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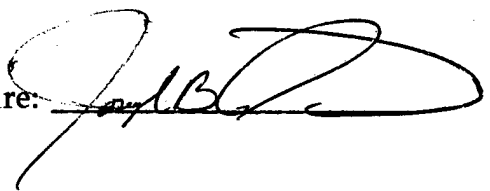
OPERATIONAL ART AND THE SUBMARINE:
DOES THE ENEMY UNDERSTAND IT BETTER?

by

LCDR Joseph B. Pellissier, USN

A paper submitted to the Faculty of the Naval War College in partial satisfaction of
the requirements of the Department Of 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 for

OPERATIONAL ART AND THE SUBMARINE:
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Many people have written about how the submarine is an indispensable operational tool for the Commander-in-Chief (CINC) due to its multifunctional capability. While the submarine community lobbies in a parochial fashion about the indispensability of the platform, the truth of how the submarine provides significant operational impact in the purest sense of operational art is somewhat lost. But the Third World has not yet committed this error. This essay demonstrates historically how the concepts of operational art are inherent in the platform through the manipulation of the operational factors of space, time and force. These factors allow the submarine, a tactical platform, to have significant operational impact and influence. Third World countries could feasibly embrace these essential elements and theoretically garnish the decided advantage initially in a littoral conflict. The essay concludes with discussion of what must be done to neutralize this threat within the same operational art framework before one can even consider the majority of tactical roles U. S. submarines are often touted to be capable of.

In these days of shrinking defense budgets and military downsizing, service communities appear at times to be getting more and more parochial under the guise of becoming more joint. Each person, by demonstrating that his community can do much more with less resources available, hopes to forward the versatility and indispensability of his particular platforms and systems. In doing so, a service segment hopes to seize the appropriate share of monies to keep their communities and their ideals alive. Branching out into a variety of missions and areas seems like it is a plus for the community, the joint services and the United States military in general. But does additional tasking with reduced resources actually make good, common sense?

For many years the United States submarine forces enjoyed a comfortable monopoly on their segment of the available resources. Tasked as the primary weapons platform to detect, engage and destroy the Soviet submarine threat, the U. S. submarine lived and flourished in a world cloaked by secrecy. For decades, no one outside of the submarine elite fully understood or appreciated the power and force that this platform brought to the purview of military capability. It performed its secret functions and missions while engaged in anything but a cold war with its Russian counterpart. The submarine community enjoyed this style of life: hidden from the scrutiny not only of the enemy, but of the rest of its own military as well.

Upon the termination of the Cold War and the demise of the Soviet superpower, the submarine force was apparently left out in the cold, or so its proponents thought. Without a strong purpose and amidst tough questions about its future role in the military, the submarine community scrambled to find a new identity to fit into the realm of the emerging military genre of jointness and functionality. It appeared relatively obvious what the force had to do. It had to unshroud this platform that, for decades, had been hidden from prominent view by clandestine operations. Proponents needed to create new missions that its vessel was capable of accomplishing which fit smartly into the ideals of perceived military needs. Thus, the community desired to demonstrate to the public and the government the value of this the submarine by making it multifaceted and attractive to retain.

For the submariner, this was rather quite an easy feat to accomplish. After all, the submarine platform carries unique capabilities that make it an ideal platform for a variety of tasks. It is, without a doubt, one of the most capable indication and warning

(I&W) platforms possessed by the military. It represents premier undersea warfare (USW) attributes. It is a natural combat search and rescue (CSAR) vessel for retrieval of personnel in tenuous wartime situations. The submarine is a favored delivery vehicle for the insertion and retraction of special forces. It carries a hidden additional strike capability available to any Commander-in-Chief's (CINC's) theater of operations. It is the most feared predator in the entire history of surface warfare. The submarine seemingly stands ready to support any mission given to it by higher authority. And for years all these positive attributes were suppressed to the exclusion of its main focus: anti-submarine warfare (ASW). Did the United States military miss the mark on the proper utilization of this weapon system in the past?

That could hardly be the case, because there is an implicit danger in all of this versatility. The infatuation of multitasking this platform could ultimately degrade the goals of the military in general and the Navy in particular. While it is absolutely true that the submarine is perfectly able to perform all of the above tasks as assigned, to focus exclusively on this aspect is to lose sight of the much larger picture. For all the missions listed above are tactical in nature. **Yet, it has been aptly demonstrated throughout the course of history that the submarine, while itself a tactical platform, can have significant operational consequences when its unique abilities are fully understood and appreciated. It is this operational significance that must be fully utilized and exploited to derive the complete value of this platform to the military.** Tactical gains are diminutive when compared to the true operational impact the submarine can provide. This operational impact is exactly what the CINC desires, and it is this the submarine force is truly obliged to give.

What is the danger in straying from the operational path? As will be demonstrated, the concepts of operational art and how the submarine platform affects them is profound yet elemental. **While the United States submarine force appears to be unconsciously walking away from these inherent concepts in pursuit of platform diversity, there exists a group of nations that apparently fully understand and appreciate the power and simplicity the submarine holds in the realm of operational art. They are called Third World countries.** They have seen and embraced the importance of the submarine and have selected to add it to their arsenals. One can count on the fact these

countries fully intend to utilize the leverage it represents in operational terms, significantly impacting a future potential conflict with any adversary, including the United States. Purely and simply, they stand ready to attempt to best opponents at the operational game. Should they be taken seriously?

Of Operational Factors

In order to comprehend how any nation can benefit from this significant leverage, one must first understand how the submarine platform came to possess such inherent operational capabilities. The submarine, because of its unique properties, has a tremendous impact on the operational factors of space, time and force. When the submarine influences one of these operational factors, it carries a significant indirect effect on the others as well. The total effect on each of these operational factors, in turn, multiplies and enhances the submarine's devastating power. This dual escalation effect climaxes, producing a nonpareil situation which lifts this platform out of the realm of tactical impact and into the realm of operational impact. The submarine derives all of its influence from its effect on the combination of these factors alone and the subsequent powers derived from them. Anything that the submarine brings to the operational stage is innately rooted in the synergy it has with the operational factors. Current popular military terms such as asymmetry and maneuver warfare are not unique concepts at all; rather, they are the product of the submarine's ability to manipulate and draw from the operational factors of space, time and force.

The Factor Space

Perhaps the largest effect the submarine has on any of the three factors is its impact on the factor space. It is within the factor space that the submarine derives most of its operational influence and power. With a submarine, a whole new dimension of space is added to any theater of operations or site of potential conflict: the undersea dimension in which it operates. The very operating realm of a submarine creates much more physical space for the adversary to deal with. Detection of a submarine within this dimension is a limited proposition. Successfully engaging an adversarial submarine in this realm adds to the degree of difficulty even if the detection problem is solved. Since this additional space is incredibly difficult for

conventional surface forces to attack or defend, it plays to the advantage of the submarine. It is this control of the undersea dimension by the submarine and the inherent difficulty in dealing with it that gives this platform its most prized possession: the concept of stealth. Stealth is the center of successful submarine operations. It is bestowed upon this platform through the utilization of additional space in the form of the undersea dimension. It is an avenue of space the opposition must master and reclaim if the operational advantage posed by the submarine is to be neutralized and defeated.

Control of the undersea dimension and the stealth afforded to the submarine as a result has additional profound influences upon the factor space. Not only is there a physical expansion via the entire undersea dimension; the implied threat posed by the stealth of the submarine serves to expand the surface dimensional space as well. The mere suggestion of the possibility of a submarine operating in the same area is more than enough to keep an opponent concerned and occupied as to the protection of his own forces. The adversary must be able to either meet the challenge head on (already alluded to as a difficult proposition) or yield operational control of significant space in deference to the well-being of his forces. Thus, because of the unpredictability and lethality of this platform, an operational commander has a wide latitude of options on using it to precisely shape the space of the theater to his decided advantage. In World War I, the Grand Fleet under Admiral Jellicoe, gave up control of a significant portion of the North Sea because of the operational threat of the German submarines posed along the northern German coastline and the southern British Isles.¹ Hence, through stealth and lethality, the submarine shaped the battlespace. And this occurred at a time when this platform had not even achieved sustained full credibility as a weapons system yet!

The submarine is not just limited to the control of undersea space or even the immediate surface area of the theater. The threat posed by its control of the factor space combines with the ability of the submarine to forward deploy undetected, yielding yet another level of space control: the ability to influence space outside the theater of operations. This aspect of control gives the submarine the added operational functions of reach and maneuver. Being in total control of the undersea

¹ Vice Admiral Sir Arthur Hezlet, RN, *The Submarine and Sea Power*, (New York, Stein and Day, 1967), 72.

dimension, the submarine possesses virtually unlimited freedom of action. It is thus able to not only control vast amounts of space on the surface, it is able to do so without attendant protection and wherever it chooses to do so. Given unlimited range, the submarine is able to deploy solo and bring this incredible influence to places distant from its base of operations. In doing so, it thereby expands the sphere of influence of the proponent and severely curtails the space of actions outside the immediate theater of operations for the opponent. Thus, through the factor space, the submarine gives even more control of larger tracts by giving the commander operational reach and maneuverability.

In World War II, the British and Americans were faced with just such a dilemma brought to them courtesy of the German U-boats. Large tracts of the North Atlantic were added to German wolfpack territory as the crusade against Allied merchant shipping took its near-fatal toll. The Allies were forced by the aggressive German submarine attack to yield more and more space to the wolfpacks as safer shipping lanes were sought. When Allied merchant shipping dried up for the Germans in one sector, that sector would be considered secure and the U-boats were directed to another part of the North Atlantic in a continuous search. The Germans dictated what shape the area of the North Atlantic took singlehandedly through the use of their submarines.²

With operational reach and maneuver the commander can utilize the submarine to shape the space as close as his shoreline or as distant as the range of the submarine itself. The submarine can maneuver to attack and sever enemy lines of operation without any prior warning. A navy doesn't need to establish prior conventional sea control for a submarine to have a profound effect upon the shape of the theater. Rather, the submarine itself can dictate control of any space almost as instantaneously as it reveals (or sometimes implies) its presence within that space.

During the Falkland crisis, Argentina felt this effect with the sinking of the General Belgrano. Argentina took great care in utilizing its maritime assets to attempt to influence the British task force present around the islands. Despite the fact that the British strove to shape the space around the Falklands by declaring a total exclusion

² Grand Admiral Karl Doenitz, *Memoirs: Ten Years and Twenty Days*, (Annapolis, MD: Naval Institute Press, 1959), 19-20.

zone (TEZ), Argentina tested the space by a naval show of force. However, on May 2, 1982 the Argentine heavy cruiser General Belgrano was tracked and subsequently sunk by the British submarine HMS Conqueror. The end result: the Argentine Navy, with no feasible way to combat the threat of the British nuclear submarine, headed back for coastal waters and never again became a factor in the conflict. One submarine with one decisive attack had operationally impacted the factor of space for the rest of the war. The TEZ and the Falkland theater of operations had been secured for the British.³

Never in the history of military operations has a tactical unit, aside from the airplane, had such a profound operational impact on the factor space. Like an airplane, it expands the realm of space to include a new dimension. However, unlike the airplane, its unique control of the undersea dimension gives the submarine its primary weapon: stealth. And through stealth, the submarine's control of the factor space escalates by posing an unknown, lethal avenue of attack. Until the undersea realm is controlled by its adversary, the submarine as a platform will always possess an incredible ability to control the enemy through its manipulation of space.

The Factor Time

By profoundly affecting the factor space via use of the undersea dimension, the submarine also has very pronounced effects on the factor of time. The mere suggestion of the presence or the deployment of a submarine by a proponent can spell serious time compression for the opponent. Before a submarine enters the immediate theater of operations and begin to significantly affect the space, the opposition must either act rapidly to counter the known effects the submarine will impart, or quickly accomplish the actions desired before being forced to abdicate the area. Time for action thus becomes limited to the transit time of the submarine, whether or not the submarine was actually dispatched. One is never quite sure if and when the predator is actually in the vicinity.

The Argentines once again found themselves on the wrong end of the manipulation of operational factors in the Falklands conflict. The Argentines had an initial plan to launch their invasion immediately before the onset of winter, in order to

³ Max Hastings and Simon Jenkins, *The Battle for the Falklands*, (New York: W. W. Norton & Co., 1984), 148-150.

make an immediate counter invasion by the British difficult, if not impossible. The winter would thus give Argentina the additional time required to bolster defenses and establish themselves to best repel a subsequent British attack the following spring. However, the British sent ahead the nuclear submarine HMS Spartan, and announced its deployment to the Argentines.⁴ The effect on Argentina was stunning; perceiving that the presence of the submarine would thwart their control of the battlespace, the Argentines opted to accomplish the invasion of the Falklands before the submarine's arrival. Success in the short term proved disastrous in the long run, however. The Argentines, pressed for time, were unable to fortify themselves on the island prior to the follow-on British invasion. Use of the submarine had compressed the factor time, disrupted the Argentine game plan and operationally impacted the ultimate outcome of the war.

A submarine able to operate undetected in a forward deployed hostile area further compresses the time for the opponent by providing the proponent commander immediate response options to a potential crisis. No longer is an adversary even given adequate time to react; the submarine can have immediate impact on the situation at hand. The invasion of France by the Germans in World War II allowed the U-boats operational bases on the French seaboard and extended the operational reach of the submarine across the entire North Atlantic. This, in turn, allowed sustained deployments and operations of the U-boats consistently in this region. With continuous presence, the factor time became a disadvantage to the Allied forces. Convoys were almost assuredly to run into attacks without interruption. Intelligence efforts had to be stepped up enormously every time the German submarine communications code was changed, as intelligence was the only true counter to the U-boat threat. The longer counter efforts took, the more damage was heaped upon the Allies, and the closer the end of the war drew for them. Time, which meant everything in this conflict, was totally dictated by German U-boat operations.

Likewise, the ability of the American submarines in the Pacific to be in a consistent, forward deployed status significantly impacted the originally devised

⁴ Max Hastings and Simon Jenkins, *The Battle for the Falklands*, (New York: W. W. Norton & Co., 1984), 60-61.

Japanese war plan.⁵ In no way, shape or form did the Japanese account for the severe compression of time and subsequent action posed by the immediate presence and threat of the American submarines in their own backyard. These submarines owe their remarkable success in large part to the consistent immediacy of the threat they represented through the use of forward deployment and the successful manipulation of factor time.

The combination of forward deployment capability and nuclear power in a submarine present the ultimate package in operational reach. Besides having a profound impact on factor space, operational reach due to speed of maneuver produces a far reaching impact on factor time, providing little or no time for an adversary to react before significant force presence is upon him. This same effect does not require nuclear power if control of the littoral is the primary concern of the proponent.

Because of its inherent dominance of the undersea dimension and the resultant stealth afforded to it, the submarine presents little or no time for reaction between its detection and attack on the enemy. Although a specific attack is tactical in nature, the clandestine method of detection and attack forces operational considerations on the adversary as to protection and employment of his forces. With absolutely no warning time available, the opposing commander must make significant operational decisions as to when and how to best position his forces to eliminate or mitigate the threat. Even tactical time can have operational impact as far as this platform is concerned.

There are several lesser considerations concerning submarine operations and the impact of factor time. Since a submarine can operate as an independent entity, it loses a lot of baggage that could easily translate into operational time constraints which plague traditional fighting forces and platforms. Since this platform represents a force of one unit, it gives away no advantage to the opposition by having to regenerate or reconstitute. If acting independently, it need not be tied to any timing significance associated with sequencing or synchronization of forces. It is in no rush to act, as it fully controls the dimension within which it is operating.

⁵Clay Blair, *Silent Victory: The U. S. Submarine War Against Japan*, (New York: J. B. Lippincott Co., 1975),121.

The Factor Force

Whereas the submarine has the largest effect on the factor space, it derives its greatest power from the factor force. Because of its profound impact on the factors time and space, the submarine becomes the ultimate force multiplier. One or two well-placed, well-utilized submarine platforms create a huge psychological factor for the opposition that result in adversarial commanders being forced to proceed with due caution. As a result, major enemy force deployments and/or placements can be significantly impacted by the location of these predators of the deep. Thus, not only does the submarine control space and time, but as a direct result of these influences, impacts enemy force location and number as well.

Almost every significant example in the history of submarine operations brings this point to the fore. Recall in World War I that Jellicoe's forces were taken out of action in the southern part of the North Sea by a few operating German submarines. In World War II a handful of German submarines at any one time was able to manipulate the entire force structure of the North Atlantic. Also in World War II two American submarines did their part to foil an entire Japanese battle plan for the defense of the Phillipine Islands.⁶

When considering the concept of force ratios, the submarine platform stands conventional wisdom on its ear. The element of force ratio (having sufficient forces per given unit space to constitute a significant advantage within that space) is normally considered key in the overall assessment of the factor force. By being a true force multiplier, however, the submarine represents a way to negate any advantages force ratios may bring to an enemy through the use of a solitary platform. The combinations of stealth and lethality, of maneuver and firepower unite to give the submarine overwhelmingly superior odds against larger conventional maritime forces. In World War I, the number of maritime vessels sunk or placed out of action by a single American or German submarine was easily 20:1 (in one particular period the German U-boat campaign took that ratio up to an astounding 167:1).⁷ During the battle of the Falklands, the entire Argentine Navy was effectively neutralized by the actions of a

⁶ Edwin P. Hoyt, *Submarines at War: The History of the American Silent Service*, (New York: Stein and Day, 1983), 190.

⁷ Vice Admiral Sir Arthur Hezlet, RN, *The Submarine and Sea Power*, (New York, Stein and Day, 1967), 89-92.

single submarine.

The utilization of this platform not only has direct influences on opposing forces, but indirect influences as well. In the face of the enormous problem posed by the submarine threat, an opponent must launch a tremendous effort in order to attempt to neutralize it. This results in the expenditure of more even more forces and more resources than those already directly affected, thereby escalating the effect of force multiplication and profoundly shaping the factor force to the proponent's added advantage. For every one submarine sailor, an opponent could easily take up to 100 of his military personnel to combat and solve the dilemma posed by the submarine.⁸ Additional forces are required to play an active ASW role. Additional personnel are required for the intelligence effort needed to successfully start engaging the threat. Forces must now be vectored off to protect merchant shipping. All of these represent assets which must be diverted from the war effort in the traditional sense to attempt to offset the operational significance represented by the submarine. The British and Americans were faced with these precise problems during World War II.

Besides having the most profound adverse impact on opposing forces, the submarine brings added lesser dimensions within the realm of the factor force. Because of its sheer dominance of the entire undersea dimension, the submarine carries unprecedented force mobility to the maritime arena. Until she can be detected and attacked with consistency and certainty, the submarine will be able to achieve the most advantageous positions, thereby selectively bringing force to bear at a place of its choosing. It represents the ultimate concentration of force at the maritime decisive points. A submarine controlling a strait or choke point has the utmost operational impact within a theater of operations. A submarine operating independently requires little force sustainment for prolonged operations, as it is a self-contained unit. Its clandestine operation and rapidity of attack have a significant impact upon the opposing forces' will. It comes fully combat ready, able to be forward deployed in a state of full readiness. Thus, it sends immediate devastating force to the enemy. Its mere presence is quite a credible force deterrent.

⁸ Montgomery C. Meigs, *Slide Rules and Submarines: American Scientists and Subsurface Warfare in World War II*, (Washington, D.C.: National Defense University Press, 1990), 83-96.

The Combination of Factors

Therefore, it can easily be seen that the submarine, although a tactical weapons platform, has pronounced operational effects that it achieves through significant impact on the factors of space, time and force. These factors are not only affected independently, but also through their manipulation affect each other, forming a synergy which serves to amplify the influence the submarine represents. In controlling and shaping space, the submarine also affects the time required for enemy action, reaction and decision (**space-time**). In dominating the space of an area or theater of operations, the submarine tends to neutralize opposing forces, rendering them insignificant in the conflict at hand (**space-force**). By being the premier force multiplier, the submarine influences an opponent to react and decide faster than he may be accustomed to, forcing ill-planned decisions and ill-conceived actions (**force-time**). Ultimately, the submarine platform controls the undersea dimension, expanding space and creating stealth in the process. This stealth allows the submarine freedom of operation and maneuver, bringing rapidity of action and surprise to the adversary, disrupting his timeline. The adversary, in awe of the influence presented by the submarine, must allocate his forces to best protect and address the situation (**space-time-force**). Hence, the submarine, by virtue of none other than the inherent abilities it possesses, becomes of tremendous operational significance that cannot and should not be taken lightly.

Of Tactical vs. Operational

If the submarine is such an operationally significant platform in and of itself, why would one desire to develop multiple tactical uses for it? While broadening the scope of a submarine's tactical capabilities will indeed provide some decided advantages in certain situations, this may very well happen at the expense of forsaking its operational impact. To apply too much emphasis in multifaceting and multitasking this tactical platform is to diminish the operational benefits that can be reaped from proper application of its inherent capabilities. This misapplication, while perhaps providing short-term tactical gains can eventually lead to long-term operational stagnation. The true value of the platform lies in its potential operational impact; to abdicate this

advantage would be an irresponsible oversight on the part of the operational commander.

Japanese submarine operations in World War II are a prime example of the trouble in this versatile yet tactical philosophy. Following the demonstration of the potential of the submarine given by German operations in World War I, navies of the world rushed to acquire this relatively "new" platform and add it to their arsenals. The United States and Japan, in particular, embraced this new weapons system and decided to attempt to make the most of it. Any follow-on war was destined to be as much a certification of submarine effectiveness as it was about huge conventional land battle.

Certainly both the Germans and Americans took submarine operational capabilities to new heights. The Germans dominated the North Atlantic with their U-boats. The Americans used their submarines to key operational effectiveness in the war in the Pacific. But what about the Japanese? The Japanese in World War II possessed very capable, top of the line submarines and had the undisputed top flight torpedo of the entire war. How is it possible that this nation's exploits in submarine warfare didn't rival those of Germany and the United States?

The reason is quite simple; Japan did not comprehend the operational impact that a submarine brought to the theater as a space shaper, time compressor and force multiplier. Japan did not understand how to utilize the submarine's inherent capabilities to provide significant operational outcomes through the manipulation of operational factors. Japan instead tried to embellish what they perceived to be the significance of the submarine by attempting to make the platform tactically multifaceted. This they did successfully, and in doing so they completely inhibited the submarine from becoming a major operational player in their plans! Although it was quite interesting to note that Japanese submarines were outfitted to move combat troops, act as tankers to refuel other submarines and ships and even launch aircraft, one has to ask how any of this helped them to win the war. The answer is, it didn't. Japan never afforded itself the opportunity to properly utilize the submarine to its fullest operational extent. Through this omission, the war effort was lost.⁹

Tactical multifaceting, which has its own time and place for effectiveness, is not

⁹ Dorr Carpenter and Norman Polmar, *Submarines of the Imperial Japanese Navy* (Annapolis, MD: 1986), 9-11.

the true concern in and of itself. The true concern is when this concept takes primacy over the concept of operational art. When one does this, he dismisses or forgets what history has to offer about the distinct role of the submarine in the realm of operational warfare. There are no new revelations or revolutions in warfighting here; there are merely just the intrinsic concepts of the submarine 's impact on operational art embodied through its distinctive effect on and synergy with the operational factors. Those who fully grasp these principles and adhere to them will enable the submarine to realize its full and true operational potential.

Of Third World Exploitation

Rest assured, every Third World country that has an interest enough in submarines to procure them for its arsenal probably understands these concepts quite well. That interest is the purest interest in the operational capabilities of the platform. These countries could care little about enhancing the tactical abilities the submarine could potentially possess. They know full well that sheer possession of the platform gives them operational power. They are well aware that successful employment of the platform escalates that power tremendously. With the small forces these countries inherently possess, they need that operational power to dominate space against their peers, that equalizer to level the playing field against larger potential adversaries.

The Falkland Island conflict has been portrayed from the British submarine point of view to be a stunning example of the manipulation by the submarine platform on the various operational factors. However, the opposing side in that conflict has a very interesting, albeit hardly known submarine experience of its own. The story of the San Luis, an Argentine diesel submarine, punctuates the point that this platform carries with it the same operational impact no matter what maritime force possesses it.

During the course of the Falklands conflict, the San Luis patrolled the TEZ seeking an opportunity to provide operational impact. Not given very much credibility by the British, she was hardly worth troubling over. After all, the British certainly didn't think she could operate effectively at such a distance from her own coastline, much less penetrate the task force! But she did! Three times she was able to slip unmolested into the middle of the battle group. Three times she was able to launch torpedoes undetected. By right, she should have sunk three ships, save for one

problem; on all three occasions the torpedoes apparently failed to explode.¹⁰ Later, the Argentine government was to discover that an operator error had occurred with all three torpedoes. At war's end, the German torpedo manufacturers joined together with the Argentine navy and, after pinpointing the problem, successfully demonstrated the effectiveness of their weapon.

The difference in the outcome of this war rested squarely on the shoulders of the Argentine submarine force. Argentina was one explosion away from seizing the operational advantage. Had their training on the German torpedo been more complete, the war would have taken on a much different complexion altogether. Had the San Luis been able to sink just one of those ships, Britain would have faced some serious issues regarding their protection and employment of its maritime forces. San Luis could have singlehandedly changed the space of the theater. She could have become a credible force multiplier. She would have radically altered British plans and timelines. She just required the credibility implicit in one successful explosion. A Third World power nearly dictated operations to a superior maritime power, all through the operational significance of the submarine platform.

If Argentina, a rudimentary submarine power, can come so close to achieving operational effectiveness through the use of this platform, imagine what a Third World country well-schooled in the employment of submarines, such as India, can actually accomplish. If these same Third World countries fully understand and appreciate what the submarine can offer their military by way of operational impact, it represents a most credible and rather powerful threat that should not be taken lightly and cannot be dismissed.

Of Operational Dominance

For decades, the United States submarine force was embroiled in anything but a battle for undersea control with their Soviet counterparts. The stake in that game was blue water dominance by a world superpower. During that period of the Cold War the United States recognized the operational significance of the submarine. It had

¹⁰ James Fitzgerald, *There is a Sub Threat*, U. S. Naval Institute Proceedings, August 1990, 57-63.

tremendous impact on controlling space. The submarine operated under the time-critical significance of forward deployment. It contained speed and power of extended operational reach and projected the necessary effect of force multiplication. This is precisely why the submarine was the platform of choice in this conflict. It is perhaps the primary reason why the Cold War was won.

The demise of the Soviet superpower left the United States searching for the next potential adversary. While the specific opponent remains a mystery in most respects, there seems to be little doubt amongst maritime entities where the next significant theater will occur for the navy: off the coastline of a Third world country, in what is now popularly termed "littoral waters". Every objective the military undertakes is geared towards a confrontation of this nature. It is precisely in this light that the submarine force has opted, like many other communities, to demonstrate its usefulness through versatility. The littoral arena will bring with it many problems which need to be addressed. Many specific missions will have to be accomplished in order to determine success in this environment. Wouldn't it be wonderful if the submarine could do as many of them as possible? Then the platform could be advertised as the premier system for the littoral area.

It is precisely here that the danger begins to emerge.

From an undersea perspective, fighting in the littoral will be the parallel of the contest for Cold War blue water control. For indeed, the littoral undersea warfare environment closely resembles that of the blue water one. Any navy should be looking to gain dominance through intelligent use of operational art, except it will occur in a significantly smaller and perhaps better defined space. The manipulation of operational factors will be key. The adversary, who will attempt this control in his local waters, doesn't require the endurance and speed of nuclear power. He will be more familiar with and already deployed in the environment. He will have a vested interest in maximizing the advantages of a force multiplier. The problem, though of a smaller scale, is incrementally more difficult as a result.

In the face of those odds, now consider what will motivate such an opponent. He is looking to use the factors of space, time and force to his advantage via the operation of his submarine. Whether or not he initially has credibility for this is immaterial. Given little attention, he will subsequently achieve credibility when he successfully attacks the first ship in the maritime theater. Thus, he will be able to

manipulate the operational factors at precisely the right time to prove the submarine as a long term operational threat. Once this happens, the operational impact of his submarine force is solidified and can be used to the utmost advantage against a larger military power. The bigger adversary is now pressed for time, must expend a tremendous effort and amount of force to neutralize the threat and must decide if and when to yield control of space to gain advantage or protection. The political will of the Goliath may very well be broken. In short, the more significant military power could become instantaneously subservient to the lesser, purely due to the latter's superior application of operational art.

The time to react is not when Third World credibility is finally proven. That would obviously be too little too late. The action must be precursory. To neutralize the effect of the adversary's submarine operational impact, one must ensure that its credibility is never gained to begin with. Therefore, a preemptive attack on this credibility must be launched to ensure that this credibility, and the operational significance that accompanies it, is never achieved. The United States submarine force, as possessor of the most credible submarine fleet in the world, is poised to ensure this happens. By utilizing this already gained and sustained credibility, the U.S. must consciously shape and manipulate the operational factors as it desires to prevent others from gaining such an advantage. But this action to seize the credibility from other potential adversaries must be immediately taken; otherwise the absolute monopoly presently held on operational art will be sacrificed.

There are those who would argue that the enemy diesel submarine problem isn't significant or difficult and would best be handled by an asymmetrical ASW effort launched against the threat platform. Thus, friendly submarines would be free to engage in an array of tactical missions dictated by the needs of the CINC. While this, at the outset, might appear to be a most formidable solution, it contains three inherent drawbacks: 1) As already proven, operational art is an equal opportunity method that any credible submarine can effect 2) In the eyes of the adversary, the United States has not proven a credible ASW effort sans the use of its submarines and 3) Even if the former were true, the deep desire to make his submarine the true force multiplier and operational impactor will drive a Third World opponent to believe at the outset in the invulnerability of this platform. These three factors combine to dictate a rather ominous conclusion: in the face of an asymmetrical threat a Third World submarine will

probably not be deterred in its quest to garnish its own credibility and bring operational impact to the conflict via sinking an opponent's maritime platform. It will rely on its perceived dominance of the undersea dimension to look for just such an opportunity. It will not be denied by conventional forces. It is probably the only real chance at victory a Third World entity possesses.

Thus, to neutralize the threat and to wrest the credibility from the enemy platform, one must take away its dominance of the undersea dimension. There must exist in this realm a player of equal or greater magnitude to establish and maintain control of the undersea littoral against the unseen adversary. Of course, that dominance of the undersea dimension must come from another submarine.

Nothing provides a more credible threat in the role of ASW than the submarine itself. To deny this fact would be to throw out forty years of Cold War history. It was decided at the beginnings of the Cold War that the submarine was the optimal platform for the operational control of the blue water theater primarily by being the premier ASW platform against the opposition's submarine threat. This was decided because it was viewed that the opposition's submarines had some credibility in being able to operationally impact situations. Yet, in a littoral struggle for control against a Third World enemy, which by all measures is similar but more difficult than the blue water struggle, the United States seems willing to abandon all the lessons and philosophies of the past solely based on a perceived lack of credibility. It just doesn't make sense.

The Soviets were always given credibility in their submarine operations even after it was discovered that a decided acoustic advantage existed against them. In the littoral sense, a lack of credibility is being attributed to a diesel submarine that, by all arguments, is of equal or better acoustic parity to that of United States submarines. The methods of dealing with this situation should be closely aligned with how the Soviet threat was successfully dealt with: utilizing the submarine platform as the optimum operational statement by exploiting its dominance of the undersea domain.

Absolute control of the undersea dimension, the follow-on arresting of credibility from potential enemy submarines and the subsequent neutralization of the adversary's submarine threat are of the utmost importance for establishing dominance in the littorals. The only credible threat that the United States brings to the table in an enemy submariner's eyes is its own submarine. It carries many decades of proven ASW experience and success. It will certainly be the only guaranteed influential factor in the

enemy's submarine employment plan. Thus, the submarine must first and foremost be utilized to negate the enemy's submarine threat through undersea dominance. Operational control must be established over the theater by underwater control and the inherent operational influence it brings as a result. This control must never be yielded to the enemy; but this is precisely the risk when the operational influence of a submarine is sacrificed for tactical advantages.

Hence, the role of the United States submarine force should not be initially concentrated on multitasking, but rather should be focused on an area that it has always been intimately familiar with; operational dominance through effective undersea and surface warfare. Before any other tasking takes place, the United States must ensure that it is utilizing the submarine to enter the theater first and shape the fight through the its superior manipulation of the factors space, force and time.

Once dominance has been established, it must then be maintained. Control of the operational factors of space, force and time will remain with the submarine as long as the submarine remains a credible force to project this influence. U. S. submarines should have little problem in this regard once credibility is seized from the adversary. The battlespace should then be ready for a follow-on application of the multifaceted tactical firepower the submarine can bring to the theater. But an eye should always be kept to maintaining the advantage over the manipulation of operational art. One must never forsake a continuous watch to ensure that an opponent's submarine can never capitalize on any advantage in this regard. This dictates the true priority of mission for the submarine element; first and foremost it must always dictate operational significance, then and only then can it accomplish its myriad of tactical missions important to the objectives at hand.

Conclusion

One can never walk away from what history has to reveal. The submarine holds more operational significance than any other weapons platform in the history of modern warfare. It derives all of its power from and, in turn, has a direct influence on the operational factors of space, force and time. Any advantages the submarine has stems directly from the interaction it has with these factors. And most certainly, as a result of the synergy with these operational factors, the submarine, as a tactical

platform, can have pronounced operational consequences in a particular theater of operations.

Neglecting these concepts can carry significant consequences for the operational commander. This shortsightedness will result in the inability to maximize the resources at his disposal. It would be unforgivable if a platform that could be used with significant operational success was relegated to a lesser tactical role simply due to the disregard of these capabilities. Focusing on the myriad of tactical tasks a submarine can accomplish at the expense of the bigger operational picture is precisely how this will occur.

But, perhaps more importantly, not recognizing there are other nations out there willing to use the submarine in its proper operational context is an even more significant oversight. The double effect of mitigating the operational role of U. S. submarines and ignoring the operational significance of Third World submarines is a recipe for impending disaster. It is only a matter of time before control of operational art is seized by an adversary to the detriment of a former superpower.

The submarine represents a crowning achievement in the execution of operational influence. The role of the United States submarine force must always be centered around the dominance in operational art the submarine provides. This is as important, if not more so, in the littoral as it was in the blue water superpower confrontation. Only after dominance in the theater has been established via maximum operational impact should the submarine be relegated to a wider variety of tactical roles. The fullest impact the submarine can ever provide will always be found at the operational level. One must always recognize this fact; one must never stray from it lest the upper hand in a conflict be lost.

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