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WHERE ARE MY SUBMARINES?

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 of
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Preemptive conventional strike capability is considerably more credible in an environment where the threat of nuclear weapon employment has diminished. Therefore, the SSN's formidable conventional strike capability presents a powerful force to be reckoned with by any potential adversary. Moreover, the SSN's "*stealth, endurance, mobility and readiness*"¹ enhance its offensive potential, making the SSN uniquely the platform of choice in most forward deployed scenarios. During the Cold War our senior military leaders, when confronted with a regional crisis, would ask where their carriers were . . . I would argue that in today's post Cold War era, they should be asking where their submarines are.

Preface

The United States' Submarine Force has often been described as the Silent Service. This characterization is with good reason, and has been perpetuated by submariners for years; as a matter of national security during the Cold War, but perhaps more out of traditional pride in recent years.

During the Cold War U.S. submarines were often in harms way, with skillful submariners pitting their tactical prowess against their Soviet adversaries in the sometimes romanticized cat and mouse game of submarine versus submarine. The winner was the submarine and crew combination that exhibited the stealthiest tactics, showed the best maneuverability, possessed the finest tactical sensors and employed the better trained operators.

Whether the submarine platform was a fleet ballistic missile or an attack submarine, when it was underway the stakes were high. Relying on stealth and unpredictability for operational success, it should be no surprise that submariners were reluctant to talk about their business. Moreover, as time passed the submarine community was predictably content to maintain the status quo, preserving an aura of mystery and unknown within neighboring professional communities.

However, with the collapse of the Soviet Union and the end of the Cold War, the submarine community no longer has a need to keep their capabilities known solely among themselves. Furthermore, today's dwindling defense budget has increased the

emphasis on inter-service operability and joint operations. Therefore, it is imperative that the submarine force share its capabilities with the rest of the Navy and the other armed services to ensure its optimum employment.

Although the submarine force has been quick to adopt this shift in mind set, years of silence do not disappear overnight. Several recent articles related to submarine operations have been published; however, very little has been written about the attack submarine as an operational fire - a tool for shaping a given theater of operations. The purpose of this paper is to discuss the SSN's role in maintaining national security, hopefully from the operational commander's perspective. Although some discussion will invariably delve into the submarine's tactical capabilities, the primary focus will be the operational significance of the SSN within a given Unified Commander in Chief's (CINC) area of responsibility.

Of particular significance, the SSN capabilities discussed in this paper are not new. Perhaps they have evolved with improvements in technology, but the truth is that submarines have been intimately involved in these operations for years, not least of which were the old diesel boats of World War II. The bottom line is that the submarine force has truly joined the rest of the Navy. The reader should gain an appreciation of how the attack submarine force has and will continue to contribute in achieving military objectives throughout the world.

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Text

Introduction:

"The end of the Cold War fundamentally changed America's security imperatives. The central security challenge of the past half century - the threat of communist expansion - is gone. The dangers we face today are more diverse. ... At the same time, we have unparalleled opportunities to make our nation safer and more prosperous. ... Never has American leadership been more essential - to navigate the shoals of the world's new dangers and to capitalize on its opportunities."² President William J. Clinton

America's National Security Strategy of engagement and enlargement has the military deployed throughout the world, maintaining the operational ability to counter anticipated regional threats and swiftly respond to emergent regional crises that threaten our national interests. Our military forces provide the foreign policy makers with the flexibility to be staged in a *forward presence role*, to provide *conventional and nuclear deterrence*, to exercise *coercive diplomacy* and to employ *power projection*.

There are three central themes that support our national security strategy: maintenance of a robust military capability and promotion of cooperative security; efforts to improve global economic growth; and promotion of democracy abroad.³ To remain visible to the rest of the world and maintain a leadership role in achieving this strategy, the U.S. military must continue to exercise its historical role of *forward presence*.

The existence of several nuclear capable nations and the potential for nuclear weapon proliferation make *nuclear deterrence* a continued necessity for the United States. However, with the threat of escalation to nuclear weapon employment arguably less likely in today's post Cold War era, preemptive employment of conventional weapons seems more credible. Therefore, *conventional deterrence* appears more relevant today. Maintaining robust operational firepower, U.S. military forces possess an impressive and visible capability that must be reckoned with by any potential adversary.

When conventional deterrence fails, *coercive diplomacy* has and will likely continue to serve our national interests well. Our military forces represent a powerful and believable source of persuasive might that can be selectively brought to bear when and where necessary to elicit the desired behavior from an otherwise potential adversary. This influential diplomacy has been historically effective while the threat of forceful intervention remains credible. The mere presence of robust firepower is insufficient if the adversary perceives an inability or unwillingness to employ it. Furthermore, force must be applied judiciously to preserve its potent impact.

The employment of military forces during Operation EL DORADO CANYON or current employment of joint forces in support of Operation SOUTHERN WATCH are recent examples of successful coercive diplomacy. Former U.S. Secretary of State George Shultz summed up the first example as an illustration that ". . . the

U.S. will take military action under certain circumstances."⁴ Similarly, the latter example has multinational, joint military forces staged to enforce United Nations sanctions against Iraq. Both cases illustrate that judicious application of military force can illicit desired behavior from a targeted adversary.

When all other efforts fail to achieve the desired result in an area of regional instability, the military's ability to *project power* and smoothly transition to war can be critical in shaping the battlefield for subsequent combat. Forward deployed units operating independently can swiftly isolate and interdict an adversary, providing initial containment to an emerging crisis.

Today's highly volatile and unpredictable environment requires proper planning conducted early to anticipate potential problems. Recognizing that military force is merely a tool available to supplement diplomatic, economic and political measures, the key to successful military involvement is the CINC's proactive participation in shaping his or her respective theater.

Possessing a robust military force is simply not enough, diminishing defense budget notwithstanding. A CINC must demonstrate superpower presence, cultivate foreign relations, aggressively seek out and effectively use operational intelligence, and maintain legitimacy within his or her area of responsibility. These functions establish an environment conducive to effective conventional deterrence, and set the stage

for successful escalation of military force should subsequent offensive action be necessary in an emergent regional crisis.

Historical perspective:

The submarine force has historically been highly successfully in fulfilling the various roles of theater shaping described above. Although none of these roles are unique to the submarine platform, it is the submarine's unique capability of combining stealth, endurance, mobility and readiness in the conduct of these missions that is relevant.

During World War II, U.S. diesel boats were highly successful at numerous wartime missions that were key to Allied success in the Pacific, Southwest Pacific and Atlantic theaters. Missions included surface shipping interdiction, mine laying, mine field penetration, shore bombardment, commando raids, scouting, blockade-running, transporting, search and rescue, and supply ship functions. This submarine force clearly demonstrated the submarine's effectiveness and versatility while operating with impunity in enemy controlled waters.⁵ Diesel boats were out in front, providing the theater commander the necessary support to facilitate subsequent maritime, aviation and ground combat. Although transition to war had already occurred, these submarines were nevertheless shaping the theater for further military action.

The Soviet's attempted coercive diplomacy using their submarine force in response to President Kennedy's quarantine zone during the Cuban Missile Crisis of 1962. Although the Soviet's effort was questionably effective, the attempt is worthy of note.

"He (Khrushchev) wanted the President and the American People to know, ..., that if the United States Navy tried to stop Soviet ships at sea, his submarines would start sinking American ships. And that would mean a third world war."⁶

Additional examples of Soviet coercive diplomacy using their submarine force, with arguably better effectiveness, included their maritime opposition to U.S. intervention during the following:

- June 1967 Arab-Israeli War
- September 1970 Jordanian Crisis
- December 1971 Indo-Pakistani Crisis*
- October 1973 Arab-Israeli War

These instances indicated a Soviet commitment to submarine employment as part of their maritime approach to diplomatic opposition of U.S. carrier battle group operations.⁷

During the Falkland Island Crisis of 1982, the British demonstrated the effectiveness of employing SSNs with HMS CONQUEROR's sinking of the Argentinean warship GENERAL BELGRANO. Admittedly a less subtle example of coercive diplomacy; nevertheless, it was highly successful. Argentina's response to

* Admiral Rickover's 1972 Congressional testimony indicates that a U.S. submarine was also involved in this event.

this event was to return their Navy to port, where they would remain for the remainder of the conflict. A single sinking by a British submarine had defeated the Argentinean Navy.⁸

These selective Cold War examples illustrate that submarines have been effectively involved in international affairs, providing considerable influence on the outcome of various emergent crises. Being forward deployed and operationally ready, submarines have routinely demonstrated the flexibility to respond in a manner commensurate with the situation. Responses ranged from covert, non-escalating presence to overt, offensive action. Again, stealth, endurance, mobility and readiness were critical to the submarine's effective employment.

Several submarines operated in support of Operation DESERT SHIELD and DESERT STORM, including employment of submarine launched land attack tomahawk missiles against targets in Iraq. Although a minor contribution to the DESERT STORM offensive when viewed from the overall operational perspective, this successful demonstration of power projection illustrates the SSN's potent capability.

The submarine force has recently emphasized deploying SSNs with carrier battle groups and amphibious ready groups, embracing the Navy's evolving strategic concept, FORWARD ...FROM THE SEA. Consider a Western Pacific deployment for a battle group SSN two years ago:

The SSN operated in the littoral regions of the Western Pacific, Indian Ocean, Red Sea and Arabian Gulf, directly supporting both the carrier battle group and the regional CINC. The submarine provided:

- ground breaking experience as the first submarine on station during real world surveillance operations to provide nearly simultaneous reporting to the battle group and shore commanders as events were unfolding.

- the first ever SSN submerged operations in the shallow waters of the North Arabian Gulf as a ready strike platform, prepared to provide carrier battle group tomahawk strike support in the Central Command theater.

- highly successful Maritime Action Group operations in the Northern Red Sea, refining and validating tactics and command and control procedures while operating with U.S. surface and air units from the Atlantic fleet.

- a forward deployed presence in the highly volatile Arabian Gulf, including the first ever U.S. SSN port visits to several middle eastern cities.

This submarine's presence.... whether it was the sight of the submarine steaming surfaced through the Strait of Hormuz as one of the first to ever operate in the Arabian Gulf; or more significantly, the submarine suddenly showing up in port following a lengthy submerged and unaccounted for period of operation in the gulf, was of keen interest to the Arab world.⁹

Current perspective:

Today U.S. submarines continue to operate closely with carrier battle groups and amphibious readiness groups, utilizing ever improving technology, equipment and procedures. On any given day 40 - 100 % of the tomahawk missile strike package requirements for the European theater are carried aboard SSNs deployed with the Mediterranean carrier battle group.¹⁰

SSNs routinely operate undetected in heavily trafficked waters, relying on various sophisticated sensors to maintain a tactical picture of the surroundings. These sensors include various sonar systems, electronic surveillance suites and a myriad of high technology periscopes. When operated passively, these sensors enable the submariner to effectively monitor his surroundings while preserving *stealth*.

Possessing nuclear propulsion, key system reliability and redundancy, and self sufficient water producing and atmosphere control capabilities, the SSN's *endurance* is limited solely by the amount of food it is capable of loading aboard. A typical deployment load out will accommodate approximately 90 days of independent forward deployed operations.

Operating around the world in open ocean and littoral regions, submarines are routinely performing missions in water that varies from several miles to mere meters in depth. Possessing advanced hull designs, sound quieting features and ship control systems, these SSNs are capable of operating at a

wide range of ship speeds while maintaining their tactical maneuverability. Although seemingly trivial, this kind of *mobility* coupled with stealth and endurance provides the operational commander with some uniquely attractive and flexible employment options.

The submarine force routinely flexes its tactical abilities during daily operations, frequent readiness evaluations, deployment workups and real world deployment operations. Although not unique to the submarine force, this high state of *readiness* is nevertheless relevant when considering the option of submarine employment. The submarine force relies on its passive tactical sensor employment and attendant stealth for survival. Therefore, it stands to reason that the submarine force's operational readiness in warfare areas requiring these sensors is outstanding.

Theater shaping or battle space preparation as demonstrated by today's SSN includes a robust intelligence and surveillance gathering capability. Remaining covert, SSNs routinely collect critical information in various hot spots around the world and provide real time feedback to various forward deployed Army, Air Force, Navy and Joint Task Force operational commanders.

Other theater shaping missions include surfaced shipping interdiction, submerged threat neutralization, tomahawk cruise missile strikes, covert mine laying and special operations forces insertion. Mine detection capability exists, and is being expanded with technological advances in tethered unmanned

underwater vehicles.

"The near term future will undoubtedly see continued expansion, maturing and refinement of the attack submarine mission repertoire. Unmanned underwater vehicles tethered to nuclear submarines offer many new opportunities. Improvements in our ability to deliver special operations forces with a more capable mini-sub are in development. Direct fire support to Army or Marine troops with tomahawks or a Naval version of the Army tactical ballistic missile launched from a submerged submarine may be necessary and achievable."¹¹

RADM Grossenbacher

SSN limitations:

Some would argue that the submarine platform possesses several critical weaknesses that make its employment at best, less than optimum; at worst, unacceptable. These limitations include communications connectivity, weapons payload capacity and mobility in littoral regions.

Shore command and surface ship communications connectivity with submarines has historically been difficult. However, this problem has been largely solved with various reliable means of 'calling up' a submerged SSN and by vast improvements in the SSNs installed communication suites. Today's submerged submarines can be reached anywhere in the world and directed to proceed to shallow communications depth. These same submarines can transmit real time satellite imagery from forward deployed locations, all the while maintaining covertness.

Weapons payload capacity is obviously limited to the relatively small stowage areas aboard the submarine. However, the newer vertical launch capable SSNs can carry a mixture of up to 37 high technology cruise missiles and heavyweight torpedoes. Although this may not sound like much, a battle group SSN carrying a weapons load emphasizing cruise missiles will likely have as many or more tomahawk missiles on board than other ships within the battle group. Furthermore, rapid reload capability is facilitated by the SSN's high transit speed and forward based support facilities.

Mobility in a littoral region requires the ability to operate in shallow water. Those who argue that SSNs are at increased risk when operating in a shallow water environment are correct. Submariners have historically enjoyed the flexibility of using depth when evading an adversary. Because most littoral regions are relatively shallow, today's SSN must rely more on covertness in order to avoid situations requiring evasion. This survival skill is practiced daily with considerable success; therefore, it is reasonable to conclude that the submarine force accepts the increased risk of shallow water operations and will continue to operate in the world's littoral regions.

Conclusion:

When you consider that the vast majority of the world's nations have access to the sea, it is no surprise that the navy plays a crucial role in providing U.S. forward presence. As the defense budget continues to dwindle, our forward based military infrastructure will of necessity also continue to shrink. This undoubtedly has an impact on all forward based military forces; however, the Navy is the least affected. Naval ships continually operate as self sufficient units, requiring minimal forward based support services to operate abroad. Operating forward deployed and independently, these naval forces remain visible in international waters adjacent to foreign soil and show the flag during port calls around the world.

With its stealth, mobility and endurance, the ready submarine force is critical to our Navy's and our military's contribution to national defense. Although various key missions essential to shaping a given regional theater remain generally unchanged from the ground breaking efforts of our World War II diesel boats, today's improved technology and increased capability make the submarine force even more relevant in today's volatile and uncertain environment.

Range of Military Operations			
Military Operations	General U.S. Goal	Examples	
C O M B A T N O N C O M B A T	War	<u>Large-scale combat operations:</u> Attack Defend Blockades	
	Operations Other Than War	Deter War & Resolve Conflict	Peace Enforcement NEO Strikes Raids Show of Force Counterterrorism Peacekeeping Counterinsurgency
		Promote Peace	Antiterrorism Disaster Relief Peacebuilding Nation Assistance Civil Support Counterdrug NEO

Figure 1: Range of Military Operations¹²

Across the entire range of military operations, the submarine force has and will undoubtedly continue to be intimately involved. From surveillance in support of counterdrug operations, non-combatant evacuation operations (NEO) and deterrent show of force to offensive strikes, mine laying, maritime interdiction and sea control; the submarine force provides the theater CINC outstanding operational flexibility and firepower.

RADM Jones, in a recent speech given during a Navy Submarine League luncheon, related the following examples of how our submarine force is perceived at the operational commander level:

"Unified CINCs in every area of the globe have gone on record tauting the role of the submarine and their need for additional submarine services. Most recently, CINCCENT identified submarine support as crucial to his theater military effectiveness, in a recent message he states that: 'The SSN's proven capabilities in anti-submarine warfare and its ability to provide sustained, non-intrusive surveillance support CENTCOM's mission and significantly enhance protection of the area's critical sea lines of communication.' - He wants increased submarine support.

... recently SOCOM identified submarines as his number one maritime necessity, his assessment: 'The most clandestine tactical means of delivery of special operations forces is sub-surface.' - He outlines to the CNO that his top need for the next budget review is a capable host submarine.

Since we married up two submarines to each battle group, every Battle Group Commander has praised the tactical significance of submarines in his post-mission briefs: 'They would not leave home without them.'¹³

Today's submarine deployments provide the battle group commander and the CINC powerful yet unobtrusive presence, credible conventional deterrence, the believable military might to serve as a coercive tool if called upon and the formidable high technology weapon systems to project precise power from the sea. Our regional operational commanders should be asking where their submarines are!

Endnotes

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