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In My View

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IN MY VIEW . . .

Jon Oliver

The Northern Flank

Sir,

Vice Admiral Mustin's "The Role of the Navy and Marines in the Norwegian Sea" presents an aggressive, forward striking role for the fleet. Mobility and maneuver will be used to seize the initiative, quickly going on the offensive; however, "We are going to choose the time and the place of naval engagements, because our forces . . . afford us the option of making such a choice." (*Naval War College Review*, March-April 1986, p. 3).

As Admiral Gorshkov points out, a vital role of the fleet is to support the land battle. The Marine Corps will be heavily engaged in Norway at the outbreak of hostilities. But for the fleet to be effective, it must be able to maneuver, both tactically and strategically. Here is the crux of a significant problem. The proper analogy is Guadalcanal. When the Japanese disputed control of local waters, the U.S. Fleet withdrew, defending the landings strategically. This allowed the Japanese to reinforce, threatening the success of the campaign and severely testing the Marines' gallantry.

While the fleet fights for control of the Norwegian Sea, we cannot allow it to be jeopardized at a time and place of the Russians' choosing because of tactical needs of the immediate land battle. The Navy made the correct decision—for maneuver—at Guadalcanal and should do the same again. To lose the fleet would be to lose Norway, at the minimum.

But in the battle for the northern flank, we should not expose the Marine seaward flank unopposed. Effective deployment and use of coastal patrol vessels may be critical. These "low-mix" assets, fulfilling the traditional naval role of light vessels, could work their way far north, using geography and weather for concealment. With suitable sensors and selective data links they can give a real-time picture to the fleet commander, and form an early strike element which can stay on station indefinitely. They would contribute significantly to a "Defense in Depth" for the fleet, and

provide direct support for the Marine flank. Vessels equipped with suitable weapons and modern modular electronic warfare equipment can provide the link between the tactical battle for Norway and the strategic struggle for control of the Northern Theater.

The Norwegian Navy currently has 39 missile patrol boats deploying about 225 Penguin missiles. These could form a nucleus for the effort, although one must consider what constitutes adequacy. In modern naval warfare, the sophistication of passive and active electronic sensors and communications will be crucial elements. The development of doctrine and systems for the best use of such Patrol Boats could be decisive.

R.D. Jacobs
Commander, U.S. Naval Reserve
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National Priorities

Sir,

In his recent letter concerning JCS reform, Mr. Luttwak appears to have shot himself in the foot.

His basic premise is that we need a national military staff "to impose national priorities in lieu of inner-regarding and literally self-serving service priorities."

Yet his next to last sentence concludes, "I know that most Navy officers are fully capable of rising above narrow corporate self-interest in confronting our national problems."

Could one not also do so as one of the Joint Chiefs?

Mr. Luttwak overlooks the fact that we already have a national staff "to impose national priorities"—it's called the President and Congress.

James S. Dearth
Captain, U.S. Naval Reserve (Ret.)
Winchester, California

Unfinished Business—Merchant Communications

Sir,

Two articles about merchant ships in the March-April 1986 issue of the *Review*, "An Amphibious Landing? With Civilian Ships?" by Colonel John F. Brosnan, Jr., USMC, and "Naval Protection of Shipping: A Lost Art?" by Captain S.D. Landersman, USN (Ret.), remind me of Schubert's Symphony No. 8: They develop two movements expertly, even brilliantly, but they are strangely incomplete. The otherwise

comprehensive discussions of the assault echelon movement (the Brosnan article) and convoy movement (Landersman) are glaringly unfinished on the topic of communications, causing—like the "Unfinished"—a pungent dissonance just before the resolution of their piece.

Colonel Brosnan recognizes that civilian-manned and civilian-owned ships *will* be a part of any large amphibious operation, and he recognizes that merchants other than Military Sealift Command nucleus fleet ships "will likely have few people or none familiar with the ways and needs of a naval force, and no comparable equipment to help them out." Period. End of discussion on the subject.

Colonel Brosnan apparently doesn't appreciate the enormity of the problem, for he doesn't even list communications among a list of "critical issues that the CATF must address if he is to integrate civilian shipping effectively into his amphibious operations." In fact, he even says his list includes "all those [issues] that, if ignored, could cause significant problems in the assault and subsequent operations afloat and ashore." Communications are relegated to a four-sentence afterthought paragraph—one sentence noting that communications systems of commercial ships are "primitive by Navy standards," and the other three telling the reader that, in contrast, MSC nucleus fleet communications are good, used chiefly to help provide underway replenishment, and are discussed in "the appropriate doctrinal and technical publications." Elsewhere, he advises the CATF to practice communications during rehearsals, given the "difference" in Navy and merchant ship communications capabilities. And because the Navy-merchant force has been "drawn from various sea service components" and thus "may not previously have operated together," he says it is "useful" to perform tactical rehearsals during the movement to the objective. What disingenuous understatement!

Captain Landersman, too, recognizes that "the majority of sealift for support of a major land campaign would be carried in merchant ships." He recognizes that "amphibious and underway replenishment ships have capacities in ship control, command and communications (C^3) far in excess of merchant ships. Combat Information Center, radio communications, visual signals, and bridge manning are absent or considerably different in merchant ships . . . ." In his excellent discussion of shifting defended lane tactics, Captain Landersman touches on the C^3 needs of merchants, as he does in his conclusion, bnt he never tells the reader what the communications and command and control problems are and what they mean.

It is a shame that both authors have pussyfooted around with the number one problem both for the CATF in incorporating civilian ships in the assault echelon and for the escort force commander/officer in Tactieal Command in protecting merchants in (non-CATF) convoy operations. That problem is communications, which affects also command and control.

The problem is especially acute in amphibious, CATF-directed operations, and it is here that the Navy is working on a solution, which Colonel Brosnan does not mention (possibly because the effort has been so sleepy and slow in maturating that it is almost a secret).

The Navy never worried about nonexistent or incompatible merchant ship communications equipment while the fleet had its own capacity to provide sealift. But as the huge amphibious and supply fleet of World War II vintage ships was

retired in the 1960s and 1970s, while concurrently the seemingly inexhaustible U.S. merchant fleet was dwindling rapidly, the Navy took a new interest in merchant shipping, beginning with a series of joint Navy-merchant ship exercises in the late 1970s. These demonstrated that: (a) Merchant ships would be essential to meet amphibious lift capacity objectives in certain situations; (b) merchant ships for the most part had little or no familiarity with Navy tactics, doctrine or plans; and (c) merchant ships were rarely able to communicate satisfactorily, either electronically or visually, with Navy ships.

The solution was the creation in 1983 of Naval Embarked Advisory Teams (NEATs), patterned after Military Departments which MSC had long used aboard its nucleus fleet (USNS) ships as a sort of operations department for its civilian-manned ships operating with the Navy. But whereas MILDEPTs are permanent active duty billets aboard ships that have permanent Navy communications equipment installed and that operate regularly with the Navy, NEATs are Naval Reserve billets aboard unspecified merchants (whichever ones the Navy happens to acquire, commandeer or activate, depending upon the circumstance, to become part of the amphibious task force), and the Reservists also bring aboard their own portable communications equipment.

NEAT detachments consist of three officers and seven enlisted personnel. The officers serve as advisers to the master (who retains full command of his ship), providing tactical maneuvering information, naval and amphibious doctrine assistance, and communications advice. The enlisted, primarily radiomen and signalmen, provide electronic and visual communications capability and modest communications equipment repair capability.

Unfortunately, there are few NEAT detachments in existence in the Naval Reserve now, and even fewer packages of portable equipment for the detachments. Each 10-man detachment is supposed to have a $65,000 package that includes an HF/VHF tactical net transceiver, a UHF transceiver, secure voice crypto units and associated equipment for the transceivers, and a tool box; two sets of signal flags and pennants, two 12-inch signal lights, semaphore flags, binoculars, stadimeter, and halyard material; and miscellaneous supplies and all necessary naval warfare publications. (By comparison, under the International Safety of Life at Sea Treaty, all oceangoing merchants are required to maintain only the following minimum capabilities: An MF CW send and receive unit, an international automatic alarm keyer and receiver to permit monitoring of the international distress frequency during the radio officer's periods off watch, a single sideband radiotelephone transceiver (1.6-3.5 MHZ), a radiotelephone watch receiver (2182 KHZ), and a VHF-FM bridge-to-bridge voice transceiver.)

From what I have been able to determine, the few NEAT packages that currently exist represent the only communications stockpile in the Navy inventory. That is a scary thought, especially with 18- to 24-month manufacturing lead times. The communications packages are maintained at the Reserve Centers at which the NEATs drill, and are taken to merchants during active duty for training involving merchant-fleet exercises, transported in approximately 10 cases weighing a total of 1,200 lbs. Since each Reserve NEAT unit consists (for training and administrative purposes) of three or four unit detachments, there is a considerable storage and transportation problem.

The planned number of NEAT detachments is far below the number that would be desirable in any major conflict requiring significant surge capacity, and all of the detachments and portable equipment that "are needed" will not be on board for some years to come. It's discouraging for those of us who have been exposed to the problem, but at least a start has been made (the efforts have been made exclusively by the amphibious planners, concerned with the CATF's need for merchants; thus, perhaps, NEATs are dedicated solely for CATF use, not for convoy or other operations).

Effective control, command and communications for the CATF and the escort force commander/OTC in regard to merchants are simply nonexistent now. Civilian ships that do not operate with the Navy cannot be expected to know as much about naval operations, tactics and amphibious warfare as Sea Cadets do; their communications equipment is almost totally incompatible (e.g., they would not know how to read flag signals even if they had flag bags); their human communications resources consist primarily of one radio officer.

Granted, the Navy has many high-priority projects competing for scarce funding. Yet one would think that effective Navy-merchant communications—so conspicuously absent at present, yet so vital and basic to any mobile logistic support operation—would have a higher priority in Navy planning as well as in any analysis involving merchant ships.

Richard H. Amberg, Jr.
Captain, U. S. Naval Reserve
St. Louis, Missouri

Wargaming in Perspective

Sir,

I found the recent article by Peter P. Perla and Lt. Comdr. Raymond T. Barrett, USN on "What Wargaming is and is Not" and the one by Michael Vlahos on "Wargaming, an Enforcer of Strategic Realism: 1919-1942" extremely interesting and useful reading. Hopefully, my comments here will further this discussion on gaming and simulation, an activity that has been used for centuries to examine military strategies and tactics. The value of gaming techniques as they have evolved today, is not that they can replicate reality, but that they provide some insight into the consequences of actions that are too complex, complicated and expensive to actually execute. As computer power filters down through all levels of the military hierarchy, gaming and simulation techniques will provide a useful means of analysis within reach of all echelons, but only if the limitations and capabilities of these techniques are well understood.

Wargamers are quick to state rhat their games are not in any true sense predictive, that is they do not necessarily reflect what will happen, only what could happen. Unfortunately, the users of war games often pay little attention to this caveat,

treating this analytical tool as a step beyond exhaustive quantitative analysis, rather than another use of quantitative techniques with the element of chance and the human factor thrown in. To state that ". . . we have war gamed this strategy and it works." or ". . . we have gamed this tactic and the risks are minimal." really means that ". . . based on the assumptions, probabilities, decisions, and luck (represented by the draw of random numbers) in *this* iteration of analysis using *these* models, this strategy/tactic shows promise." There is a difference here that goes beyond mere semantics, but it often gets lost in the heat of selling a program or a plan. The wise reviewer will examine the assumptions, probabilities and models carefully before buying the results of anything "proven" in a war game.

Many of the pitfalls of gaming really relate to the use of gaming results rather than gaming itself. Gaming and simulation techniques in the form of wargaming as we know it today, have many valuable characteristics and utilities which go beyond the "proving" of any particular concept or plan. For the military user, gaming forces decision makers to think about things that may have been overlooked. It makes them grapple with weather, environmental conditions, political realities, the vagaries of allies, the unpredictability of potential adversaries, the slowness and unresponsiveness of their own command bureaucracy, the squeamish indecisiveness of their own political masters, and real world limitations on quantity and quality of weapons, platforms and sensor systems, to name only a few.

It is extremely frustrating for a commander to be told during a war game that he must defend his force, take no offensive action until threatened directly, and his actions must not be considered provocative. Yet there is a valuable lesson here. If history proves anything for the U.S. military, it is that the military desire to take advantage of surprise will usually be subordinate to the political will to maintain the peace until the last possible moment. If this lesson can be assimilated by our commanders in war games, where it can be accompanied by relevant discussion and explanations, the games have already paid for themselves.

Political realities are only part of the lessons learned in war games that relate directly to the strategies employed. Perhaps equally instructive is the requirement to use realistic numbers of weapons and sensors such as sonobuoys in given scenarios rather than assuming unlimited quantities. Logistic limitations can set the boundary for what is possible in any given situation and thereby drive the strategy itself. New gaming techniques can account for weapon/sensor availability and reliability by use of the computer's computational power. Fuel constraints can also be modeled easily, forcing commanders to look hard at the logistics tail required to get his force into battle.

These are significant reasons to conduct wargaming but the greatest value derives from another gaming attribute, that of providing a context for military decision-making. What makes wargaming different from other kinds of quantitative analysis is the man in the loop, the decision maker. Decisions made during the course of a war game can change the outcome. While gaming is no real "test" of the decisions reached, it is these inputs from players that make gaming a dynamic and often controversial form of analysis.

The other difference is the element of chance, injected in gaming by a roll of the dice or the random numbers generated by a computer. The procedure is simple and lends itself well to computer assist. If a defensive weapon system has an overall system

reliability of .85, a .80 probability of detecting an inbound missile, a .75 probability of acquiring it, and a .65 probability of destroying it, then each of these processes can be compared against randomly drawn numbers to determine the chance of each event occurring. For example, a random number less than or equal to .85 drawn against the overall reliability of this system would result in the system working. A number greater than .85 would equate to system failure. To determine the outcome of a single engagement, each of the decision points, in the order that they occur, would have to be subjected to a similar random number equation. When the size and number of computations required for a two-regiment BACKFIRE airstrike against a CV Battle Group are considered, it is easy to see why computer power is required to perform credible, detailed engagement assessments.

There is nothing "magic" or particularly difficult to understand about this process. It is strictly numbers-crunching, the thing a modern computer does best. The key variables of course are the probabilities assigned to the likelihood of any given event. Using the probabilities of kill (Pk) provided by the prime contractor of any weapons system, Harpoon for example, will provide one set of outcomes. Using Pk's developed from fleet operational tests and experiences will provide yet another set. Which set should be believed depends on the loyalties of the observer. All too often, the inflated Pk's of the contractor provide the outcomes that game participants want to hear, so it is these that form the basis for engagement assessments.

Since it is the individual probabilities that are critical to the outcome of games, it is these factors that are the most sensitive and controversial. These factors have a direct, but sometimes less than obvious effect on the game players, their decisions, and the overall outcome of the game itself. For example, whether or not an airstrike takes heavy losses will be a factor in the decision to conduct a follow-on strike. And yet the losses determined by gaming an airstrike may be sensitive to the system performance of a single SAM system. Multiply this sensitivity several hundred times throughout a gaming evolution and the critical nature of the Pk assumptions becomes evident.

The current philosophy is to use probabilities based on real world tests and operations. This will then theoretically result in the most "realistic" results. While this approach is certainly logical, it may be useful to periodically degrade our own system performance probabilities to see what might result. Rather than using an offensive system "kill" probability of .85, for example, it would be interesting to cut that Pk in half and then play out the game. Alternatively, increasing the estimated Pk of enemy weapons systems would be similarly instructive. Manipulating these figures would give our game decision makers experience under "worst case" conditions, to see what they have to do if our systems don't function exactly as advertised or if the enemy has developed effective countermeasures against them.

Regardless of the actual data used in conducting games however, the real value of wargaming derives from the personal involvement of the participants rather than the mechanics of the analysis. The results of any individual war game is important only from the lessons learned by the participants, not in terms of what tactics worked but in what insights can be drawn. While gaming will never totally overcome the "fog of war" and "Murphy's Law," the insights into potential problems and possible

implications of tactical decisions gained from gaming can help decision makers prepare themselves for the real thing.

E.D. Smith, Jr.
Captain, U.S. Navy

Iron Laws at Work

Sir,

When speaking of "iron laws" of naval warfare, as does Commander Williams in the May-June *Review* in connection with convoying, it is well to consult the foremost students of such laws: the theoreticians of Soviet Military Science. In a 1972 work, then Colonel B. Ye. Savkin, gave as the "First Law of Armed Conflict" that "methods and forms of armed conflict depend on the material basis of the battle and operation." They may respond very inelastically to changes—certainly the convoy "method" has done so—yet they must be expected to alter substantially if the "material basis" finally crosses some threshold. It is arguable that the merchantship protection regime is today so changed that the basic idea of convoying is undercut.

The convoy concept assumes that: (1), the enemy will probably detect and close any vessels attempting to pass, and will then destroy some critical number of them limited primarily by his own effectiveness; and that (2), any merchant shipping present in excess of that fated toll will pass safely out of reach. The tactic worked for all the historical examples given by Commander Williams because of the tactical element common to them: an attacker forced within "limiting lines of approach" by his slow speed and the short range of his weapons.

The convoy advantage disappears, however, when attackers can strike continuously or nearly so. In this regime, the "limiting lines" close upon themselves and evaporate; the predictable toll is exacted not once but again and again, perhaps until convoy and escort are annihilated. This outcome was foreshadowed by the grim fate of Murmansk- and Arkhangelsk-bound convoys of World War II, which while transiting the Barents Sea were in range of German shore-based air for days on end. Today, a number of technological factors—primarily the high speed of submarines in comparison to that of a convoy, the broad area from which SSM or even torpedo attacks may be delivered, and the high probability of detection of large surface contacts by (or on behalf of) submarines—collectively dictate that a modern convoy could be under attack for long periods without respite, and that safety in numbers would not accrue.

On the other hand, the characteristics of modern merchantmen make the alternative of independent sailings—on high-speed zigzag tracks—more promising than in the past. With large numbers of such ships at sea, submarine advantages could be offset in some part by target confusion and the time required to prosecute each engagement, whether by SSM or torpedo. Further, it would not be necessary to "defend" or "sanitize" the sealane, but only to weed out intruders transiting to it

from their bases, and, by means of aggressive patrolling of high-probability areas, to disrupt the attempts of surviving submarines to localize, gain firing position, attack, and reattack. Such "offensive" ASW, which has failed in the past, might be revitalized by modern long-range sensors and weapons, as might independent merchant sailings by the very qualities which make them difficult to escort. By these means, it might be possible to capture the ultimate advantage which for so long belonged to convoys.

Pelham G. Boyer
Lieutenant Commander, U.S. Navy

Pulling One's Weight

Sir,

I would like to offer some opposing viewpoints to "Determinants of Strategic Burdensharing in East Asia, The U.S. Japan Context" by Edward A. Olsen in the May-June 1986 issue of the *Naval War College Review*.

Professor Olsen noted that a popular argument used by critics of U.S. involvement in the Korean and Vietnam Wars was that U.S. policymakers were acting on behalf of big business and were sacrificing America for Wall Street. He points out that the argument is flawed because the United States had little trade or investment in either of those countries at that time. He concludes that ideological and military factors were the most important. I will not argue what factors were most important in the policy process of that time. However, I do believe the economic argument was misstated and thus prematurely disregarded in the article. The economic argument was not that the United States was defending trade and investments in those countries because, as he stated, the United States had little in either country. The real argument was that the military-industrial complex and the big oil companies encouraged the wars to boost business. Liberals charged that big business's powerful lobbies pressured the government to maintain and increase involvement throughout the war. Regardless of whether it is true, this argument is much more relevant and involved far greater sums than any investments in either country. The economic argument is much stronger when considered in this context.

Later, while talking more specifically about burden sharing, Professor Olsen stated that there is no reason why Japan should not assume more responsibility for sealing off the strategic chokepoints that are vital to containing the Soviet Pacific Fleet. I think there is an important reason why the United States does not want the Japanese to assume that responsibility. It is not in the U.S. interests to have another country entirely responsible for such an important strategic task. Although we can count on the Japanese to perform that task now, we cannot be sure they will perform when we need them. Each country can be counted on to do what is in its own interests. I can think of many scenarios where the United States could lose by delegating full responsibility for those straits. Japan's future may be more neutral toward the Soviets

or Japan may be put in a position where it might not be willing to "sacrifice Tokyo" in a U.S.-USSR conflict. One might argue that Japan already has most of the responsibility for the security of those straits, which is true, but the United States still has the ability to ensure the mission is carried out.

Still later, Professor Olsen states that fairness in U.S.-Asian affairs is a double-edged sword. He said that Asians have the right to be treated as true partners in defense and trade so their interests will be clearly reflected in mutual arrangements. I totally agree. The problem is, however, that U.S. policy is not made that way. Treaties and agreements always use the phrases "act in accordance with its constitutional processes," and the "do what's in our own interests" mentality pervades in government. That is fine diplomatic ambiguity, but it does not contribute to a true partnership. It allows Japan, for example, to decide it will not close the straits, or allows the United States not to take action if South Korea is attacked. This, of course, prevents the United States from being dragged into unwanted conflicts, however, it allows other countries to do the same. If we want true partners from our allies we must make at least some commitments. Certainly these commitments must be thoroughly deliberated and reviewed at intervals, but they must be made just the same. Otherwise, the United States will never be true partners with anyone, especially Asians.

Let me agree Japan must share more of its defense burden. However, the burden should be economic not military. The answer to the problem is not increased Japanese defense forces but increased Japanese share of defense costs of Northeast Asia. The answer also requires public commitments of both countries to defense against a common enemy, the Soviet Union.

Finally, Professor Olsen implied that countries unfairly criticize Japan for not pulling its weight in defense costs, and while countries such as South Korea are more cooperative and self-reliant defense partners than the Japanese, they forget they are saving money by enjoying the U.S. security umbrella in the region. What he does not say is that savings applies equally to the Japanese who are, in effect, saving twice. He also stated that if South Korea had had to shoulder more of its defense expenses in the early years, it would not have experienced such tremendous economic growth. There are many who argue that South Korea's effort to become self-reliant is what made it an economic power. In short, the Japanese neglect of pulling its own weight in defense matters cannot be masked by deflecting the focus to other countries. No other country in Asia is receiving such a bargain.

Richard Saccone
Monterey, California

Quality versus Quantity

Sir,

I could not agree more with Admiral Eccles' recent views on the dangers of overdependence on technological superiority. The fact that we *may* possess a

technological superiority over many or all of our potential enemies can in no way be seen to guarantee our security.

On the Eastern Front in the Second World War the Wehrmacht enjoyed a qualitative edge over the Soviet military in many areas. The Soviets however, possessed a numerical superiority in manpower and simple, rugged weapons, which they could produce in vast quantities. In the end this preponderance of force ground down the German qualitative edge and, as the Germans could not compete in a war of production, allowed the Soviets to overrun eastern Germany, where they sit today.

Today the Soviet Union still possesses this quantitative edge in addition to enjoying near technological parity with the United States in many areas. Ironically, much of the Soviet Union's newfound technological sophistication has been stolen or simply purchased from U.S. companies.

It may now be the time for the United States and her Allies to rethink their decision to rely upon small numbers of high technology weapons to counter the Soviet's numerical superiority.

Some facts: the NATO alliance has a larger population base than the Warsaw Pact countries and a much more vigorous economic base, that functions with greater efficiency. There is seemingly no economic reason why the United States and her Allies could not produce numbers of effective, cost-efficient weapons equal to or greater than that fielded by the Warsaw Pact.

Thus, not only is it potentially dangerous for the West to remain dependent upon fragile and expensive technologically superior weapons, it may also be unnecessary.

A common response to my suggestion is that we (particularly the United States) cannot provide sufficient personnel to man increased quantities of *systems*. If true, it might reflect a lack of interest and resolve, and our preference for "Gold-Plated" personnel to man our combat systems. In any event we could be facing defeat by default.

C.E. Myers, Jr.
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