WITHHOLDING & ATTACKING SSBNS

by

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Examination of the role of strategic missile-carrying submarines in deterrence and mission of attacking these forces during the conventional phase of a war. It includes discussion of varying locations for submarine deployments impacting on potential ASW campaign. Also analyzes possible arms control regulation of ASW.
Attacks against strategic missile-carrying submarines is one of the most interesting and controversial topics for students of navies, deterrence, war fighting, war termination, and arms control. The concept involves the cutting edge of submarine and antisubmarine warfare technologies and techniques, the potential for uncontrolled or unwanted escalation during the conventional phase of a war, some extremely difficult command and control issues, and a potential new area for arms control between the superpowers. Such operations, often called "strategic antisubmarine warfare," also offer us one of the finest examples of the complex interaction between nuclear and non-nuclear warfare.

The issue of attacking strategic missile-carrying nuclear submarines, however, involves more than just the two superpowers. First, three other nations have such warships: China, France, and the United Kingdom. Second, a significantly larger number of nations have antisubmarine (ASW) forces that might be positioned, capable, and potentially involved in military operations against the five nations of the world who currently have submarines carrying strategic ballistic or cruise missiles. Canada, for example, may join the ranks of nations with nuclear-powered submarines (SSNs) that will routinely deploy in some of the ocean areas where strategic missile-carrying submarines operate.
This prospect of a multitude of nations potentially conducting strategic ASW and thus upsetting deterrence reinforces the Soviet concept of "equal security": The USSR claims that in order to have the same level of security as enjoyed by the United States, the USSR must have a defensive capability against all possible enemies.

There are those who would argue that nuclear weapons have no military utility and serve only to deter war. But nuclear weapons, like any military hardware, do have warfighting potential in case deterrence fails. Many people argue that deterrence is what prevents war from breaking out. Deterrence, however, is only a theory and opinions differ as to what best deters. In general, deterrence is thought to be credible when one nation is convinced that another nation has both the capability to perform a defending or punishing act in response to an attack and the political will to actually do so.

There are two major schools of deterrence theory. The first says that you best deter war by having the capability to passively and actively prevent an enemy from achieving his goals and objectives. Soviet ballistic missile, air, and civil defenses are examples of passive actions that nations take to prevent damage to their homeland. Modern Soviet offensive ballistic missiles that can strike Western air, submarine, or missile bases before the allies could use them are examples of active "defenses" that support this theory of deterrence.

The second major theory is that deterrence is served best by
having the capability to punish an aggressor if he breaks the peace. The latter theory is also described as a "minimal" or "assured destruction" theory of deterrence; i.e., one need not field sufficient forces to prevent an aggressor from damaging one's homeland but merely a minimal force that can retaliate with offensive forces even if forced to absorb a first strike.

If shared by two nations, this second theory of deterrence is known as "mutual assured destruction" or MAD. The unilateral dismantling by the U.S. of its single ballistic missile defense site in the 1970s and similar U.S. actions taken to virtually eliminate passive air and civil defenses are actions compatible with "mutual" assured destruction. Unfortunately Soviet retention and expansion of active and passive defenses, suggests they do not accept the "MAD" theory of deterrence.

Whether one accepts warfighting, minimal deterrence, or MAD as the preferred theory of deterrence, there seems to be general agreement that in any case, a nation must have a survivable/secure reserve force capable of striking back, even if subjected to a well coordinated and surprise first strike. This reserve retaliatory force must also be perceived by the other nation as having the credible capability of conducting a second strike that would matter; something must be threatened that is of value to the nation to be deterred.

Manned bombers were the first strategic nuclear delivery vehicles. Older bombers and associated supporting tankers have become, unfortunately, relatively easy to destroy before they
take off or while they are attempting to penetrate air defenses. Similar problems exist for new ground-launched cruise missiles (GLCMs). Over the years, credibility decreased that older manned bombers could successfully penetrate massive Soviet air defenses. This led to improvements in bomber systems, the development of GLCMs, and eventually to the use of air-launched cruise missiles (ALCMs) launched from bombers outside these defenses. Such air-breathing bomber and cruise missile forces could be used for a strategic nuclear reserve.

Bombers offer the advantage of being able to provide a nuclear reserve force that is capable of being recalled before actual weapons employment and re-cycled for additional follow-on strikes. Mobile GLCMs with extremely long ranges are only recently becoming possible. The Soviet lack of investment in dedicated intercontinental air-breathing forces over the years is one indication that they appear more comfortable with other delivery systems for deterrence.

Ballistic missiles in hardened silos could be used for a reserve force. Despite the many fine attributes missiles in fixed silos (e.g., prompt counter-military potential), their relative vulnerability to attack makes them ill-suited for such a secure reserve role. With the advent of longer range mobile ballistic missiles, nations will have to consider whether or not these land-based systems ought to be a part of the secure reserve force that is expected to survive an enemy first strike or is to be used/withheld from own initial nuclear strikes.
Traditionally, nations have looked to navies to provide strategic nuclear delivery systems that can survive enemy attacks and threaten nuclear retaliation if the peace is broken. Western strategists often argue that it is the knowledge that despite the relative vulnerability of land-based missiles and the problems in penetration by air-breathing systems, sufficient warheads remain on undetected submarines on patrol to constitute a threat so powerful that no nation would risk making the first strike. Sea-based nuclear forces have thus been described in the West as constituting the final deterrent force.

Navies first deployed sea-launched cruise missiles (SLCMs) to perform this function. The U.S. Navy performed deterrent patrols with Regulus guided missile submarines (SSGs) and surface ships well before the appearance of the Polaris system. As technologies permitted, sea-launched ballistic missiles (SLBMs) were developed and married to submarines. The Soviet Union first fired a ballistic missile from a diesel-electric submarine (SSB) in 1955. Later both superpowers developed nuclear-powered ballistic missile submarines (SSBNs). The Soviet Union also built nuclear-powered guided missile submarines (SSGNs) capable of carrying SLCMs that can be used against shore targets.

As SLBM ranges improved, submarines did not have to sail close to an enemy's shorelines in order to threaten his homeland. Extremely short-ranged SLCMs were discarded by the U.S. in favor of longer range ballistic missiles. Early Soviet missiles that required a submarine to surface to fire were replaced by more advanced models that could be launched from under the surface.
Some Soviet Yankee SSBNs carrying SS-N-6 and SSGNs have, however, continued their pattern of patrolling off the shores of Western nations.

The SS-N-8 Sawfly missile, first deployed in 1972, gave the USSR the unilateral advantage of being able to deploy other SSBNs close to its own shoreline and still threaten targets in North America. These protected home areas have been termed "bastions" by Western analysts. There is ample literature, hardware, and exercise evidence to support the contention that this was the preferred method of Soviet deployment for the bulk of its navy in the past and recent present.¹

An interesting asymmetry developed between Western and Soviet navies. The U.S., French, and Royal Navies retained the shorter range Polaris, Poseidon, M-20 and M-4 missiles and relied on stealth to provide security for their SSBNs on patrol. The Soviet Navy, on the other hand, deployed its newer submarines in bastions with a protective array of air and sea power and favorable geography to ensure that its forces retained their "combat stability" (mission capability).

All nuclear-capable nations could feel relatively secure that no matter what happened during the conventional phase of war, or despite the use of some of one's own missiles, a "sufficient" amount of nuclear forces would remain at sea to credibly threaten an enemy. No nation would likely be forced into a position that it felt its sea-based nuclear force should
be used early in a war because it might be lost due to combat actions taken against it.

Some analysts in the West assumed that each of the two major superpowers would withhold some or most of its SLBMs from any first strike to constitute a nuclear reserve force. In an era of SALT and detente, they then mirror-imaged doctrine and strategy and assumed that the Soviet SS-N-8 missile was developed for such a reserve role.

Although this makes interesting discussion, there is no direct evidence in Soviet military or naval literature that supports such a strategy for withholding once a war enters its nuclear phase. To the contrary, direct Soviet literature evidence is that once a war goes nuclear, it does so on a global and massive basis. There is some latent evidence to support withholding but it is extrapolated from reading between the lines. Such evidence is extremely thin and inconclusive.

There are obvious benefits to withholding a secure reserve force even after a nuclear war starts. These primarily involve the potential benefits for securing better terms during the termination phase of a war by retaining a credible nuclear threat that can perform militarily significant missions against one's opponent. Hence nations have been and are still interested in refining the capabilities of their SLBMs and SLCMs to allow greater direct military utility; e.g. hard-target kill, rather than only threaten non-precision targets.
Also, it is doubtful that the Soviet military could ever allow one service, especially the fifth-ranked navy, to be "the" decisive branch of combat arms in the event of war. As is well known, Soviet military strategy is a combined arms approach to warfare in which all major branches are given a role in influencing the "outcome" of the war. There simply is no direct evidence in Soviet military literature that either the Navy or sea-based nuclear systems will be the force that directly influences the outcome of a future war. Allowing the Navy to constitute the only nuclear reserve is decidedly non-Russian.

Another problem with the theory of withholding sea-based missiles from a nuclear first strike is that older SLBMs and shorter-range SLCMs deployed off the coasts of enemy nations can perform unique damage limitation missions. For example, Soviet SS-N-6 Serb missiles aboard Yankee submarines are capable of striking U.S. Strategic Air Command (SAC) bases much more quickly than can intercontinental range land-based ballistic missiles (ICBMs) launched from the USSR itself or SLBMs from protected bastions. Similarly, sea-based systems deployed in the rear oceanic areas of Europe may allow the Soviets to circumvent the loss of SS-20 Saber missiles dismantled as part of the new INF Treaty.

Soviet submarines on patrol off the coasts of Europe, Japan, and North America are also much more vulnerable to ASW operations during the conventional phase of war. For example, Soviet SS-N-5 Sark missiles found on Golf-II diesel-electric submarines homeported in the Baltic and Soviet Far East are probably very
susceptible to ASW actions, including actions by nations outside the NATO alliance. For reasons then of military utility and lack of survivability, it is very likely that some sea-based systems have a role in a first nuclear strike.

If these shorter-range sea-based systems were to be a part of a secure nuclear reserve, then the Soviets should have withdrawn them to more protected home waters where they could be withheld to present a subsequent escalatory threat if surge deployed close to enemy shores. Instead, by keeping them in relatively exposed forward areas, we must conclude that they are positioned to be used quickly as part of a combined arms attack in the event of war, or that the Soviets have a high regard for their survivability. It could also mean that they serve only a pre-war political role and are either expendable in time of combat or would be repositioned.

Another theory that has been suggested is that the USSR intends to hide these units in the territorial and perhaps inland waters of neutral nations. This option would certainly present both unique challenges to the militaries of such nations as well as to NATO. What should be the response of the allies, for example, if they detected Soviet SSBs in neutral waters?

With a large portion of Western SSBNs deployed in the deep ocean expanse and the possibility that some or even most of these carry warheads for the nuclear reserve force, Soviet military theoreticians and spokesmen have openly stated that destruction of enemy sea-based nuclear assets is a strategic goal for the
Soviet military and a main mission of the Soviet navy in the event of a future war. Such statements when coupled with aggressive ASW programs and other actions taken to reduce homeland vulnerability to attack further, reinforce the contention that the USSR has never accepted "mutual" assured destruction. Fortunately for the West, Soviet strategic ASW capabilities have never matched their aspirations.

Simply put, to the Soviet military planner it is better to strike an enemy submarine during the conventional phase of a war and destroy perhaps hundreds of warheads before they launch than to allow that threat to exist. For example, the destruction of even one Ohio class SSBN armed with Trident C-4 missiles could perhaps result in the loss of 192 allied nuclear warheads. Performing this type of damage limitation mission is totally in conformance with Soviet military strategy for deterrence.

The Soviet theory is that having the capability to alter the correlation of forces by sinking Western strategic missile-carrying submarines on the high seas during the conventional phase of a war will both deter nuclear escalation by NATO in the event of war and also limit damage to the Soviet homeland if the war goes nuclear anyway. There is no literature evidence demonstrating Soviet fear that nuclear escalation might result from such operations; i.e. they apparently do not anticipate that the allies would initiate nuclear warfare over the loss of strategic missile-carrying submarines during the conventional phase of a war.
NATO and U.S. declaratory maritime strategies now also include the possibility of offensive action against Soviet strategic missile-carrying submarines during the conventional phase of war. The reasons are essentially the same as those espoused by the Soviets. A strong and additional side benefit to the Allies is that if the Soviets are tied up defending their bastions, then only minimal residual forces may be available for open-ocean strikes against vital allied sea-lines of communication (SLOCs).

Actually attacking a missile-carrying submarine is a far more difficult task than is generally given credit by civilian analysts and academics unfamiliar with salt water ASW operations. One must assume, however, that submarines deployed near an enemy's antisubmarine forces are more likely to be destroyed than those who try to avoid them. Forward-based submarines are prime targets for enemy navies since they represent not only a nuclear threat but also could provide vital attack assessment and other intelligence information and because they have a conventional torpedo and missile capability. Additionally, every submarine sunk during the initial stages of a war is one less that can be re-used if reloaded.

The West has manipulated the USSR for years with an implicit threat of conventional attack against their homeland in the event of a future war. One can only speculate on the effect of a few conventional SLCMs on the populations of Japan, France, the U.K. or the U.S. even if such weapons were employed only against military targets in the coastal regions. It seems that a prudent
planning assumption one should make before a war is that any enemy submarine found off one's shores is a potential threat that should be neutralized in the event of armed conflict with that enemy nation. Whether it carries nuclear or conventional munitions is irrelevant.

Attacking enemy submarines in actively defended bastions will likely be extremely difficult and will doubtless involve a high cost. If the benefits of such actions, however, are substantial, then one must assess the commensurability of benefits to costs. For example, if France or the United Kingdom took every possible precaution to ensure survivability of their sea-based nuclear forces during the conventional phase of a war, but the Soviets were able to destroy them anyway, then France or the U.K. might not have any nuclear "cards" to play during war termination and therefore might not participate. Such a major political result might be worth the cost of a few, albeit high cost, Soviet ASW units.

One of the major issues now being raised is that with improvements in technology, the Soviets might elect to send the majority of their strategic missile-carrying submarines into the deep oceans instead of keeping them in bastions. Such action would circumvent the problem of having their fleet tied up on defense rather than on offensive operations against the West. Whether survivability of Soviet strategic missile-carrying submarines would be enhanced by such deployments is dependent upon advanced submarine and ASW technologies and the penchant for control of nuclear weapons exercised by the Kremlin. It would be
more Russian to retain nuclear weapons close to home in bastions than it would to allow them to hide independently in the open ocean.

Another option is to deploy submarines in restricted waters such that for geographic, military, political, and legal reasons, other nations would find it more difficult to actually conduct offensive ASW operations. Tom Clancy raised such a possibility in his fictional *Red Storm Rising* when Soviet SSBNs deployed in the White Sea.

Choosing to achieve survivability of a reserve force by stealth alone has proven successful for the West now for some thirty years. Deploying submarines in waters such as the White Sea would offer the Soviet Union the opportunity to hide submarines beyond narrow straits whose access is relatively easy to control. This type of deployment might make up for deficiencies in submarine and ASW technology.

Additional political and legal implications would certainly impact on Western decision-making, e.g. should the allies conduct naval operations in enemy home waters during conventional war? Or during a limited war when the action thus far is confined to a distant theater?

Some of these restricted waters are claimed by the USSR as either closed seas, historic bays or seas, or internal waters. The Sea of Okhotsk is a case in point, having been referred to in the past as a "closed sea" by Soviet jurists. It has also been acknowledged as an area for Soviet SSBN deployments. The similar
principle of the historic bay is recognized in the West with Britain's Bristol Channel, Canada's Hudson Bay and Strait, and the U.S. Chesapeake Bay as examples.

Whether or not the Sea of Okhotsk is actually a "closed sea," or what the legal significance is of such statements, it is clear that the Soviets attach more importance to areas of the seas that are close to its shores than they do the high seas. They may be likely to react to attacks within such areas in a different manner than attacks on forward deployed units. Similarly, Canada or the U.K. would probably react more strongly to attacks conducted on shipping in the Hudson Bay or Bristol Channel. In other words, horizontal escalation from warfare ashore to war at sea may have a number of "rungs" in that ladder.

Similarly, the White Sea is claimed as internal waters by the USSR. While other nations have not accepted the exact line behind which the White Sea is internal waters, there is a certain portion of the White Sea that clearly is internal waters and not part of the territorial sea. Internal waters are afforded a special legal status as the legal equivalent of land; i.e. ships from other nations do not have the right of innocent passage through them in time of peace. Ships do have certain rights of innocent passage in the territorial sea.

During wartime, such as during the Vietnam war, nations often find it more difficult to authorize even conventional offensive military operations within an enemy's or a neutral nation's internal waters just as they take a significant step
when they attack targets on or invade a nation's land mass. Are there other areas of the world that nations might want to use to hide their strategic missile-carrying submarines? If sea-based nuclear forces primarily constitute a nuclear reserve, there is no requirement that they routinely patrol within missile range of their assigned targets.

These geographic, military, political, and legal ramifications serve to illustrate the ratchet effect possible through horizontal escalation at sea. Nations may be expected to react differently if one of their naval or merchant ships is attacked well out on the high seas, closer to their own shores, within the territorial seas, or within internal waters themselves. Simply imagine the difference if the nations of the world were losing tankers and other ships within sight of their own shores rather than in the on-going limited war in the Persian Gulf.

Additional political and legal aspects of strategic ASW have been raised with suggestions that arms controls regulate such potential operations. Proposals to restrict deployments of strategic missile-carrying submarines and parallel limitations on ASW have been around since the Brezhnev era. Even former U.S. President Jimmy Carter favored such an approach. More recently, these ideas have been once again raised in the Western literature and suggested by Soviet Communist Party Secretary Mikhail Gorbachev in his October 1987 speech in Murmansk.
Most of these proposals would attempt to create "safe" zones for the deployment of strategic missile-carrying submarines. All ASW operations would be restricted within them. Other proposals include limits on strategic ASW technological development. Even if one could verify compliance with such measures, the net effect would be more beneficial for the Soviet Union than for the West.

Simply put, the Soviets would be allowed to restrict Western naval operations in vast areas of the high seas while, at the same time, the West would be required to identify the areas of the ocean in which its strategic missile-carrying submarines deploy. The latter would be a major contribution to the solution of the Soviets' ASW search problem.

If we try to think through such a possible arms control agreement, verification problems abound. For example, if the West could demonstrate that the Soviet Union was not in compliance with the agreement, but could only do so by exposing sophisticated technical or intelligence capabilities, then might it also be likely that someone would argue against exposing the violation at all?

Attempting to regulate strategic ASW technology without similar restrictions on operational or tactical ASW is obviously not practical nor in the allies' best interests. If successful execution of NATO defense strategy continues to depend upon the reinforcement/resupply of Europe from North America in the event of conventional war, then the allies will continue to require advanced ASW techniques to get the convoys through. The Warsaw
Pact can fight in Europe without reliance on vulnerable SLOCs and might therefore be in a better position to absorb ASW technology restrictions. The West cannot afford to gamble on surrendering its lead in ASW technology by agreeing to any restrictions in a future arms control regime.

Given all of the major policy issues surrounding the potential withholding of sea-launched missiles in the event of a war and the possibility of conducting strategic antisubmarine warfare, what should Western policy be for procuring new weapons systems and for war planning? Although one might like to be prepared for all possible threats, governments are more likely to prepare only for "more likely" or even "best" case assessments than they are against the "worst" case. The exception has been that in the U.S., every Secretary of Defense since Robert McNamara has openly stated that nuclear forces should be sized to retaliate even in the face of a first strike.

Thus procuring forces that can perform defensive strategic ASW in high threat environments seems to be a good idea even if that capability is expensive. If deterrence were to fail, such forces could actually do something that is militarily significant. Attacking enemy strategic missile-carrying submarines during the conventional phase of a war is exactly what the Soviets say they will do, and it is matched by the evidence that they are not only developing such forces, but also give research and development in this area a high priority.
Having such an ASW capability does not necessarily undermine deterrence but rather parallels it by reinforcing the notion that deterrence is best served by a credible capability to prevent an enemy from achieving his own war aims. We should always remember that it is the Soviets that the West wants to deter and to do so means taking steps that they respect. Having a credible capability to limit damage to one's homeland in the event of war is a principle that the Soviets obviously respect.

It follows that any attempt to regulate deployments of strategic missile-carrying submarines or strategic ASW in the absence of a comprehensive nuclear and conventional arms limitation regime is a bad idea. The price to be paid by the West would include probably less security for its own sea-based nuclear forces, less opportunity to be prepared for critical battles in the event of war, and significantly reduced opportunities for the gathering of intelligence (a part of our national technical means of verification of existing arms control agreements).

Attempts to regulate ASW technology would only undermine our operational and tactical needs such as convoy and battle group defense. Restrictions on strategic ASW operations in wartime also is a bad idea since it would deny navies the opportunity to conduct otherwise legitimate and lawful military operations.

In the event of a war, attacking an enemy force before he attacks you is sound militarily. Attacking enemy nuclear capable forces may also make good military sense. The numbers of
strategic missile-carrying submarines of all types as well as air-breathing and land-based weapons systems in the Soviet inventory make it unlikely that the West could actually ever attrite sufficient numbers to deplete the Soviet strategic nuclear reserve in its totality. The loss of a submarine at sea is not likely to "require" a nation's political leadership to seek overwhelming retribution through nuclear escalation.

On the other hand, the opportunity to reduce large numbers of enemy nuclear forces in the event of war is one that should be taken. Soviet SSBNs, SSBS, SSGNs, and SSGs should not be placed on a list of targets that require authorization to attack once armed conflict commences. The Soviets will attempt to attack our forces; we should attack theirs. Every submarine destroyed will reduce the number of warheads whose use could be threatened by the Soviet Union during the conventional phase, or would be used in actual nuclear combat operations, or could be threatened/used during the termination phase of a future war.

Deterrence through both active and passive defense is a concept with which navies should be very comfortable. Armor has been added to men of war as part of damage control systems. Active anti-aircraft defenses attempt to shoot down missiles and aircraft before they strike the ship. Aircraft have extended the ASW protection envelope of convoys and battle groups. Strikes against enemy airfields are seen as an integral part of fleet air defense.
Attacking the enemy's main battle fleet is naval tradition and a principle of operational naval warfare since Alfred Thayer Mahan. Even Karl Von Klausewitz claimed that to decide a war, nations must attack centers of gravity. Developing the forces that can sail into the teeth of the enemy is expensive but if this serves deterrence, no price is too great.

It is not likely that any nation will make the political decision to escalate to nuclear warfare due to actions that are taken against its fleet at sea, even if the units damaged or sunk are strategic nuclear delivery vehicles. No matter how much we talk before war about the need for arms control and reductions in military expenditures, during a war that same political leadership will demand from its military that actions be taken that will result in as favorable a set of terms of war termination as can be achieved. Altering the nuclear correlation of forces by attacking an enemy's submarines is the type of step that can help. Defense of one's homeland is a morally acceptable position that is one of the primary responsibilities of government.
NOTES


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