

F.A.S. PUBLIC INTEREST REPORT

Journal of the Federation of American Scientists (FAS)

Vol. 33 No. 10

December 1980

FOUR WAYS FOR THE REAGAN ADMINISTRATION TO BLOW IT

If the Reagan Administration is to avoid setting national security back a long way—from its own point of view—it is going to have to discard an awful lot of campaign rhetoric awfully fast and move very cautiously.

Nowhere is this more evident than in the likelihood that its economic predilections will initiate a raging inflation. If, indeed, the basic inflation rate rises from 9% to 15% as some economists fear, Americans will lack both will, and means, to maintain the forces the Reagan Administration wants.

The mere election of Ronald Reagan has already triggered inflationary expectations. After all, who is so naive as to believe that this new Administration's commitment to three annual 10% tax cuts for citizens, to tax incentives for business, and to large increases for defense can be balanced by cutting federal expenditures? Many of Reagan's original economists even argued that this balancing wasn't necessary. No wonder everyone is out borrowing money, and the prime rate is rising sharply. *Newsweek* warns of an inflationary spiral that could make the nation's recent experience "pale by comparison" while even Reagan enthusiasts like Alan Greenspan argue that there is only a 50-50 chance of succeeding despite "worsening of the short term situation."

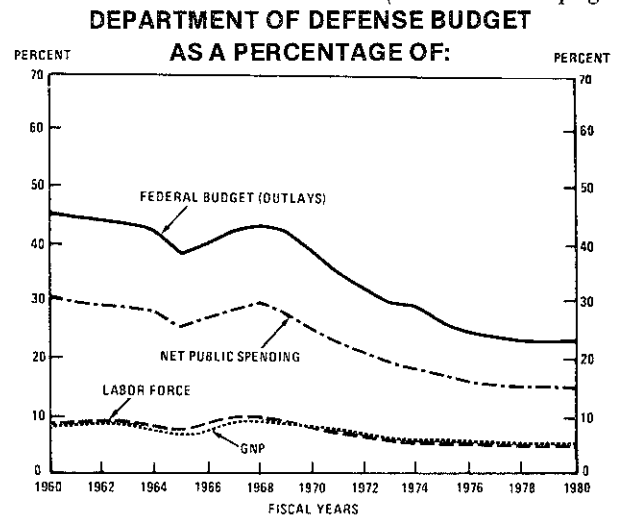
Inflation Easily Triggered

Remember that it was a failure to tax Americans for a mere ten billion dollars of Vietnamese war costs that triggered the inflation that is still with us today more than a decade later. Inflation is a lot easier to start than stop. The special inflationary problems of energy, food, housing and medical care are not about to be controlled by budget balancing anyway. And the inflation inside the defense industries is already much higher than the consumer price

index. All in all, it seems likely that the effort by Ronald Reagan to solve the inflation through tax incentives and tax relief will only provide the public with more money to put into inflation hedges, rather than productive investment. If so, the economic base upon which defense planning relies will be very seriously injured and for a long time.

In strategic force planning also, the Reagan Administration needs time to stop and think. In particular, if it is not careful, it may undermine the security of America's first line deterrent (Polaris-Poseidon and Trident missile-firing submarines) in a poorly planned effort to strengthen the security of our second line, backup deterrent (land-based Minuteman missiles). This is because its strategists favor amending the treaty against anti-ballistic missile (ABM) systems in order to permit the construction of an ABM

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ON HIDING AND THE DEFENSE DEBATE

The interested reader can learn much from the two articles contained within—not only about defense *per se* but about the debate over defense. Richard Garwin's article shows that Stealth techniques can be applied not only to bombers, but to missiles and to submarines where its strategic implications are less touted by Administration officials because they are less supportive of the MX policy. Stealth will, in particular, help maintain the primacy of offense over defense in the ABM area. And it will add to the existing high degree of invulnerability of U.S. submarines.

This is followed by Christopher E. Paine's revealing description of the struggle between backers of land-based missiles and backers of sea-based missiles (in particular, the Navy). The fine structure of Defense Department

politics is skillfully revealed under a microscope which Mr. Paine has applied to realms of Congressional testimony. The key question today, as in 1969: Will supporters of a new land-based missile have to smear the Navy's Polaris-Poseidon-Trident force in order to get their way?

In the process of describing this internecine struggle, the author reveals the great hidden strength of U.S. antisubmarine warfare capabilities against the Soviet Union's submarines. It appears to be no accident that American strategists no longer talk of urging—in the name of stability—that the Soviet Union deploy its missiles at sea. The newer, no less patronizing, advice is that the Soviet Union will be encouraged by MX counterforce abilities to "go mobile" on land. □

(Continued from page 1)

defense for land-based missiles. Unfortunately, there is much reason to believe that such an amendment would cause the total unraveling of the ABM treaty leading to anti-ballistic missile systems around cities. This would threaten to impede the arrival of our (otherwise invulnerable and effective) sea-based missiles and stir up new and more serious fears for our deterrent.

One would like to believe that the Reagan defense spending increases would, at least, lead to increased military readiness. Predictably, as real spending on defense has declined, the military establishment has chosen to maintain the facade of military capability rather than to maintain unit effectiveness. But because there is such an air of unreality about direct U.S.-Soviet military activity, most hawks opt for the symbols of military power—especially the strategic weapons that are already in fantastic surplus—rather than for the reality of conventional power.

Readiness Versus New Strategic Weapons

Thus a test of the seriousness of the Reagan Administration about military preparedness will be the extent to which it follows the advice of President Nixon's Assistant Secretary of Defense for Systems Analysis, Ivan Selin. He recently urged that all real increases in the defense budget go to improved readiness rather than to new strategic weapons so as to maintain a consensus on increased defense spending while doing first things first:

"We have about three years to decide whether we *also* need a new generation of aircraft and missiles. But if we try to lard the defense budget with premature procurement decisions, we risk losing the once-a-generation opportunity to fix the critical readiness problems. We can't have new hardware and improved readiness at the same time. We cannot improve the readiness of our forces if at the same time we try to change these forces significantly." (*New York Times*, November 6, op ed page).

More likely, however, it will be impossible for the Reagan Administration to control the defense debate in this way; much otherwise available funds will be caught up in quick decisions on MX and B-1, etc.

Finally, the new Administration risks foreclosing future SALT agreements—which it might otherwise soon come to want—by mishandling SALT II. If, as Senator Sam Nunn (D. Georgia) has proposed, the Senate is permitted to amend the treaty and to send it back to the Soviet Union on a take it or leave it basis, SALT as we know it will likely be dead. The Administration would be far better to begin negotiating on a supplemental agreement for real reductions which it might add to the main elements of SALT II. By keeping the reins in its hands, the Executive Branch would preserve the ability to use SALT if it wants. And just as the Joint Chiefs of Staff came around to some enthusiasm for arms control agreements—as the arms race realities sunk in—so also might the Administration.

As in the case of MIRV, about which even Henry Kissinger once expressed regret, America has learned that its first national security impulses are not always right. The Administration badly needs a forum—such as an intergovernmental Hoover commission—to think through its arms race policy over a period of at least a decade or two.

We can no longer afford, either economically or strategically, to muddle through without a better defined strategy and set of priorities than we have.

Because the Administration comes to these problems from the right, and because of the mandate it has received, it has tremendous influence. Will it blow its chances by acting quickly and euphorically, or will Mr. Reagan show the caution which these issues fully deserve? Tune in closely in the first 100 days.

—JJS

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THE IMPLICATIONS OF STEALTH

Richard L. Garwin

Secretary of Defense Harold Brown announced in August that the United States had achieved great success in development and demonstration of "Stealth Technology," significantly changing the balance of world military power. To what extent is this true?

Brown claims that Stealth vehicles will be invisible to Soviet radars with a clear line of sight to the aircraft, that the heat of the engine and exhaust will be hidden from heat-seeking missiles and trackers, and that the ability of our strategic and tactical aircraft and cruise missiles to penetrate Soviet and Soviet-supplied air defenses (both ground- and air-based) will thus be assured. The means involved are evidently refinements of the long-used tools of *shaping* metallic surfaces to minimize the reflection of radar energy back to the radar itself, *coating* metal to absorb radar energy rather than to reflect it, *substituting* plastic for metal to reduce reflections, *repositioning* and *treating* engine intakes and other apertures, *masking* hot engine parts, and the like. It is certainly desirable to consider seriously reducing these "signatures," in some cases to achieve invisibility and in others to make feasible or less costly the confusion of radar or heat detectors by the creation of false targets—by "jamming" or "deception." In fact, one of the advantages claimed for the reduced radar visibility of the B-1 bomber over the B-52 was not invisibility but lower weight and power requirements for decoys which would draw enemy fire *as if* they were B-1s.

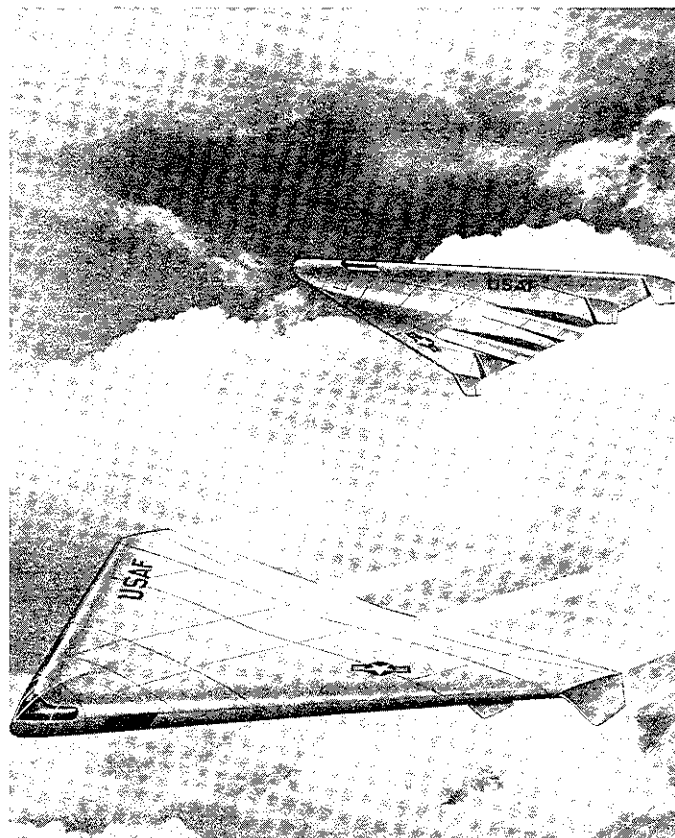
Stealth technology applied to aircraft and cruise missiles ought to be effective, even though it could not be expected to allow large bombers at high altitudes to fly invisibly over Soviet radars, nor to cause the Soviets to give up air defenses.

Stealth on Missiles

However, the utility of Stealth technology is not limited to aircraft. Similar means can make the warheads (reentry vehicles—RVs) of ballistic missiles absolutely invisible to radars and heat-sensitive telescopes at the vast distances required for successful space-based defense against ICBM or sub-launched ballistic missile (SLBM) attack. Unlike the atmosphere, the vacuum of space places no size or strength requirements on the coatings and shapes suitable for hiding speeding reentry vehicles from radar and infrared sensors. Stealth technology plus the possibility of reentry vehicles of indifferent accuracy (but capable of maneuvering 10 miles or more to their target from a deceptive reentry point) still spell supremacy of offense over defense, except possibly in the special case of ballistic missile defense or individual missile silos. Here there are as many radars as silos (or several times more) so that destroying a radar results only in another taking its place, and the need to destroy all or most of 1,000 silos keeps the attacker from assigning many warheads to a target.

Stealth on Subs

Stealth technology also has important applications to *anti-submarine* warfare which the Defense Department is not advertising, and which should weigh heavily in the



Stealth Technology?

debate over MX. The ocean—at best murky, shadowed, and full of noise—is *also* a ripe environment for the application of Stealth technology. Why should the same Harold Brown who asserts U.S. technology can make large aircraft invisible in clear view of powerful radars express doubt that nuclear submarines (or even smaller, slower, less-powerful, *non-nuclear* submarines) can remain hidden beyond 1990 or so in oceans where no radio or radar wave can travel even to the usual patrol depth of a submarine; where even blue-green light can only with great difficulty be directed to a known submarine location at operating depth; and in which horizontally-traveling soundwaves are bent grossly to 2-mile depth, returning to submarine depth 30 miles away? In fact, the ocean's concealment is so complete that little modern technology has been needed to maintain the cloak of invisibility up to this time.

A recent letter from the Secretary of Defense to Admiral Thomas B. Hayward, the Chief of Naval Operations, admits that Defense personnel may have gone too far in arguing that a land-based MX missile was required *because* submarine basing may become vulnerable in the 1990s to Soviet antisubmarine warfare. With Stealth technology, the DoD position should be reversed! An active effort to recognize any emerging ASW threat and to counter it by Stealth-like techniques can surely maintain a sub-based MX far less vulnerable than the proposed (and exposed) land-basing scheme. □

—Dr. Garwin, an FAS Sponsor, has been an unusually influential analyst of defense issues for three decades.

THE TRIAD GAME

Christopher E. Paine

An old favorite Potomac pastime is back—the TRIAD game. Unlike much of the intricate maneuvering that goes on in Washington, this game is really quite simple. Anyone with a strategic weapon in search of a rationale can play, and previous losers are welcome. The object of the game is to sell your leg of the *Triad* by sowing doubts about the ability of the other legs to survive a massive Soviet surprise attack. The game is played especially vigorously by those who have tried and failed to sell their system on its own merits.

In recent months, as the MX-Multiple Protective Shelter system has encountered stiffening resistance from members of Congress, residents of the proposed Nevada-Utah basing area, and a broad cross section of the scientific community, Pentagon leaders have begun to make the case for a new mobile land-based ICBM by publicly spreading doubts about the “survivability” of the Navy’s submarine missile force.

This move is more than a little reminiscent of Melvin Laird’s 1969 ploy to sell Congress on the need for the SAFEGUARD ABM defense of MINUTEMAN by hinting the Soviets might find ways of detecting and destroying Polaris-Poseidon submarines. “If this particular question of Polaris vulnerability is limited to the period through 1972,” Laird testified, “I would say that I believe that our force will remain very free from attack. If you go beyond that time period, I seriously question that.” Anxious to establish a requirement for a giant new submarine carrying long-range missiles which could compete for the Air Force’s intercontinental strategic role, the Navy itself joined in the attack on poor old Polaris, with one high ranking Navy officer estimating that the Soviet Union might achieve the ability to wipe out the entire Polaris force by the mid-1970s.

Polaris-Poseidon Never Detected

But in 1978, with the Trident program firmly established, the Navy testified that the Soviets had yet to detect even one of the 41 Polaris-Poseidon submarines during the some 1500 60-day patrols conducted since 1960! Since the Soviet ASW potential “breakthrough” argument was, by a number of accounts, the one which clinched the President’s approval of the large-diameter land-based MX

missile (which will not fit in the Trident sub launch tubes), it merits close examination.

During a nominally off-the-record breakfast session with reporters in April of this year, Undersecretary of Defense William Perry remarked that ASW technology was advancing so rapidly that the Navy’s new Trident submarine as well as the older Poseidon would probably become vulnerable to Soviet ASW capabilities “by the 1990’s.” As for U.S. capabilities, according to one knowledgeable observer, “He (Perry) said, in fact, that if given the billions of dollars needed to mount such an effort, he could find all the Soviet submarines in the ocean and destroy them.”

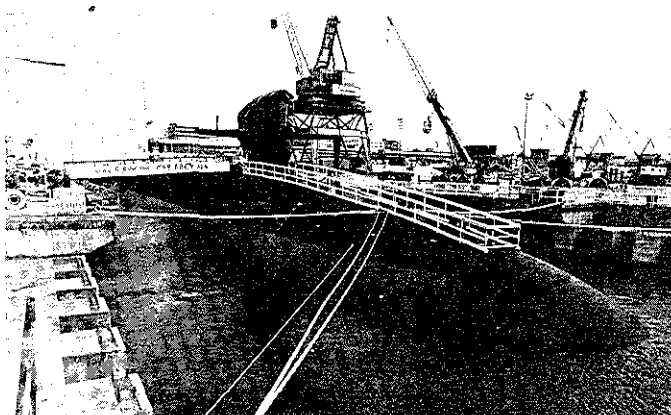
That same month Perry told a nationwide television audience, “Submarines are invisible today. By the 1990’s, whether we will have learned a way, or whether the Soviets will have learned a way, of making the oceans transparent is precisely the issue. My judgment is that we ourselves will be able to detect and locate Soviet submarines at sea at that time period. I have no reason to believe that the Soviets will not be able to do a similar thing.”

Navy Unhappy

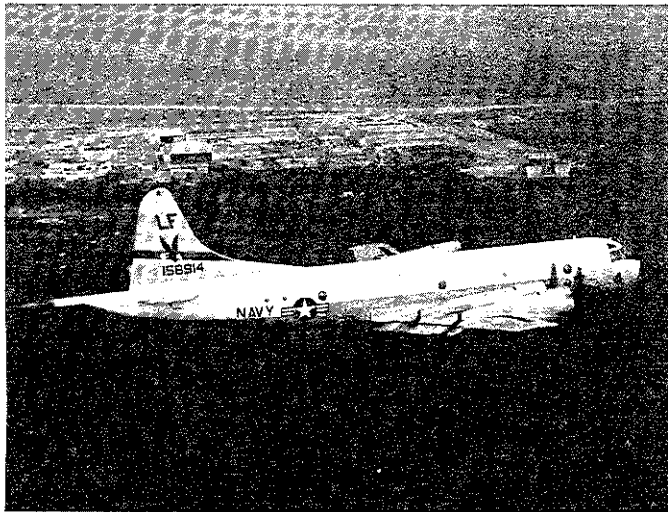
The Navy is, in the words of one high-ranking officer, “extremely unhappy” over Perry’s statements. It does not believe that the Soviets are anywhere close to achieving the capability suggested by Dr. Perry. “The Soviets are a long way from that,” observes one recently retired admiral with an intimate knowledge of Soviet ASW capabilities. “I have a great deal of respect for Dr. Perry,” he remarked, “but I think his statements are farfetched and influenced by political concerns about the MX.” Another high-ranking naval officer notes, “You may assume that we have examined the things he (Dr. Perry) is referring to, and we do not see the prospects for either an acoustic or non-acoustic breakthrough as realizable as early as the 1990’s.”

The last straw for the Navy was an interview with Dr. Perry in the September 8 issue of *U.S. News and World Report*, in which the Undersecretary of Defense said that he could foresee both Washington and Moscow making breakthroughs in antisubmarine warfare in the coming decade. The problem of detecting submarines would “yield to limited technological solutions maybe five or ten years from now.” In response, Admiral Thomas B. Hayward, the Chief of Naval Operations, reportedly sent an angry memorandum to Secretary Brown complaining that civilian Pentagon aides were trying to win public support for the Air Force’s controversial MX system by raising questions about submarine vulnerability. While the Navy supported the proposal for a new land-based mobile missile, Hayward is reported to have informed Secretary Brown that the Navy could not accept a strategy of building support for the MX by generating concern about a Soviet ASW threat. Brown is said to have acknowledged to Admiral Hayward in writing that his senior aides may have gone too far in stressing the possibility of dramatic improvements in Soviet ASW sufficient to threaten the ballistic missile submarine fleet.

Perry himself expressed considerably more confidence in the survivability of the U.S. SSBN force in prepared



Navy’s First Trident Submarine



ASW Aircraft P-3C Orion

testimony before the Senate Armed Services Committee in February 1980. He stated that the Soviets "are in the early development phase of new submarine detection systems which by the early nineties could have *some* level of effectiveness against our *current* nuclear submarines" (emphasis added). In other words, if the U.S. ballistic missile submarine program stood still for twelve years or so while the Soviets continued to develop their ASW systems, by the end of that time the Soviets might be able to threaten some fraction of the U.S. SSBN force! This is a considerably milder version of the threat than the one Perry sketched for reporters, legislators and audiences only a few weeks later. Moreover, as Perry himself emphasized to the senators, this distant and less than dire threat is already well hedged. The introduction of the new longer range Trident (C-4) missile "will allow our submarines to increase their patrol area by a factor of ten, and we are introducing a new submarine (the Trident) which is quieter than its predecessor. These combined measures will be deployed before a potential new Soviet ASW system could be operational, giving us high confidence in the continuing survivability of our submarine launched missiles." This statement is difficult to reconcile with Perry's later public pronouncements that U.S. SSBN's would probably become vulnerable to Soviet ASW in the 1990's.

US/Soviet ASW Capabilities

During the televised Salt Lake City debate, Perry remarked that the U.S. "will be able to detect and locate Soviet Submarines at sea...by the 1990's." This is undoubtedly a reasonable projection, especially in view of the fact that the United States *already has* this capability, and is investing billions annually to improve it.

A recent Defense Department submission to Congress describing U.S. "Large Area Ocean Surveillance Systems" casually notes, "Since the first USSR deployment of SSBN's, a large fraction of the SSBN deployed force has been subject to SOSUS (Sound Surveillance System) detection and tracking." According to one Pentagon official, "I'm not free to say what percentage of Soviet Submarines we can locate at any given time, but I will say that if war were to break out, they probably would lose all their sub-

marines before they could destroy our fleets."

The contention that the Soviets might not be so far behind in ASW is in flat contradiction to continuing statements by top DOD officials. Navy Secretary Graham Claytor, for example, remarked in a speech in May 1978 that "the qualitative edge that we hold over the Soviets in both equipment and personnel is awesome."

The present U.S. ability to detect and locate Soviet submarines is based on a *combination* of geographic, political, deployed force, and technological advantages which could be duplicated by the Soviets—to the extent this were possible at all—only by a phenomenal buildup costing many billions of dollars over a period of many years. The only alternative to such a strategy—based on some radical non-acoustic breakthrough in global near "real time" satellite-based ocean reconnaissance linked to a capability for ICBM "barrage attacks" on ocean areas—is regarded as a virtual impossibility given the rapid attenuation of electromagnetic radiation in seawater. According to David E. Mann, the Assistant Secretary of the Navy for Research, Engineering, and Systems, "there does not appear to be any one technology that will provide the breakthrough to make the oceans 'transparent.' It will be necessary for these systems to perform synergistically and be complementary with existing and planned acoustic systems to provide effective ASW coverage both against quiet targets and in areas wherein acoustic performance is degraded."

Geographic advantage—In the west Soviet SSBN's can gain access to the Atlantic only by transiting the north coast of Norway and the Greenland-Iceland-United Kingdom (GIUK) gap. In the East, Soviet SSBN's have direct access to the Pacific, but the proximity of the U.S. Aleutian Islands and Japan allows for the possibility of monitoring the passage of Soviet subs.

By contrast, the long uninterrupted coastlines of the U.S., bordering directly on the open oceans, favor both undetected SSBN access to the broad reaches of the Atlantic and Pacific and the deployment of extensive ASW forces and sensors.

Geopolitical advantage—The U.S. has allies, such as Norway, the United Kingdom and Japan, which sit astride the sea lanes leading to and from the Soviet main bases. The Soviets do not enjoy a comparable advantage *vis-a-vis* the U.S. Furthermore, the U.S. has access to overseas territories—such as Midway and Guam in the Pacific—as well as access to those of its allies—such as Diego Garcia in the Indian Ocean (U.K.) and the Azores in the mid-Atlantic (Portugal)—from which to track the movements of Soviet submarines. The Soviets lack reliable access to such a global basing structure for ASW activities.

Deployed systems advantage—The foundation of U.S. ASW capability is SOSUS, a network of underwater microphones—called hydrophones—suspended in oil inside large metal cylinders mounted on the ocean floor. Begun in 1954 and continually expanded and updated ever since, SOSUS "arrays" are now deployed along the U.S. continental shelf in the Atlantic and Pacific, around the Azores, Hawaii, and the North coast of Japan, off the Aleutians, between Bear Island and the north coast of Nor-

way at the entrance to the Barents Sea, across the GIUK gap, and undoubtedly in other locations as well.

Numerous hydrophones are contained in a cylinder, with each hydrophone listening to a particular frequency band. The cacaphony of marine sounds is digitized and relayed via cable to Navy and allied shore installations where computers, using elaborate programs incorporating reams of oceanographic data, search for telltale sounds of Soviet submarines. Since the sound of a passing submarine can be heard simultaneously by several hydrophones several miles apart, computers on shore can reportedly determine a sub's approximate speed and direction as well as its location to within a 50 nautical mile radius. Some sources report that under certain conditions that detection radius may range as low as 15 nautical miles. The Soviets do not possess anything remotely close to the capability represented by SOSUS.

SOSUS data is then relayed to U.S. or allied attack-submarines and aircraft, which use their own sonars and other detection systems to locate the submarine more precisely, track it, and—in the event of a conflict—destroy it.

The U.S. nuclear attack-submarine force of some 74 boats—including 10 new "Los Angeles" (688) Class SSN's—is larger and vastly more sophisticated than the comparable Soviet force of 41 nuclear "hunter/killer" subs. U.S. SSN's are quieter and equipped with more advanced passive sonars, signal processors, and computerized fire control systems.

By contrast, Soviet attack submarines are noisy and lack the passive stand-off target acquisition capabilities and long-range "smart" weapons of U.S. SSN's. In fact, defense industry sources report Soviet subs lack *any* on-board signal processing capability. According to Secretary Brown, "the Soviets continue to search for a strategic anti-submarine warfare capability. However, the performance of their ASW forces is evolving gradually and remains substantially less effective than that of the United States. The VICTOR-class nuclear powered attack submarine constitutes the most capable Soviet ASW platform, but neither it nor other currently deployable Soviet ASW systems represent a serious threat to our ballistic missile submarines."

In addition to hunter-killer submarines, the U.S. maintains a deployment of some 216 P-3 ASW patrol aircraft. A global basing network enables these aircraft to cover an



Soviet "Victor" Class Fleet Submarine

area of about 51.5 million kilometers, including all deep ocean areas in which Soviet missile submarines are likely to be found.

P-3 aircraft, using either "vectored intercepts" provided by the SOSUS network or open ocean search techniques, locate a submarine primarily by dropping both active (pinging) and passive (listening) "sonobouys," and refine its position even further through the use of magnetic anomaly, infrared, and radar sensing. P-3's carry a number of ASW weapons, including nuclear depth bombs and the Mk. 46 lightweight torpedo, an active/passive acoustic homing weapon which is reportedly capable of reaching speeds in excess of 45 knots and of re-attacking its target if it misses on the first try.

The Navy also has some 180 S-3 Lockheed Viking jets on board aircraft carriers with equipment and weapons similar to those carried on the P-3. In addition, the Navy is currently evaluating the first five of some 200 LAMPS Mk III ASW helicopters which will fly off the fantails of some 100 ships.

Soviet capabilities for airborne open ocean search operations are very limited. Their only aircraft equipped for long-range ASW patrol missions are 30 *Bear F*, a variant of the 1950's vintage bomber. Helicopters and amphibious aircraft for short-range protective ASW missions closer to home are more numerous, but equally deficient in technological sophistication. These aircraft do not carry directional sonobouys, and like Soviet attack submarines, lack on-board signal processing capability.

Technology advantage—The U.S. is continually improving and expanding its ASW capability. The roughly \$40 billion five year plan (1979-1983) for ASW forces includes:

- *The Surveillance Towed Array Sensor System (SURTASS)*, an acoustic hydrophone array towed by a class of trawler type manned by civilian crews, will provide the Navy with a better capability to localize Soviet subs in the deep ocean basins.

- *The Rapidly Deployable Surveillance System (RDSS)*, an air or sub deployable command-activated sonobouy designed to moor itself automatically to the ocean bottom, this system transmits its acoustic data in compressed bursts "which are so short that hostile direction finding will be very difficult." In wartime, besides providing a valuable backup or enhancement of existing fixed-system coverage, RDSS could be deployed in current Soviet SSBN "sanctuary areas" such as the Barents Sea and the Sea of Okhotsk, providing target data for a U.S. missile attack on Soviet Delta III subs carrying the long-range SS-N-18 missile.

- *More attack submarines.* Thirty-five 688's have been authorized by Congress, of which ten have been delivered so far. Hunter-killer improvements include new passive thin towed array sonars, a new long-range, high search rate active sonar to counter future classes of quiet Soviet subs, new standoff ASW weapons—to take advantage of increased detection ranges—new high pressure hull materials to increase operating depths, and quieting improvements to lessen the "acoustic signature" of the submarine.

- *P-3C improvements*, including an upgraded magnetic

anomaly detector doubling the range at which Soviet subs can be detected by their magnetic signature, an Infrared Detection System (IRDS) with a day/night surface detection capability, new sonobouys and a Sonobouy Reference System to more rapidly pinpoint Soviet subs, new lightweight ASW torpedos, and finally, a new ASW air platform for the 1990's which could patrol for longer periods of time and cover a wider ocean area than the improved P-3C.

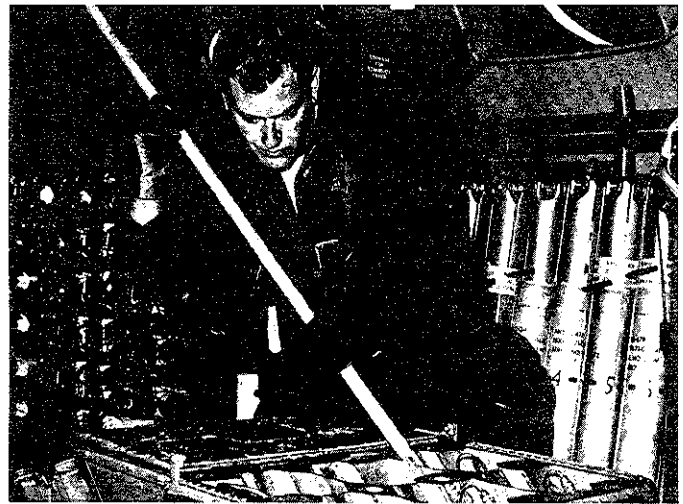
- *Quietness.* The Soviet Union's most advanced attack submarine, the *Alpha* class, is now approaching the operating noise levels the U.S. attained with the U.S. Thresher class submarine when it was first deployed in the early sixties. According to Navy Assistant Secretary Mann, "Soviet submarines show no major trends toward quieting. Major strides in quieting would entail sizeable and costly new approaches to submarine construction. There are no indications that the Soviets are moving in that direction."

- *Sonars.* According to Admiral Metzler of the Navy's Anti-Submarine Warfare Division, "we are significantly better, and that is one of our major advantages. Most of our sonar systems, as we know them and what we know about the Soviets, make us think we have a distinct advantage in detection range."

- *Open Ocean ASW.* According to Carl Levin, a member of the Senate Armed Services Committee, "Soviet open ocean ASW capabilities have been considered extremely limited, if not non-existent." In the words of Secretary Mann, "in the open ocean, the U.S. advantage stems from a number of factors...(deleted)...This technological advantage carries over into every facet of acoustic ASW, including surface ship, submarine, and aircraft sensors and weapons."

In view of the evidence, it seems ironic, if not completely circular, for the Pentagon to be justifying the MX by hypothesizing Soviet breakthroughs in the very area of the arms race in which the U.S. leads by the widest margin! "Hedging" the possibility of such a breakthrough does not logically require the immediate construction of an enormous missile system in the middle of the Western Desert, but rather only a steady ASW countermeasures research program such as the one we currently have. Should the Soviets *actually* develop a capability to detect U.S. submarines over the next decade, it would be at least eight to twelve years before they could deploy it in sufficient quantity to physically threaten the survivability of a significant fraction of the submarine force, leaving plenty of time to deploy appropriate countermeasures, a new mobile ICBM, or some other system.

A comparison of present and likely future U.S.-Soviet ASW capabilities reveals no cause for concern—at least on the U.S. side. As for the Soviets, they have had reason to be concerned since the day they built their first missile launching submarine. The overwhelming advantage which the U.S. has maintained in this area has probably played a major role in Soviet force planning decisions, particularly the decision to proliferate land-based ICBM's as the major component of their strategic forces. Unlike the United



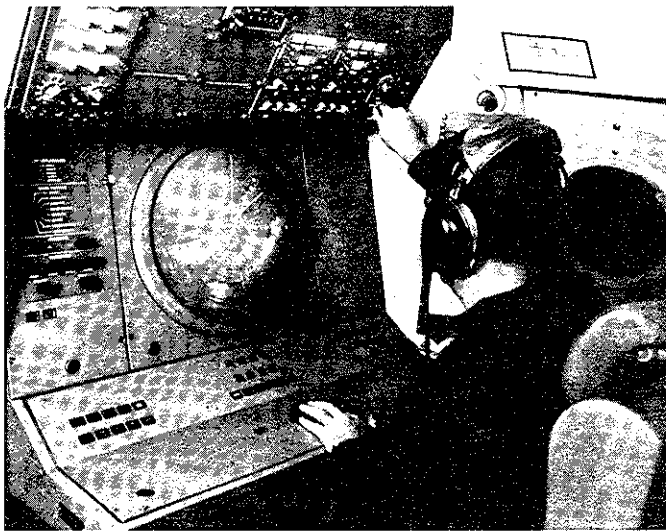
Sonobouys being loaded onto P-3 Orion

States, political pride and an ongoing sense of technological inferiority prevent the Soviets from advertising their vulnerabilities. If, as the Carter administration claims, the MX program is the "consequence" of the Soviets rejecting Carter's March 1977 "Deep Cut" proposals—which imposed big reductions on Soviet ICBM's but did not even address the strong U.S. advantage in sea-based forces—then the need for MX and the ASW capabilities are indeed linked, *but not in the way Undersecretary Perry suggests.* We don't need the MX because the Soviets are so good in ASW. The reverse is probably closer to the truth. We're getting the MX because *we're so good in ASW*, effectively discouraging the Soviets from moving a larger percentage of their nuclear deterrent "out-to-sea," in the form of survivable but lighter payload, *less accurate* SLBM's which would not pose a first strike threat to the U.S. Minuteman force.

Moving Soviet Force to Sea: A U.S. Goal?

In fact, limiting the growth of the Soviet heavy ICBM force and moving the Soviets out to sea has been one of the avowed *goals* of the U.S. SALT negotiating position. Given the continuing massive investment by the United States in improved ASW forces since the mid-sixties, the sincerity of this position is open to question. Why should the Soviets move to sea, if our hunter-killer submarines and sub-hunting aircraft are there to greet them?

On reflection, it all seems a bit bizarre. With the Navy acutely sensitized to any bureaucratic maneuver which might further serve to undermine Trident—already shaping up as the great procurement debacle of all time—it is doubtful whether Perry actually set about to foster a deliberate deception in order to build support for the MX. A more likely interpretation is that like previous players in the TRIAD game, Perry and the Air Force simply got carried away. Unfortunately, such perturbations of logic on the part of our high defense officials seem to be an endemic feature of major weapons systems debates. Recall, if you will, how we came to where we are today. Eleven years ago, while the Army was clamoring to defend Minuteman silos against a then non-existent Soviet MIRV threat, the Air Force and Navy began deploying MIRV's to penetrate a (still) non-existent Soviet ABM system and in-



Sensor Station Aboard Orion

crease the number of warheads surviving an infeasible counter-silo attack.

Then, with an eye to the Navy's burgeoning Trident program, the Air Force during the early seventies toned down its earlier emphasis on silo vulnerability and began talking instead about Minuteman's enduring capability. In January 1973 the Air Force's Deputy Chief of Staff for Research and Development, General Otto J. Glasser, remarked in an interview that there was no specific timetable for completing the next round of MX studies because "it isn't at all clear that we can reasonably credit the Soviets with any near term capability that could wipe out our ICBM force as a strategic entity. Air Force calculations indicated, the General said, that "the task of laying on a precise attack with high confidence of success may be as difficult, or more difficult, than solving the ASW problem."

The problem of a successful attack against the entire force, Glasser observed, "appears insurmountable from the Soviet point of view. The problem has many facets, including command and control, timing, penetration of dust and debris clouds, accuracy and yield, and it is

staggering."

Three years later John B. Walsh, the Pentagon's Deputy Director for Strategic and Space systems, testified that the Department of Defense calculations of Minuteman vulnerability were "based on the unsophisticated and unlikely assumption that a Soviet planner might elect to concentrate his attack on U.S. silos, while ignoring the more important requirement of attacking all legs of the TRIAD to reduce their mutually reinforcing capability of retaliation against any form of attack." And in a written response to the Senate Armed Services Committee's query, "Is the concern for the increasing vulnerability of Minuteman the primary and deciding factor pacing the MX program," the Defense Department replied, "No. While an attack on Minuteman with projected Soviet ICBM capabilities in the mid-1980's could decrease Minuteman survivability, it is not the primary factor pacing M-X development. Hardening and dispersal of Soviet economic recovery targets, the existing shortage of high quality weapons, and a near (deleted) increase in "superhard" Soviet targets between now and the mid-80's have been the deciding factors in the pace of the M-X development program."

Publicly, the decision to proceed with the MX was tied to Soviet "restraint" in building up its new ICBM forces to the levels by the Interim Agreement. Privately, however, within the Pentagon, the new missile was non-negotiable. "The need for MX with an early IOC remains," the DOD testified, "regardless of further Soviet effort, in order to counter Soviet initiatives which are now ongoing...(emphasis added)." A year later, of course, under a new administration, Minuteman became "vulnerable" again, the Carter people apparently preferring high-minded arguments about the sanctity of the TRIAD to the ghoulish sounding rationale of the Republicans that the United States needed a survivable counter-silo missile to fight a "protracted" nuclear war. □

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