

SUBMARINE EMPLOYMENT IN AN ERA OF GREAT POWER COMPETITION

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14. ABSTRACT The United States has entered an era of great power competition, and the global security environment has undergone a significant shift. This paper analyzes the role of submarines in this changing environment, particularly the role that submarines would play in a series of fleet engagements with a peer competitor. This analysis uses historical examples to identify elements of OPART that apply to submarine operations. Then, there is a discussion of the fleet tactics construct and how it can be applied to submarines to develop a better understanding of submarine combat power. Finally, elements of OPART and the fleet tactics construct are used to develop recommendations to the operational commander for how to employ submarines in a series of fleet engagements with a peer competitor.					
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Abstract

The United States has entered an era of great power competition, and the global security environment has undergone a significant shift. This paper analyzes the role of submarines in this changing environment, particularly the role that submarines would play in a series of fleet engagements with a peer competitor. This analysis uses historical examples to identify elements of OPART that apply to submarine operations. Then, there is a discussion of the fleet tactics construct and how it can be applied to submarines to develop a better understanding of submarine combat power. Finally, elements of OPART and the fleet tactics construct are used to develop recommendations to the operational commander for how to employ submarines in a series of fleet engagements with a peer competitor.

Introduction

The National Security Strategy (NSS) released in December 2017 stated that the security environment that has existed since the fall of the Soviet Union has fundamentally changed and “after being dismissed as a phenomenon of an earlier century” great power competition has returned.¹ Many strategic and operational issues accompany this significant shift. However, the question that this paper aims to answer is this: Does the rise of great power competition and the potential of fleet-on-fleet engagements require a change in the operational employment of fast attack submarines?²

The shift to great power competition and the increased potential of fleet engagements that accompanies it requires that submarines become more integrated into the fleet at an operational level. There must be a better understanding of the submarine’s operational value to enable this shift. This paper will use historical examples to draw out elements of OPART that apply to submarine operations. Then, there will be an explanation of how the combat power of submarines can be better understood using elements of Captain Wayne Hughes’ fleet tactics construct and the Maritime Advanced Warfighting School (MAWS) Relative Combat Power Assessment (RCPA) method. Finally, combining the OPART elements identified with an enhanced understanding of submarine combat power will be used to develop recommendations for submarine operational employment in a potential future peer conflict.

Historical Background and OPART

¹ Donald J. Trump, *The National Security Strategy of the United States of America* (Washington, DC: White House, 2017), 27. <https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf>

² Unless otherwise designated the term “submarine” throughout this paper refers to fast attack submarines.

Submarines have undergone significant technological shifts throughout more than one hundred years of US Navy operations, but there are elements of OPART related to submarine employment that remain unchanged. Examining historical examples of submarine operations will identify such factors and aid in the understanding of how operational commanders can employ submarines in the current and future environment. The following examples will also demonstrate that the US submarine force has always adapted as the global security environment has changed. Finally, examining the submarine force in today's environment provides evidence that the rise of great power competition requires just as much of a shift in the mindset that governs submarine employment as was seen in these historical examples.

Submarines, or more accurately submersible vessels, have been a part of American warfare since the American Revolution. However, it is when the US Navy purchased its first submarine in 1900 that the story of the submarine force truly begins. In 1912, not long after the first submarines were placed in service, then LT Chester Nimitz wrote an article titled "Military Value and Tactics of Modern Submarines." He stated that there are four factors on which to judge a warship: communication, mobility, invulnerability, and offensive strength.³ He made several key observations that still ring true today: communication with submarines is difficult, a submarine that makes unnecessary noise will be detected, and a submarine's defense lies in its "invisibility" more than anything else.⁴

Most importantly for this discussion, he made an important point about submarines as offensive weapons. He stated that as submarines develop they will "rank equally well, if not better than surface craft" and become a "dangerous offensive weapon, and one which will

³ Nimitz, Chester. "Military Value and Tactics of Modern Submarines," *Proceedings Magazine* 38, no. 4 (December 1912).

<https://www.usni.org/magazines/proceedings/1912-12-0/military-value-and-tactics-modern-submarines>

⁴ *ibid.*

have a large part in deciding fleet actions.”⁵ Nimitz’s writings from more than 100 years ago provide insights regarding maneuver, offensive power, stealth, and surprise that apply to today’s submarine force.

Compared to other nations, such as Germany, the US submarine force was not heavily involved in the First World War. A relatively small number of US submarines performed convoy escort duties, anti-U-Boat patrols, and coastal defense. However, there was considerable development in both submarine technology and tactics during the interwar period. Improvements in diesel engines and batteries meant that submarines could travel faster, farther, and stay submerged longer.⁶ Such “fleet boats” were designed to serve in a supporting role to battleships and the rest of the fleet. However, this was a mission that took a backseat after the attack on Pearl Harbor when unrestricted submarine warfare commenced against the Japanese Empire. The submarine force constituted less than 2% of the US Navy, yet sank approximately 200 Japanese warships and 1,300 Japanese merchants, 55% of all Japanese shipping sunk during the war.⁷ It was the increased mobility and offensive firepower of submarines that enabled these successes.

By their interdiction of Japanese shipping, submarines helped to isolate Japanese island strongholds in support of US invasions and wreaked havoc on the Japanese economy, operational and theater strategic objectives of the United States in the Pacific. As such, US submarines conducted what can be considered both operational and strategic fires against the Japanese in support of the dual US offensives in the Central and South Pacific. Although this was not the mission trained or prepared for in the 1930s, it was the understanding of the

⁵ *ibid.*

⁶ Clay Blair Jr., *Silent Victory: The U.S. Submarine War Against Japan*, (Annapolis: Naval Institute Press, 1975), 64-65.

⁷ Blair, *Silent Victory*, 877-879.

operational and strategic value of submarines by leaders such as Admiral Lockwood, Commander Submarine Force Pacific Fleet, and Fleet Admiral Nimitz that led to the successful employment of the submarine force.

Following WWII the US submarine force underwent probably its most significant shift, to the modern boats we see today. The combination of nuclear propulsion and the Cold War developed abilities and created mission sets that did not exist for previous generations of submariners. US submarines prowled waters around the world, tracking Soviet submarines and conducting clandestine intelligence missions against the Soviet Union. In the 1980s, a new naval strategy deployed the fleet around the periphery of the Soviet Union to demonstrate that the United States and NATO could threaten Soviet bastion areas and strike deep inside the Soviet Union in the event of an attack on Europe.⁸ Submarines were an essential part of this strategy and were uniquely able to track, and therefore threaten, Soviet ballistic missile submarines and other naval assets. Submarine stealth, or “invisibility,” enabled them to access areas denied to other assets and achieve a distinct space-force advantage against the Soviets. This strategy increased pressure on the Kremlin and helped to hasten the fall of the Soviet Union.⁹

With the end of the Cold War, the fight that had defined the silent service for over 40 years was over. Many wrote in the mid-1990s about what role the submarine force would play in the future. Some argued that principles of war such as offense, security, and economy of force made the submarine ideally suited to deterrence, strike, and surveillance missions.¹⁰

⁸ “Oceans Ventured: Winning the Cold War at Sea,” The Heritage Foundation, last modified September 28, 2018, <https://www.heritage.org/event/oceans-ventured-winning-the-cold-war-sea>

⁹ Ibid.

¹⁰ Daniel Mack, “Attack Submarine in the Post Cold-War Environment: Operational Art Implications for the Operational Commander” (research paper, US Naval War College, Joint Military Operations Department, Newport, RI 1995), 13,

John Hanley, in a 1993 issue of the *Naval War College Review*, stated that the case for building new submarines was weak because submarines had gone from a place of supreme importance in the war against the Soviets to “niche missions” like local surveillance.¹¹ In 2000, for the submarine centennial, then Director Undersea Warfare RADM Malcolm Fages wrote on future submarine challenges. He emphasized that submarines provided a unique ability to access areas that other forces could not. However, in his discussion of combat power he spoke only about the submarine’s ability to conduct “covert, precision strike” on land targets in the opening stages of a conflict and made no mention of torpedoes or their employment.¹² These examples from the post-Cold War era show that in a unipolar world without significant peer threats the maneuver and stealth of submarines can provide significant offensive power for operational commanders.

Although there have been immense changes in the global security environment since the end of the Cold War, submarine employment often remains rooted in the post-Cold War mission sets described above. However, such operations are “only tangentially related to vital wartime missions” that US submarines would be expected to carry out in a series of fleet-on-fleet engagements with a peer competitor.¹³ To be successful in such engagements the submarine force must “strike a new balance between peacetime missions and preparation for

<https://apps.dtic.mil/dtic/tr/fulltext/u2/a293704.pdf>

¹¹ John Hanley, “Implications of the Changing Nature of Conflict for the Submarine Force,” *Naval War College Review* 46, no. 4 (Autumn 1993), 25, https://www-jstor.org.usnwc.idm.oclc.org/stable/44642521?pq-origsite=summon&seq=1#metadata_info_tab_contents

¹² Malcolm Fages, “The Submarine Force: A Century of Excellence, and the Challenge of the Future,” *Undersea Warfare* 2, no. 4 (Summer 2000), https://www.public.navy.mil/subfor/underseawarfaremagazine/Issues/Archives/issue_08/challenge_of_future.html

¹³ Michael Dobbs, “Submariners Must Prepare for War,” *Proceedings Magazine* 143, no. 6 (June 2017), <https://www.usni.org/magazines/proceedings/2017-06/submariners-must-prepare-war>

large-scale naval war.”¹⁴ On the tactical side, some of this change has already occurred. The newest *Commander’s Intent for the United States Submarine Force and Supporting Organizations*, released in March 2018, places an increased emphasis on combat preparation.¹⁵ Also, in November 2018 the submarine force announced the creation of an “aggressor squadron,” focused on training forces for the high-end fight against Russia and China.¹⁶

For submarines to contribute to success in future fleet-on-fleet engagements, there must not only be a tactical shift but a shift in the operational understanding of submarine warfare as well. Hughes stated that the “decisive shift” to missile warfare has been emphasized but undersea warfare has been neglected for two decades and “a lot of catch-up” is needed in this domain.¹⁷ This discussion of historical examples has identified operational elements related to submarine employment such as advantages in maneuver, offensive power, and surprise. It has also shown how the submarine force has adapted to past changes and demonstrated that today’s environment requires a shift in the way that operational commanders employ submarines to be victorious in a series of fleet engagements. As Dale Rielage stated, in a future conflict “Contesting and securing sea space across a broad area”

¹⁴ Ibid.

¹⁵ Commander Submarine Forces, *Commander’s Intent for the United States Submarine Force and Supporting Organizations* (Norfolk VA, 2018), <https://www.public.navy.mil/subfor/hq/Documents/Commanders%20Intent%20March%202018.pdf>

¹⁶ Megan Eckstein, “Navy Creating Attack Sub Aggressor Unit to Train to Fight Against Russia, China,” *USNI News*, 8 November 2018, <https://news.usni.org/2018/11/08/submarine-forces-china-russia>

¹⁷ Wayne P. Hughes, “Naval Operations,” *Naval War College Review* 65, no. 3 (Summer 2012): 39-40, <https://digital-commons.usnwc.edu/cgi/viewcontent.cgi?referer=http://cimsec.org/fleet-tactics-returns-a-conversation-with-authors-wayne-hughes-and-bob-girrier/37040&httpsredir=1&article=1466&context=nwc-review>

will require “the synchronized effort of an entire fleet.”¹⁸ Submarines will be a vital part of this effort.

Fleet Tactics

Since the release of Hughes’ seminal work *Fleet Tactics* in 1986, it has provided direction and guidance on fleet employment and informed leaders at the operational level of war for nearly a generation.¹⁹ In the second edition, referenced for this paper, Hughes presented a framework for the missile age that provides a way to understand how navies and fleets operate, focusing on surface ships and anti-ship cruise missiles (ASCMs). The framework that he developed has been used by MAWS to develop an RCPA method that determines the Offensive Combat Power (OCP) and Defensive Combat Power (DCP) of naval forces. This method is informative but has some weaknesses, one of which is that it does not have a good way to account for submarines and torpedoes. This section will describe how this framework can be applied to submarines using the definitions developed by Hughes and elements of the MAWS RCPA method. However, this paper will not delve into the mathematics and equations of RCPA, such as how each of the components can be quantified to develop the numerical OCP or DCP of a submarine. Instead, it will remain focused on enhancing the framework to create a better understanding of the employment of submarines and submarine-launched torpedoes in a series of fleet-on-fleet engagements.

¹⁸ Dale Rielage, “How We Lost the Great Pacific War,” *Proceedings Magazine* 144, no. 5 (May 2018), <https://www.usni.org/magazines/proceedings/2018-05/how-we-lost-great-pacific-war>

¹⁹ Matthew Schehl, “Legendary Naval Strategist Hughes Releases New Edition of Fleet Tactics,” *US Navy News*, 13 July 2018, https://www.navy.mil/submit/display.asp?story_id=106317
Chief of Naval Operations, Admiral Richardson, stated in the forward he wrote for the third edition published in 2018 “I am sure that I am not alone when I say that my copy of 'Fleet Tactics' is one of the most consulted, most dog-eared, most underlined, most marked-up books in my library.”

To understand the fleet tactics framework it is necessary to discuss Hughes' "six crucial points about maritime warfare."²⁰ These six cornerstones are: 1) men matter most, 2) doctrine is the glue of tactics, 3) to know tactics, know technology, 4) the seat of purpose is on the land, 5) a ship's a fool to fight a fort, and 6) attack effectively first.²¹ Hughes states that the most important maxim is to attack effectively first²² and submarines are uniquely capable of this feat.

The fleet tactics framework consists of three dyadic elements: firepower and counterforce, scouting and anti-scouting, and command and control (C2) and command and control counter-measures (C2CM). Firepower is "the capacity to destroy the enemy's ability to apply force" while counterforce is the "capacity to reduce the effect of delivered firepower."²³ In the MAWS framework, firepower is available ASCM and counterforce is the amount of hard and soft kill measures available.²⁴ Scouting is the ability to "gather information by any and all means" and then transfer this information to the commander. The goal of anti-scouting is to "destroy, disrupt, or slow" enemy scouting.²⁵ In the MAWS construct scouting refers to tangible factors such as sensor range, type, and integration, and intangible factors like training and experience. Anti-scouting consists of the same intangible factors and active and passive denial measures, systems, and techniques.²⁶ C2 is both a process and a system. The command process "decides what is needed from forces," the control process transforms that need into action, and the C2 system is the equipment and

²⁰ Wayne P. Hughes, *Fleet Tactics and Coastal Combat*, 2nd ed. (Annapolis: Naval Institute Press, 2000), 23.

²¹ Hughes, *Fleet Tactics*, 17-40.

²² Hughes, *Fleet Tactics*, 40.

²³ Hughes, *Fleet Tactics*, 175.

²⁴ "Relative Combat Power Assessment" (PowerPoint Presentation, Naval War College, MAWS Department, Newport, RI, 7 December 2018).

²⁵ Hughes, *Fleet Tactics*, 175.

²⁶ "RCPA" (PowerPoint).

organizations that perform these processes.²⁷ C2CM are “steps to limit the enemy’s ability to decide (command) and disseminate decisions (control).”²⁸ In the MAWS construct C2 is the organization and its structure, leadership, training, and the like while C2CM are disruptive measures such as deception and jamming.²⁹

Before talking about the specifics of submarines and the fleet tactics framework, there must be a brief discussion of an important takeaway from the MAWS RCPA method. US surface ships carry significantly fewer ASCMs than ships of a peer competitor such as the Chinese People’s Liberation Army Navy (PLAN). Additionally, US ASCMs like the Harpoon anti-ship missile are shorter range than PLAN ASCMs such as the YJ-18.³⁰ Carrier-based aviation employing air-launched ASCMs adds to the OCP of surface forces, but getting within range of enemy forces can add significant risk to a high-value unit like an aircraft carrier. Finally, US ships would likely have to travel far from the area of hostilities to conduct an ASCM reload, making it difficult for a fleet to sustain offensive operations in a series of fleet engagements. Overall, what this means is that in a series of fleet engagements US surface and air forces are at a relative OCP disadvantage compared to peer competitors. Submarine combat power can help to overcome this disadvantage.

Examining the definitions of each of the fleet tactics elements and how they fit into the MAWS method, some apply to submarine employment more easily than others. Perhaps the most straightforward application of the fleet tactics framework to submarines is that of firepower. At present, the only maritime offensive power of US submarines is the MK 48

²⁷ Hughes, *Fleet Tactics*, 176.

²⁸ Ibid.

²⁹ “RCPA” (PowerPoint).

³⁰ Anders Corr, “China’s New Destroyer, The U.S. Navy’s Anti-Ship Missile Failure, And Preemption,” *Forbes*, 1 July, 2017, <https://www.forbes.com/sites/anderscorr/2017/07/01/chinas-new-destroyer-the-u-s-navys-anti-ship-missile-failure-and-preemption/#6d3ba1d2638f>

ADCAP torpedo. However, there is the potential that in the future submarines will regularly carry ASCMs. The first test of a submarine-launched Harpoon anti-ship missile in more than 20 years occurred in the summer of 2018, and there is the potential that the anti-ship Tomahawk variant, currently in development for surface ships, may be transferred to submarines.³¹ Despite these advances, this discussion will focus only on torpedoes, since a submarine-launched ASCM does not differ from a ship or air-launched ASCM where firepower is concerned.

If torpedoes are the only firepower, the question then becomes how to take a number of torpedoes and turn it into a usable understanding of OCP. For ASCMs, there needs to be a discussion of salvo size, how many missile hits represent a kill, and other such factors. However, for a submarine, much of that determination is not necessary. The “salvo” should only be considered one torpedo, based on current torpedo tactics and technology. Another assumption is that a submarine will engage one target at a time. Although it is possible to engage multiple targets, this conservative assumption takes into account the short ranges of torpedoes as compared to ASCMs, the targeting progress, and the fact that multiple targets likely will not be within torpedo range simultaneously. The final assumption is that it takes one torpedo to put a ship out of action. With these assumptions, one can then determine the OCP of a submarine by multiplying the number of torpedoes by a factor that accounts for target evasion and countermeasures as well as torpedo equipment failures. One can likely develop such a factor using Submarine Command Course (SCC) data on torpedo employment.

³¹ Paul McCleary, “Navy To Begin Arming Subs With Ship-Killer Missile,” *Breaking Defense*, 18 December, 2018, <https://breakingdefense.com/2018/12/navy-arms-subs-with-ship-killer-missile-harpoon/>

Counterforce does not apply as neatly to submarines. Submarines carry countermeasures meant to protect from enemy torpedoes. However, counting countermeasures and developing a “shot doctrine” would not be as useful as it is for surface ships. While the hard and soft kill measures of ASCM counterforce aim to destroy or disable incoming missiles, submarine countermeasures aim to jam or deceive incoming torpedoes, enabling the submarine to evade. A submarine’s best defense is its stealth, and remaining undetected should be considered a submarine’s counterforce. As long as a submarine is undetected, it has all the counterforce that it needs. If detected, a submarine has zero counterforce until it evades any weapons employed, hides, and then re-enters the required area. Therefore a submarine’s counterforce should be considered an element based more on time and space than on force.

Scouting is one of the areas in which submarines are weakest. This statement may seem counterintuitive given the fact that one of the primary missions of submarines in the post-Cold War era has been intelligence, surveillance, and reconnaissance (ISR). However, Hughes states that there are two parts to scouting: gathering information and then transferring that information to the commander.³² A submarine is uniquely capable of collecting data in areas where other platforms would not be able to. However, with current technologies, a submarine is relatively incapable of transferring information to an operational commander promptly without endangering itself. This problem only becomes more complicated when one considers the challenging anti-submarine warfare (ASW) and electronic warfare environment that would be present in a peer conflict. In a series of fleet engagements, the

³² Hughes, *Fleet Tactics*, 175.

submarine should only be counted on as a useful scouting element for long-term information, not for short-term actionable data such as passing target locations to other platforms.³³

When it comes to anti-scouting, submarines can provide some advantages. They are capable of jamming operations or other disruptions to enemy communications systems. As unmanned underwater and aerial vehicles continue to develop, this may become even more effective.³⁴ Other typical anti-scouting measures, such as passive denial measures like emissions control (EMCON), are standard operating procedure for submarines and apply more to the previous discussion on counterforce and remaining undetected than to anti-scouting. The best way that submarines can contribute to anti-scouting is to destroy enemy scouts - most importantly enemy submarines. In a peer conflict, enemy submarines will likely be an initial line of defense and may act as scouts for the rest of the enemy fleet. US submarines are the best platforms to conduct ASW and neutralize these threats to enable the fleet.

C2 may initially seem as if it is one of the areas where the submarine is weak due to communication abilities. However, such communication weaknesses produce a framework that lends itself to mission command. Mission command may seem hard to execute in the days of modern communications. But, this is not a new problem. For example, on the eve of WWII Admiral Ernest King had concerns about commanders stifling the initiative of

³³ Forest B. McLaughlin, "Undersea Communications Between Submarines and Unmanned Undersea Vehicles in a Command and Control Denied Environment," (research paper, Naval Postgraduate School, Operations Research Department, Monterey, CA, 2015), <https://apps.dtic.mil/dtic/tr/fulltext/u2/a620661.pdf> Currently submarines have to proceed to periscope depth to conduct communications. The referenced paper represents ongoing research that would use UUVs to communicate with submarines, enabling the submarine to transmit and receive communications while remaining deep. Such communication developments would make the submarine a more effective scouting asset.

³⁴ Brian Fung and Andrea Peterson, "America Uses Stealthy Submarines to Hack Other Countries' Systems," *Washington Post*, 29 July 2016, https://www.washingtonpost.com/news/the-switch/wp/2016/07/29/america-is-hacking-other-countries-with-stealthy-submarines/?noredirect=on&utm_term=.8215b7dca8e1

subordinates.³⁵ However, submarines make mission command a necessity. For this process to work effectively, a submarine commander must receive clear orders and the freedom to direct his tactical actions. This ability is something practiced in most peacetime submarine missions. Therefore, submarine communications and C2 should not be seen as a weakness but rather as a strength when operating in the probable communications denied environment of a potential future peer conflict.

The final element of this construct is C2CM, an area in which submarines are among the most capable platforms. A question often asked on submarine qualification boards is: How many submarines does it take to impact enemy operations? Junior sailors usually try to determine the number of submarines in the US Navy, or randomly guess. However, the answer they will inevitably arrive at (no doubt with some prodding) is that it takes one undetected submarine underway to impact enemy decision-making. This is not just a joke for qualification boards - it is a truth of modern maritime warfare. One of the goals of C2CM is to impact the way the enemy makes decisions, and this is an area in which submarines are nearly unmatched.

The conflict in the Falklands presents an example of how submarines impacted the decision-making processes of commanders at the highest levels. One UK submarine sank the Argentine cruiser General Belgrano which caused Argentine naval leaders to keep their navy

³⁵ Ernest J. King, "Exercise of Command - Excess of Detail in Orders and Instructions," message CINCLANT Serial 053 of January 21, 1941, https://upload.wikimedia.org/wikipedia/commons/1/19/Exercise_of_Command_-_Excess_of_Detail_in_Orders_and_Instructions.pdf

He was concerned by the tendency of commanders to tell their subordinates "'how' as well as 'what' to do to such an extent and in such detail that the 'custom of the service' has virtually become the antithesis of that essential element of command — 'initiative of the subordinate'."

in port for the remainder of the conflict.³⁶ One Argentine submarine was also able to impact British operations. Although this submarine was not successful tactically, it failed to score a hit in three separate attacks,³⁷ the impact it had on the operational employment of the British force is undeniable. The British were unable to strike the Argentine submarine even though they expended a great deal of ordnance and employed one aircraft carrier, eleven destroyers, six submarines, and over 25 helicopters for ASW.³⁸ Perhaps this idea is best understood as a sea-denial aspect of submarine operations or as a single submarine embodying elements of a fleet-in-being, threatening the enemy fleet by its mere existence. Regardless, the ability of submarines to impact enemy decision-making is a great contributor to C2CM and presents an opportunity for US operational leaders to gain the upper hand in a series of fleet engagements.

Fleet tactics and the MAWS RCPA method provide a way to understand the combat power of submarines in the context of a series of fleet-on-fleet engagements. The most important takeaways from this discussion are the contribution of the submarine to firepower and C2CM. Submarine offensive firepower presents a way to overcome the previously discussed ASCM deficiencies of surface and air forces in a series of fleet engagements. Potentially even more important than the contribution to firepower, submarines uniquely impact enemy decision-making through their presence or perceived presence. This impact on decision-making presents the operational commander with the opportunity to get inside the decision-making cycle of the enemy and make decisions faster and better, a marked advantage against a peer competitor who will likely have significant force advantages.

³⁶ Steven Harper, "Submarine Operations During the Falklands War" (research paper, US Naval War College, Joint Military Operations Department, Newport, RI, 1994), 12, <https://apps.dtic.mil/dtic/tr/fulltext/u2/a279554.pdf>

³⁷ Harper, "Falklands War," 10-11.

³⁸ Harper, "Falklands War," 18.

Counter-Argument

Some could argue that the current global security environment does not require submarines to become more integrated into the fleet at the operational level. After all, the United States is in an era of great power competition, not great power conflict. The US submarine force has not fired a torpedo in anger since WWII. However, submarines regularly conduct ISR missions around the world and have launched Tomahawk missiles at land targets multiple times, beginning in the Gulf War and most recently in April 2018 when USS JOHN WARNER (SSN 785) participated in strikes against Syrian chemical weapons facilities.³⁹ Additionally, the submarine force has already made changes in tactical training to prepare for potential peer conflicts. This tactical shift does not need to be accompanied by a change in operational understanding because submarines could quickly shift to wartime operations if necessary. Operational commanders should remain focused on the crucial missions that submarines currently perform rather than preparing for fleet engagements that may never happen. If hostilities with a peer competitor commence, operational commanders only need to designate appropriate waterspace and allow tactically proficient submarines to attack the enemy fleet.

Rebuttal

It is true that missions such as ISR and strike are vital to operational commanders and submarines will continue to perform such missions in an era of great power competition. However, these missions and preparations for fleet engagements with a peer competitor are not mutually exclusive. In concert with current operations, operational commanders must develop an understanding of how to employ submarines in a series of fleet engagements well

³⁹ Ben Werner, "USS John Warner is First Virginia-Class Attack Sub to Fire Missiles in Anger," *USNI News*, 16 April 2018, <https://news.usni.org/2018/04/16/32965>

before conflict breaks out. The “pace of modern military operations” would not provide the opportunity for such learning to occur during a conflict.⁴⁰ Additionally, although the submarine force may quickly transition to wartime operations due to changes in tactical training, tactically proficient submarines will not be able to overcome poor operational understanding of submarine employment in fleet engagements. Operational leaders must coherently integrate submarine tactical actions to have the desired effects. Even the most tactically excellent submarine cannot contribute to a series of fleet engagements if the operational commander does not employ it effectively.

Conclusions and Recommendations

The United States has entered an era of great power competition, and this requires that submarines become more operationally integrated into the fleet. The discussion of historical examples and OPART concluded that submarines provide advantages in maneuver, offensive power, and surprise. The fleet tactics framework determined that submarines provide the fleet with a significant increase in firepower and C2CM capabilities. Therefore submarines give operational commanders a capability to access denied areas and provide an ability to overcome the space-force advantage that a peer competitor will have in a potential future conflict. It is not enough that the submarine force adapts tactically to peer challenges; the operational understanding of submarines must change as well to ensure that submarines are employed effectively.

These conclusions about the operational value of submarines lead to three recommendations for submarine employment in a series of fleet engagements in an era of great power competition. First, submarines should be the first asset employed in a series of

⁴⁰ Dobbs, “Submariners Must Prepare for War.”

fleet engagements. Submarines positioned within areas the enemy has denied to other forces can strike the most capable enemy ships, taking away enemy OCP and DCP at the very beginning of a series of engagements and helping to overcome identified US OCP shortfalls. Submarines are the most capable platform to attack effectively first, and operational commanders must use this fact to their advantage. Second, after the initial engagements have taken place, submarines should be used to execute operational fires against the enemy fleet in support of a maritime campaign. Submarines can attrite enemy naval forces, striking at targets of opportunity and restricting enemy movements. Submarine fires can also be used to control areas or deny access to enemy forces, enabling the rest of the fleet to operate closer to the enemy. Finally, operational commanders must consider submarines as a contributing factor to information operations and non-kinetic fires. Submarines are an ideal platform to conduct C2CM, and this capability must be understood and leveraged at the operational level to have the most significant impact on enemy decision-making. This enhanced understanding of the operational value of submarines will help the United States to be victorious in the event of a series of fleet engagements with a peer competitor.

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