not surprising considering that the U.S. has been heavily involved in Iraq and Afghanistan over the past decade where the priority for Carrier Strike Groups (CSGs) deployed to the region has been on Strike and Close Air Support (CAS) missions.

The U.S. Navy placed vast emphasis on ASW prior to and throughout the Cold War due to the significant Soviet submarine threat. However, once the Soviet threat vanished, the U.S.'s focus on ASW all but disappeared. In 2000, Vice Admiral John Grossenbacker (Commander of Submarine Forces, Atlantic and ASW forces, Atlantic at the time) provided this telling assessment on the state of ASW. He stated, "As I testified before Congress, our ASW capabilities can best be described as poor or weak...[A]s a minimum our Navy must have the capability and capacity, if required, to neutralize the potential undersea threats posed by China, North Korea and Iran, today."²²

Granted, this was over a decade ago, but little has changed for the better since the Admiral's testimony. Since this time, the U.S. Navy retired the S-3B Viking (long range, carrier-based ASW platform), the P-3C Orion has just about reached the end of its service life, and the planned production of 50 P-8A aircraft will attempt to handle the same workload that 200 of its predecessors did.²³ Furthermore, the Navy's overall ASW capable surface and sub-surface force is gradually being reduced year after year.²⁴ Although it is true that the Naval Mine and Anti-Submarine Warfare Command (NMAWC) was stood up in 2004 to better emphasize the ASW and MCM missions, this was not necessarily an improvement because it sacrificed overall success in each of the missions for efficiency, and will probably

result in each community battling for resources.²⁵ Furthermore, the Navy insists that the LCS is the answer to its problems, but not everyone would agree with that. According to defenseindustrydaily.com, “the Anti-Submarine Warfare (ASW) module has experienced a lot of turbulence, and after early testing went poorly, the Navy is re-thinking this entire module.”²⁶ Furthermore, it has been suggested that the LCS’s displacement is not small enough to allow it to effectively perform ASW in the littorals (where many SLOCS pass through).²⁷

The outlook for the MCM mission is not much better. With an aging MCM fleet of ships and helicopters awaiting the arrival of LCS, this mission area is very much in transition and in a state of uncertainty. This is not acceptable considering “the worldwide mine threat is being modernized, particularly that of the PLAN.”²⁸ While mine threat capabilities are increasing, the current state of U.S. MCM capabilities is considered “brittle.”²⁹ Furthermore, “The U.S. Navy and its allied and partner navies are ill prepared to cope with Chinese mine warfare strategies and operations.”³⁰ Dr. Vego and Ronald O’Rourke have equally bleak perspectives. Mr. O’Rourke is skeptical of future U.S. MCM capabilities based upon the mine module for LCS losing multiple key components,³¹ and Dr. Vego believes that the U.S. Navy is incapable of performing MCM in the littorals and against technologically advanced mines.³² Even if the U.S. Navy’s ASW and MCM capabilities were sufficient, it would still be difficult for operational commanders to protect shipping due to a lack of clear doctrine and little guidance.

Guidance and Doctrine

Current doctrine on the protection of maritime shipping is weak because it focuses too little thought on the direct protection of shipping during a conflict. A primary example of

this can be found in NTTP 3-07.12 (Naval Cooperation and Guidance for Shipping) (NCAGS). Not only does this document devote a single, paltry three sentence section to the concept of protection, it refers the reader to an equally lacking allied publication for the procedures and tactics for the protection of shipping.³³ Neither this publication nor the allied one provides the operational commander with the operational “how” to protect shipping. As Dr. Vego asserts, “There is not a single document in use by the Navy that explains the employment of combat forces to defend and protect maritime trade.”³⁴

Another reason it is inadequate is because it does not place enough emphasis on the lethal threats a multitude of countries could employ against merchant shipping. In the past, NTTP 3-07.12 referred to the mission of protecting shipping as “Naval Control and Protection of Shipping” (NCAPS). However, in 2003, the Navy changed the mission to “Naval Cooperation and Guidance for Shipping (NCAGS).”³⁵ This change was more than semantic. By taking the words “control” and “protection” out of the mission and replacing them with “cooperation” and “guidance”, the U.S. Navy undermined the value that direct protection of shipping has in a hostile environment.

According to NTTP 3-07.12, this change was made because “NCAPS was originally established to meet a Cold War-era national need to protect merchant shipping against a global ocean threat.”³⁶ Furthermore, “The threat to merchant shipping has changed and so has the Naval Control of Shipping (NCS) mission. The primary threat to U.S. merchant vessels is no longer considered to be traditional naval vessels under the flag of a known enemy; instead the threat is terrorism.”³⁷ This shift in thinking is delusional because it is blindly focused on the present threat while disregarding the possibility of a belligerent actively attacking U.S. maritime trade. Dr. Milan Vego reinforces this notion. He asserts,

“What was ignored was the fact that the threat of conventional war at sea still exists in some of the world’s flashpoints, specifically on the Korean Peninsula, the Taiwan Strait and the Persian (Arabian) Gulf.”³⁸ The U.S. must not forget about the past and solely focus on asymmetric threats from terrorists or pirates. Furthermore, operational commanders must resist the temptation to minimize conventional threats. Rather, they need to plan for the possibility that another belligerent will attempt to attack U.S. shipping again.

NDP-1 is equally bad. The current signed version lists “Forward Presence”, “Deterrence”, “Sea Control”, “Power Projection”, “Maritime Security”, and “Humanitarian Assistance/Disaster Response (HA/DR)” as the six core capabilities of naval forces.³⁹ However, one must infer from the discussion under “sea control” that shipping is naturally protected via this capability (NDP-1 fails to account for the fact that sea control could be contested). Furthermore, in a typical Mahanian spirit, this Navy publication ties sea control to power projection.⁴⁰ NDP-1 is severely lacking and needs to be updated to place more emphasis on the protection of shipping. At the very least, maritime trade protection should be added to this doctrine as a core capability, rather than be imbedded under sea control.

Another striking example of the absence of clear guidance on the protection of shipping can be found in the Universal Naval Task List (UNTL). The glossary of this document lists “Naval Control and Protection of Shipping” vice “Naval Cooperation and Guidance for Shipping.” Moreover, it defines the term as, “All measures taken by naval authorities to safeguard the ports of merchant shipping in time of crisis.”⁴¹ This is a glaring oversight that creates confusion rather than adding clarity. The glossary not only uses an old term (i.e. NCAPS vice NCAGS), but only discusses the aspect of safeguarding the ports of

merchant shipping, not actually protecting the shipping from origin to destination. Despite these arguments, others have a different outlook on the vulnerability of shipping to attack.

Counter-Arguments

Although protection of a maritime nation's shipping is vitally important, there are some who argue that due to globalization, no country would risk the international fall-out and condemnation for attacking another country's merchant shipping. The authors of "No Oil for The Lamps of China" argue that an energy blockade of China would "send destructive shock waves through the global economic and political landscape."⁴² With this in mind, it is not a stretch to also conclude that one belligerent attacking another belligerent's shipping would create a similar outcome. Moreover, Geoffrey Till believes that outside of full-scale war, "globalization would hugely increase the commercial and political penalties of trying to"⁴³ attack another belligerent's shipping.

Based upon the above premise, the primary threats that might be identified as necessary to prepare for would be terrorist and piracy attacks against shipping, not conventional military threats from another belligerent. If piracy and terrorism constitute the most probable threats, NCAGS is most likely sufficient enough to address them. While piracy and terrorism certainly pose a threat to maritime shipping, they are not on the same scale as one belligerent actively attempting to sink another belligerent's merchant shipping. This is where NCAGS falls short –it primarily focuses on providing the operational commander situational awareness on the whereabouts of merchant shipping in order to de-conflict it from military operations, not the means to directly protect it should major power wars occur in the future.

Others may argue that the likelihood of a major power war in which merchant shipping would be attacked is remote. Geoffrey Till postulated that he does not envision conflicts similar to World War I or World War II in which merchant shipping was attacked on a grand scale likely to occur again.⁴⁴ Furthermore, Robert Rubel concluded “the same factors that complicate blockade⁴⁵ make commerce raiding almost infeasible in the current threat environment. In any case, if the U.S. Navy attempted to interdict Chinese commerce, nuclear escalation could become an issue.”⁴⁶ While Mr. Rubel makes the claim that attacking Chinese commerce could lead to nuclear escalation, a Chinese attack on U.S. shipping could lead to nuclear escalation as well. As such, the crux of this counterargument is that the threat of nuclear escalation would deter a country from attacking another nuclear capable country’s maritime trade.

Using the logic of nuclear escalation described above, some probably feel that the procedures already in place through NCAGS are more than adequate. However, the U.S. cannot afford to ignore a threat country’s capabilities to attack its maritime trade. Contrary to Geoffrey Till’s hypothesis, if another belligerent has the capability to attack U.S. shipping, history has proven it most certainly will. In fact, as described in *AirSea Battle: A Point-of-Departure Operational Concept*, one of the PLA’s operations would be to “interdict US and allied sea lines of communication (SLOCs) throughout Southeast Asia and the Western Pacific.”⁴⁷ Furthermore, in a Strait of Hormuz closure scenario, Iran would use mines and ASCMs to attack merchant shipping and convoy escorts.⁴⁸ Again, NCAGS is inadequate because it is tailored more to piracy and terrorism than to major power war between peer competitors.

While these counter arguments do have some merit, they are flawed because they are more focused on assumed intentions vice military capabilities. History, however, has proven that countries that have developed plans based upon assumed intentions instead of its capabilities have suffered disastrous consequences.⁴⁹ Therefore, the U.S. should heed the modernists' view, "that basing defence preparations on the assumption that the era of old-fashioned 'modern' interstate conflict is definitely over demands a level of confidence in one's own capacity to predict the future that verges on the irresponsible."⁵⁰ For these reasons, the U.S. must implement change now.

Conclusions and Recommendations

While technology may ultimately render many things obsolete in the future, the one aspect it will not is the nation's shipping. Nothing will be able to replace the sheer volume of equipment, material, and goods that maritime shipping can move via the world's oceans. Therefore, a country's shipping must be protected at all costs. Regrettably, the U.S. is not adequately prepared to undertake this most vital task as is evident by the preceding arguments. Therefore, the following recommendations are provided regarding the ability to protect the U.S.'s maritime shipping.

First and foremost, the current doctrine needs to be updated. NTTP-3-07.12 should be changed to Naval Protection and Guidance for Shipping (NPAGS). The protection piece should be added back into the title and publication to clearly emphasize to operational commanders that this mission is focused on protecting merchant shipping from origin to destination and against all threats. The guidance piece should remain to highlight the situational and maritime domain awareness (MDA) aspects that are an integral part of NCAGS. These aspects are extremely important and can provide the operational commander

with detailed information on the whereabouts of all merchant shipping within his AOR. However, the operational commander should be focused on the protection piece; specifically, how to execute that mission with the forces assigned to him.

Second, operational commanders must be proactive. One means of accomplishing this is by mapping out Shipping Risk Areas (SRAs) before a crisis occurs. NTA 3-07.12 highlights that these can be formed when shipping is at risk.⁵¹ However, the primary shipping routes utilized by commercial and military shipping are well known. Instead of waiting for a crisis to occur, operational commanders should preemptively create SRAs within their respective AORs, so they can be immediately activated if and when a conflict occurs. Furthermore, by identifying these SRAs now, operational commanders can conduct detailed analysis of these areas and determine the likely methods the enemy might use to exploit the air/water space within them.

Third, the Joint Intelligence Operation Center of the Geographic Combatant Commander (GCC) should be integrated with the MDA portion of NPAGS to ensure the operational commander has overall situational awareness on the threat picture in relation to the merchant shipping picture. The operational commander must rely on and heed the intelligence team's advice to assist him with protecting the shipping in his respective AOR. As history has demonstrated, failing to trust the intelligence team's assessment has dire consequences.⁵²

Fourth, the U.S. Navy must not be the only service relied upon to protect the nation's shipping. With the current budget cuts in progress across DOD, the U.S. Navy is likely to get smaller. The U.S. Air Force has the capabilities to protect maritime shipping against attack. As Dr. Vego suggests, "The Air Force also can be very effective in...and defending

U.S. sealift and maritime trade, by conducting strikes and offensive mining.⁵³ Therefore, it is incumbent upon joint force commanders at the operational level to integrate the Air Force into their plans for protecting shipping. The U.S. Navy and U.S. Air Force must continue to train together in the maritime environment to build rapport and establish standardized operating procedures. This is quite feasible considering the U.S. Air Force has already participated in maritime exercises where it proved its ability to attack seaborne targets.⁵⁴ Therefore, as Lawrence Pinetta asserts, “We should work toward making land-based aviation and hence Air Force jets, an integral part of the air-to-water mission.”⁵⁵

Fifth, the U.S. should look hard at adding protective measures to its merchant vessels to counter the possible threats that could attack them in future conflicts. Some may argue that this is not feasible because of the costs that would be involved. However, that does not preclude the U.S. Navy from exploring this option. With a downsizing Navy, the number of warships available for escort or direct protection will certainly be limited. Therefore, equipping commercial and military sealift ships with defensive weapons is an alternative that would at least make them more survivable and reduce the overall risk of shipping to the operational commander.

This is not an unrealistic concept. In 1988 and 1989, as part of the United States “Sealift Ship Survivability Program”, two separate tests of various off-the-shelf weapon systems were conducted aboard ship while underway.⁵⁶ In fact, each of the tests showed favorable results and, according to the author, the 1989 test “found the MK38-Mod 0 25 mm naval gun, the ASP 30 mm cannon, the Chaparral Air Defense missile, as well as the Mast Mounted Site acceptable under at-sea conditions.”⁵⁷ This is one particular example. Many years before this initiative, at the beginning of World War II, the British created an

organization known as the Defensively Equipped Merchant Ship (DEMS) organization which essentially equipped British merchant shipping with deck guns.⁵⁸ Furthermore, another instance of outfitting merchant shipping with protective measures was ARAPAHO. This concept developed by the U.S. Navy in the 1970s allowed for container ships to launch and recover V/STOL type aircraft.⁵⁹ In fact, there are several viable options available to make the U.S.'s critical shipping more survivable; therefore, the U.S. should invest the time and money⁶⁰ to make this happen.

Lastly, operational commanders should conduct exercises focused on all aspects of convoy operations. History has proven that convoys work. During World War II, after the allies decided to conduct convoy operations, the rate at which merchant ships were sunk went down significantly. According to data for the year 1942, merchant shipping that steamed independently was sunk at a rate of 7.5 percent while merchant shipping that sailed in a convoy was only sunk at a rate of 1.5 percent.⁶¹ However, convoys are inherently challenging to establish and execute due to the amount of coordination required. Therefore, the time to practice the art of convoying is during peacetime, not after hostilities have broken out and merchant shipping is at risk. While the practice of convoying could certainly be integrated into pre-existing exercises, budgetary constraints and potential impacts on shipping could severely limit the opportunities. Therefore, operational commanders should leverage existing synthetic training scenarios to be better prepared to execute convoy operations. According to Lieutenant Michael Grub, there are a number of synthetic training scenarios that carrier strike groups participate in prior to deployment that “could easily be modified to test commanders and their staffs on the complex coordination, ROE, and space-

time-force operational art challenges executing NCAGS/protection of shipping tasking concurrently with other expected missions.”⁶²

It is extremely challenging to coordinate convoy operations; therefore, they should not be thrown together at the last minute. Operational commanders should have standard, established procedures already in place to ensure success. A good example of this was the convoy system developed by the British during World War II. The British systemically divided their merchant ships and protective measures into five categories (based upon how critical the cargo was and the level of protection required).⁶³ The U.S. could perform something similar today; operational commanders could take detailed inventory of the various types of shipping the U.S. relies upon for economic and military purposes and place them in distinct categories. Once this is accomplished, commanders could look at the multitude of threats that could impact this shipping and determine the best means, ways and ends to provide protection. Again, the key is to be proactive and have established procedures in place before a crisis occurs.

Final Remarks

As a maritime nation, the U.S. cannot afford to take for granted the protection of its shipping. Current and future operational commanders must avoid the Commander E. Cameron Williams mantra “that assigning forces for the direct protection of shipping is a purely defensive and passive measure, alien to the spirit of offensive warfare.”⁶⁴ They must take the approach that “your fleet is the security and protection of your trade.”⁶⁵ Furthermore, they must heed the operational lessons learned from World Wars I and II on the consequences of failing to protect one’s shipping. If they do not, history is likely to repeat itself and the U.S. will once again find itself ill prepared to protect its shipping from attack.

NOTES

1. U.S. Office of the Chairman of the Joint Chiefs of Staff, *Department of Defense Dictionary of Military and Associated Terms*, Joint Publication (JP) 1-02 (Washington D.C.: CJCS, 2010), 265.
2. U.S. Energy Information Administration. “Energy in Brief,” 24 June 2011, accessed on 27 February 2012, http://www.eia.gov/energy_in_brief/foreign_oil_dependence.cfm.
3. Wikipedia, accessed on 15 March 2012, http://en.wikipedia.org/wiki/George_Santayana.
4. Milan Vego, *Operational Warfare at Sea* (London: Routledge, 2009), 91.
5. Milan Vego, lecture to MAWS students at U.S. Naval War College, 28 February 2012.
6. Jonathan T. James, “Countering Naval Guerrilla Warfare: Are Convoys Obsolete?” (Research Paper, U.S. Naval War College, 1991), 15.
7. Thomas Poirier, “Results of the German and American Submarine Campaigns of World War II,” accessed on 20 November 2011, <http://www.navy.mil/navydata/cno/n87/history/wwii-campaigns.html>, 3.
8. Geoffrey Till, “A Changing Focus for the Protection of Shipping” in *The Strategic Importance of Seaborne Trade and Shipping: A Common Interest of Asia Pacific*, ed. Forbes, Andrew. Canberra, Australia: Sea Power Centre – Australia, 2002. (NWC 4032), 15.
9. Milan Vego, “Trade Protection,” accessed on 18 January 2012 <http://www.armedforcesjournal.com/2008/11/3759053>, 27.
10. Ibid
11. Director, Warfare Integration (OPNAV N8F), “Report to Congress on Annual Long-Range Plan for Construction of Naval Vessels for FY 2011,” (Washington DC: CNO, February 2010), 30.
12. “LCS: The USA’s Littoral Combat Ships,” Defense Industry Daily, accessed on 21 March 2012, <http://www.defenseindustry.com/the-new-littoral-combat-ships-updated-01343/>, 2.

13. Ronald O' Rourke, "Navy Littoral Combat Ship (LCS) Program: Background, Issues, and Options for Congress," Congressional Research Service, CRS Report Prepared for Congress, 29 April 2011, 31-32.

14. "LCS: The USA's Littoral Combat Ships," Defense Industry Daily, accessed on 21 March 2012, <http://www.defenseindustry.com/the-new-littoral-combat-ships-updated-01343/>, 10.

15. Jan Van Tol, Mark Gunzinger, Andrew Krepinevich, and Jim Thomas, *AirSea Battle: A Point-Of-Departure Operational Concept* (Washington DC: Center for Strategic and Budgetary Assessments, 2010), 45. Of note, this same article also surmises that the LCS is inadequate to execute the escort mission for the same reasons O'Rourke and defenseindustrydaily.com gave.

16. Till, "A Changing Focus for the Protection of Shipping," 16.

17. Robert C. Rubel, "Talking About Sea Control," *Naval War College Review* 63, no. 4 (Autumn 2010): 38.

18. Ibid, 47.

19. "A Cooperative Strategy for 21st Century Seapower," accessed on 17 December 2011, <http://www.navy.mil/maritime/MaritimeStrategy.pdf>, 11.

20. Van Tol, Gunzinger, Krepinevich, and Thomas, *AirSea Battle: A Point-Of-Departure Operational Concept*, 23.

21. Vego, *Operational Warfare at Sea*, 92.

22. John R. Benedict, "The Unraveling and Revitalization of U.S. Navy Antisubmarine Warfare," *Naval War College Review* 58, no. 2 (Spring 2005): 99-100.

23. Milan Vego, "Patrolling the Deep," accessed on 21 February 2012, <http://www.armedforcesjournal.com/2008/09/3654984>, 26.

24. According to Ronald O'Rourke's 08 FEB 12 CRS Report for Congress titled "China Naval Modernization: Implications for U.S. Navy Capabilities – Background and Issues for Congress," "the cruiser-destroyer and attack submarine forces will drop substantially below required levels in the latter years of the 30-year plan," 55.

25. Vego, "Patrolling the Deep," 37.
26. "LCS: The USA's Littoral Combat Ships," Defense Industry Daily, accessed on 21 March 2012, <http://www.defenseindustry.com/the-new-littoral-combat-ships-updated-01343/>, 7.
27. Vego, "Patrolling the Deep," 26.
28. Scott C. Truver, "Taking Mines Seriously: Mine Warfare in China's Near Seas," *Naval War College Review* 65, no. 2 (Spring 2012), 48.
29. Ibid, 47.
30. Ibid, 62.
31. O'Rourke, "Navy Littoral Combat Ship (LCS) Program: Background, Issues, and Options for Congress," 32.
32. Milan Vego, "Mine Warfare," Joint Military Operations Department, U.S. Naval War College, 2011, (NWC 1009), 2.
33. U.S. Department of the Navy, *Naval Cooperation and Guidance for Shipping (NCAGS)*, Naval Tactics, Techniques, and Procedures (NTTP) 3-07.12 (Washington D.C.: CNO, October 2003), 2-2.
34. Vego, "Trade Protection," 28.
35. NTTP 3-07.12, 1-1.
36. Ibid
37. National Geospatial-Intelligence Agency, *Radio Navigational Aids*, Publication (PUB.) 117, Chapter 8, (Bethesda, MD: NGIA, 2005), 8-3.
38. Vego, "Trade Protection," 29.
39. U.S. Department of the Navy, *Naval Warfare*, Naval Doctrine Publication (NDP) 1, (Washington D.C.: CNO, March 2010), 25-31.

40. Ibid, 27. It specifically states on this page that, “sea control and power projection complement one another.”

41. U.S. Department of the Navy, *Universal Naval Task List (UNTL)*, OPNAV Instruction (OPNAVINST) 3500.38B, (Washington D.C.: CNO, January 2007), B-31.

42. Gabriel B. Collins and William S. Murray, “No Oil for the Lamps of China,” *Naval War College Review* 61, no. 2 (Spring 2008): 80.

43. Till, “A Changing Focus for the Protection of Shipping,” 14.

44. Ibid, 14-15.

45. For more information on the factors that complicate blockade see page 39 of “Talking About Sea Control.”

46. Rubel, “Talking About Sea Control,” 41.

47. Van Tol, Gunzinger, Krepinevich, and Thomas, *AirSea Battle: A Point-Of-Departure Operational Concept*, 21.

48. Caitlin Talmadge, “Closing Time: Assessing the Iranian Threat to the Strait of Hormuz,” *International Security*, 33, no. 1 (Summer 2008): 88.

49. Milan N. Vego, *Joint Operational Warfare* (Newport: U.S. Naval War College, 2009), APP-99. This is one of Dr. Vego’s operational lessons learned from the Leyte Operation.

50. Geoffrey Till, *Seapower, A Guide for the Twenty-First Century* (London: Frank Cass, 2006), 6.

51. NTTP 3-07.12, 2-4.

52. U.S. Office of the Chairman of the Joint Chiefs of Staff. *Joint Intelligence*, Joint Publication (JP) 2-0, (Washington D.C.: CJCS, 22 June 2007), III-17. 23 of the 34 merchant ships apart of convoy PQ17 were sunk as a result of Admiral Sir Dudley Pound failing to heed Commander N.E. Denning (Admiralty’s Operational Intelligence Center section chief) assessment.

53. Milan Vego, “AirSea Battle Must Not Work Alone,” *Proceedings Magazine*, July 2011, <http://www.usni.org/print/8235>, 3.

54. Lawrence Spinetta, "Cutting China's String of Pearls," *U.S. Naval Institute Proceedings* 132 no. 10 (October 2006): 3. During Resultant Fury (PACOM exercise), B-52Hs hit both of their moving maritime targets.

55. Ibid, 4.

56. Paulette R. Neshiem, "Protection of Merchant Shipping," (Research Paper, U.S. Army War College, 1990), 40-42.

57. Ibid, 42.

58. Ibid, 44. The British actually installed several thousand three and four inch guns as well as smaller caliber weapons on over 4000 merchant ships.

59. Ibid, 45. This would allow merchant ships to utilize organic armed aircraft for protection.

60. CDR Paulette Neshiem highlights on page 45 of "Protection of Merchant Shipping," that ARAPAHO, at a cost of \$16-17 per system (FY 1982 dollars), was fairly inexpensive. Even after accounting for inflation, this type of system would still be relatively inexpensive to install on merchant shipping today.

61. Neshiem, "Protection of Merchant Shipping," 7.

62. Michael Grub, "Protection of Shipping: A Forgotten Mission with Many New Challenges," (Research Paper, U.S. Naval War College, 2006), 19. He lists Battle Group Inport Exercises (BGIE), Fleet Inport Synthetic Training (FIST), and Maritime Group Inport Training (MGIT) as possible exercises and training opportunities strike groups could participate in.

63. Milan N. Vego, *Naval Strategy and Operations in Narrow Seas*, (London: Frank Cass, 2003), 258.

64. Grub, "Protection of Shipping: A Forgotten Mission with Many New Challenges," 8.

65. Till, "A Changing Focus for the Protection of Shipping," 9.

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<http://www.navy.mil/navydata/cno/n87/history/wwii-campaigns.html>.
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