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## *Semper Paratus?* The Coast Guard Is Not Equipped to Fight

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Lieutenant Commander William L. Ross, U.S. Coast Guard

**A**s early in World War II as June 1943, the Coast Guard's commandant, Vice Admiral Russell R. Waesche, directed his administrative planning staff to prepare a document entitled "The Function of the Coast Guard and Its Place in the Scheme of Government." For this study, Waesche indicated his desire to emphasize why the service should be reinstated under the Department of the Treasury—and *not* be retained by the Department of the Navy in peacetime.<sup>1</sup> The Coast Guard had performed remarkably well during the course of the war. In fact, its participation predated its official Navy Department association when it was tasked in September 1941 with the disassembly of German weather stations in Greenland and the detainment of German personnel and ships at the request of the Danish Government of Greenland. On 1 November 1941, more than a month before the declarations of war between the United States and the Axis powers, the Coast Guard was transferred to the Department of the Navy, and ". . . in the critical convoy battles on the North Atlantic Run of 1942 and 1943, all U-Boats sunk by U.S. forces were sunk by Coast Guard cutters. Under the Navy in World War II, Coast Guard forces were a critical part of amphibious operations in [both the] Atlantic and Pacific theaters."<sup>2</sup> Because of the success attained by the two Services through integration of their warfighting capabilities, many senior Coast Guard and Navy officers favored retaining the Coast Guard as a part of the Navy in peacetime. Vice Admiral Waesche, however, was determined to return his organization to the Treasury Department. Just as the other Services did, the Coast Guard ordered rapid demobilization when hostilities ceased in 1945.

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Lieutenant Commander Ross was graduated from Boston University in 1973 and commissioned in 1976 through the U.S. Coast Guard Officer Candidate School. He has served in the cutters *Hamilton* and *Evergreen* and commanded the cutters *Cape Horn* and *Vashon*. A 1989 graduate of the Naval War College, he is presently assigned to the Joint Staff, J-3, Counternarcotics Operations Division, at the Pentagon.

Vice Admiral Waesche's legacy lives on today. Forty-four years after his order for general demobilization, the Coast Guard's major operational platforms—surface and air—possess little to no warfighting capability (or even survivability) for a contemporary conventional war or low-intensity conflict (LIC).

Under Titles 10 and 14, U.S. Code, the Coast Guard was transferred to the Department of Transportation (DoT) in 1967. These statutes also provide for its transfer to the Department of the Navy in time of war (or when the President directs), however, they contain no concise mission or role assignment. They are simply the legal authority for the Coast Guard to be an armed force.<sup>3</sup> Without a wartime task or mission to prepare or plan for, and no purpose other than to maintain a military readiness capability, the design, procurement, and armament of major operational platforms since World War II have been dictated by peacetime mission requirements: those that are regulatory, those having to do with maritime safety and environmental concerns, and those involving the various aspects of maritime law enforcement.

The recent organization and implementation of the maritime defense zones (MDZs) has brought the Coast Guard back into the sphere of defense and readiness planning. Within the MDZ, "planning and exercises in this area for mine countermeasures, antisubmarine and inshore undersea warfare, port security, and anti-terrorist activities now fall to the Coast Guard Area Commanders."<sup>4</sup> However, planning under the MDZ concept employs utilization of a notional force as opposed to a standing force. Peacetime forces augmented by mobilized reserves (Navy and Coast Guard) will fill the MDZ billets within the limitations of their authorized peacetime strength. But not all of even the Coast Guard's limited forces will be available to prosecute the wartime missions within the huge areas encompassed by the Atlantic and Pacific maritime defense zones. In wartime, some of the Service's high endurance cutters (WHECs), fast patrol boats (WPBs) and surveillance/transport aircraft (C-130s) are scheduled as augmentation forces for forward deployment to the appropriate commander in chief. "The Coast Guard will have to rely heavily on the Navy and other services for antisubmarine warfare, mine countermeasures, and even air defense. But, commitments to allies and forward deployment of the fleet will quickly remove any Navy assets available for coastal defense, and commandeered commercial vessels and minesweeping Craft of Opportunity (COOP) will not be able to pick up the slack."<sup>5</sup>

The problem of shortfalls in defense planning is compounded by the fact that although the Service's planning thus far has organized existing and potential forces to fill mobilization and deployment billets, it has given little consideration to actual warfighting capability. The Coast Guard's major platforms (and even the minor ones, for that matter) are not equipped to fight in a contemporary arena of hostilities, and its personnel are not trained to

fight with weapons other than machine guns and small arms. The Coast Guard likes to portray itself publicly as “the 12th largest ‘Navy’ in the world and the 7th largest naval air force in the world.”<sup>6</sup> While these figures give the illusion of a significant force-in-being that is ready to augment the Navy when called upon, they do not reflect the lack of weaponry and trained personnel. The Coast Guard’s greatest handicap in wartime force capabilities planning is its reliance upon a weapons proviso in new construction: “space and weight reservations for weapons retrofit.” This proviso is imposed by Coast Guard budgetary limitations—funds have never been available for independent (i.e., DoT) weapon systems acquisition. Furthermore, since the Coast Guard can become a part of the Navy in time of war, reliance for weapon systems acquisition is placed upon the Navy, whose budgetary concerns also find the “retrofit proviso” satisfactory in peacetime. Most military strategists today believe that any future conflict will be a “come as you are war.” I certainly agree and I doubt that in time of need, Coast Guard cutters will be given high priority for retrofits in the nation’s few remaining shipyards. I also doubt that the appropriate weapons, sensors, command and control systems, and ordnance will be ready “on the shelves” for rapid installation, or that there will be sufficient time to properly train crews in the tactical operation of these systems prior to deployment.

It is now time to discuss the Coast Guard’s major operational platforms and to present an approach toward achieving commonality and interoperability of weapon systems, hulls, and airframes. It is my belief that the Coast Guard can carry out its peacetime missions with platforms and personnel that are capable of going to war on a moment’s notice, if required.

### High Endurance Cutters vs. Fast Frigates

When the *Hamilton*-class 378’ high endurance cutters were introduced in the late 1960s, their combined diesel/gas turbine propulsion system represented a breakthrough in warship design. Capable of a long-range, eighteen-knot cruising speed, the gas turbines permitted a twenty-nine-knot dash speed for fleet escort, rapid response search and rescue, and antisubmarine warfare. The success of these twelve ships led to the use of a very similar hull design and gas turbine main propulsion for the Navy’s *Spruance*-class DDs and *Oliver Hazard Perry*-class FFGs. Yet the capabilities of the 378s remained static, with World War II weapons and 1960-vintage sensors and fire control systems. However, nearly twenty years after introduction, six of these ships have been decommissioned for the purpose of fleet renovation and modernization (FRAM), with the remaining six ships scheduled to follow in the next few years. The FRAM program will indeed improve the ships’ capabilities: CIC is being relocated below decks (out of the aluminum superstructure), the 1941-vintage 5”/38-caliber deck gun is

being replaced by a modern Mk-75/76mm (the same gun used aboard the FFG-7 class), fleet satellite communications capability is being installed, the air search radar is being modernized, the flight deck is being upgraded to accommodate the LAMPS I ASW helicopter, and modern rapid-blooming chaff launchers are being installed. Furthermore, the Phalanx close-in weapon system (CIWS) and Harpoon surface-to-surface missiles are being added. The 378' class will retain its 1960-vintage hull-mounted, short-range sonar and similarly limited electronic warfare suite.

The 378s will certainly be improved, but they will not be fully capable. The ships will have no offensive anti-air warfare capability, a dependence upon the availability of Naval Reserve LAMPS detachments for bonafide ASW capability, and no ability to rapidly exchange surface/subsurface/air picture data. In response to the many critics of the 378' FRAM program, one supporter summarized that "the primary purpose of FRAM is to install logistically supportable equipment as replacements for the older and marginally operable systems that have served past the most optimistic projections for service life. Only marginal improvements in the warfighting capability of the ship were included in the FRAM plans."<sup>7</sup>

The 378' FRAM program is designed to extend the service life of these twelve ships for another fifteen years. Since the normal planning/budgetary review/design phase/construction cycle is 10-15 years, the time has come to determine a replacement for these ships, although no planning proposals have been enacted.<sup>8</sup> In the interest of acquiring contemporary warfare-capable ships and achieving fleet interoperability with the Navy, I submit that it is in the Service's best interest to procure whatever class of frigate that the Navy intends to build in the first decade of the next century. If the *Perry*-class FFG is continued as a viable platform, then that would be the design of choice. This concept is not new; the Coast Guard has at various times contemplated building FFG-7s as the "top end" of the Coast Guard's surface fleet and the "low end" of the Navy's high-low mix of surface combatants.

In a 1986 in-house memorandum, defense specialist Norman Polmar offered the following: "Indeed, an alternative being put forth when the *Bear* class was in the design stage was for the Coast Guard to instead buy FFG-7 class frigates with certain modifications. While such ships would have been more expensive to procure and operate than the *Bear*-class ships on a one-for-one basis, the FFG-7s would have been more capable in all peacetime as well as wartime missions, and could take advantage of the large Navy production run with respect to unit cost, spares, maintenance, and crew training, all of which would contribute to mitigating the cost differences."<sup>9</sup> Nevertheless, the Coast Guard purchased, and is still building, ships of the *Bear* class. I will discuss the deficiencies of this vessel shortly.

Clearly, operating a standard platform offers advantages to both the Coast Guard and the Navy, and the concept of interoperability is the key to the

proponent's argument. Interoperability of the Coast Guard's major platforms with the Navy's minor platforms eliminates the research and development and most of the design elements of the acquisition cycle; it streamlines and lowers the cost of spare parts acquisition and maintenance planning; and it provides a larger talent pool of individuals trained in the operation and maintenance of the ship's various systems. Most importantly, operating a standard frigate would enable the Coast Guard to augment the Navy, when called upon, with ships that can fight and survive. Present (and historical) wartime tasking for high endurance cutters includes escort duties (convoy, battle group, and amphibious assault group) and coastal (i.e. maritime defense zone) antisubmarine warfare. Since this tasking is almost identical to that of Navy frigates, common sense and practicality would dictate the Coast Guard's purchase of FFG-7s (or their replacement) after the turn of the century when the 378s are retired from service.

Analogous to the Coast Guard's dilemma as an unprepared naval force-in-being is, or rather was, that of the Naval Reserve. To enable systems compatibility, standardized training, and to facilitate fleet support, the Navy has recently upgraded its reserve forces through the introduction of new frigates (FFG-7s, albeit the older models), LAMPS I squadrons, and contemporary tactical aircraft.<sup>10</sup> "The expansion of the Navy's peacetime responsibilities into the Indian Ocean-Persian Gulf-Southwest Asia area has so stretched already over-committed active fleets that the Navy has become more disposed to obtain help from wherever it can get it, including the Naval Reserve."<sup>11</sup> I maintain that the Navy should be able to get help from the Coast Guard as well—the mission is there and has been for nearly two hundred years. But the Coast Guard cannot contribute to the nation's maritime strategy if it is not properly equipped to fight.

Opponents of the Coast Guard frigate concept have argued that not only is a frigate too expensive but that it cannot do the Service's peacetime missions as well as a "purpose built" cutter.<sup>12</sup> Moreover, they maintain that there is no valid peacetime reason to have missiles on board. These arguments are easily disputed, although counterarguments have not been successful in the recent past. With its superior sensors for surveillance and interdiction, a modern frigate can do the primary peacetime missions (search and rescue and maritime law enforcement) well, in fact even better than a 378. For the past several years Navy frigates have been actively and successfully involved in maritime law enforcement operations, using embarked Coast Guard law enforcement detachments (LEDETS). As to the missiles—well, there is no reason for a 378 to have sonar, ESM equipment, torpedoes, and a five-inch deck gun in peacetime either. In point of fact the weapons are there to maintain a military readiness *capability*. That's why the 378 FRAM is to be equipped with Harpoon. The only significant drawback to using an FFG-7 is that it has only half the cruising range of a 378' cutter. In peacetime

operations fuel economy would be of concern, and there would be more "sprint and drift" tactics than is the norm.

In a 1984 Naval Institute *Proceedings* article, R.E. Tinsman summed up the "Coast Guard frigate" interoperability issue: "The Navy's FFG-7 program is a good one. Built at a reasonable cost, the ship class has a great deal to offer naval strategic planners. Integrating the FFG-7s into active Coast Guard service would serve both the Navy and Coast Guard command structures by providing a single platform that could meet each other's primary needs. A peacetime function using the Coast Guard's roles would help to keep both the FFG-7s and the Coast Guard wartime ready."<sup>13</sup> (See the table for comparative characteristics of the FFG-7, 378 WHEC, and 378 WHEC (FRAM).)

### Medium Endurance Cutters

The Coast Guard's fleet of medium endurance cutters (WMECs) consists of a motley assortment of thirty-five ships dating from as far back as 1941 and ranging in size from 180' (1,000 tons) to 270' (1,730 tons). Although suitable for most of their peacetime duties, none of these ships has any real warfighting capability or even defensive capability. Three of these ships are converted World War II Navy salvage vessels, three are converted World War II Navy fleet tugs, and three are converted World War II Coast Guard buoy tenders. The largest weapon possessed by any of the World War II-era ships is a fifty-caliber machine gun.

The main body of the medium-endurance fleet consists of sixteen 210' cutters of the *Reliance* class, which have been in commission since the mid-1960s. They were designed for search and rescue and law enforcement duties. These ships are equipped with a flight deck suitable for use with the older HH-52A helicopters (which are now being phased out of service) and the new HH-65A helicopter. However, flight operations on an extended basis are somewhat limited because these ships are too small to accommodate a hangar. The 210' cutters are slow (18 knots) and are outfitted with a single World War I-vintage hand-loaded, slow-firing, three-inch fifty-caliber deck gun which, from my experience, is of more danger to the gun crew than to any target. Two fifty-caliber machine guns make up the remainder of the 210' "weapon suite." The ship's only sensor is a surface search radar. Although currently undergoing a mid-life major maintenance availability, no modernization of weapons, sensors, or speed capability is planned. Clearly these ships have no offensive or escort capability (and cannot even defend themselves against attack from a Third World patrol boat). Of concern, even in their peacetime role, is the probability that they could not defend themselves against attack from a drug-smuggling vessel armed with shoulder-

**WHEC/FFG Comparative Characteristics**

|              | <i>Perry Class FFG</i>   | <i>Hamilton Class WHEC</i>  | <i>Hamilton Class (FRAM)</i>  |
|--------------|--|---|---|
| Displacement | 3,605 tons   | 3,050 tons  | 3,050 tons  |
| Length       | 445 feet   | 378 feet  | 378 feet  |
| Beam         | 45 feet  | 42.75 feet  | 42.75 feet  |
| Draft        | 24½ feet   | 20 feet   | 20 feet   |
| Propulsion   | 2 gas turbines<br>1 shaft w/controllable<br>pitch prop.<br>2 350-HP electric<br>aux. prop. units | 2 gas turbines<br>2 diesels<br>2 shafts w/cont.<br>pitch props.<br>Bow thruster | 2 gas turbines<br>2 diesels<br>2 shafts w/cont.<br>pitch props.<br>Bow thruster |
| Speed        | 28+ knots  | 29 knots  | 28 knots  |
| Range        | 4,500 NM @ 20 knots  | 9,600 NM @ 18<br>knots (diesels)<br>2,300 NM @ 29<br>knots (turbines)           | 9,600 NM @ 18<br>knots (diesels)<br>2,300 NM @ 28<br>knots (turbines)           |
| Complement   | 179  | 155   | 165   |
| Helicopters  | LAMPS I/III  | HH-52A or HH-65   | HH-65 or LAMPS I*   |
| Missiles     | Standard MR SAM &<br>Harpoon SSM (40)  | Not Equipped  | Harpoon SSM (8)   |
| Guns         | 1 76mm AA Mk-75<br>1 20mm CIWS Mk-15   | 1 5"/38<br>2 20mm machine<br>guns<br>2 .50 cal<br>machine guns                  | 1 76mm AA Mk-75<br>2 20mm machine<br>guns.<br>1 20mm CIWS Mk-15                 |
| ASW Weapons  | 6 12.75 in. Mk-32<br>torpedo tubes &<br>LAMPS  | 6 12.75 Mk-32<br>torpedo tubes.   | 6 12.75 in. Mk-32<br>torpedo tubes and<br>LAMPS I.                              |
| Radars       | SPS-49 Air Search<br>SPS-55 Surface<br>Search  | SPS-29D Air Search<br>SPS-64 Surface<br>Search                                  | SPS-40B Air Search<br>SPS-64 Surface<br>Search                                  |
| Sonars       | SQS-56   | SQS-38  | SQS-38  |
| Fire Control | Mk-92 Mod 2 FCS  | Mk-56 GFCS  | Mk-92 Mod 1 FCS   |
| Hulls        | 51   | 12  | 12  |

\* Naval Reserve LAMPS I Detachments, if available upon mobilization.



launched missiles (an increasing possibility in today's world of narco-terrorism). Although officially considered to be warfare capable by Coast Guard readiness planners, no clearly defined tasking exists. It is presumed that this class of medium endurance cutter will somehow play an active coastal defense role within the MDZ force structure. The wartime mission of these vessels is currently under review by the Navy-Coast Guard (NAVGARD)<sup>14</sup> Board, with input expected from the Naval Sea Systems Command.<sup>15</sup> One of the missions under study is the potential for using the 210s for mine countermeasures. No doubt each of these ships has the potential for locating at least one mine.

The Coast Guard's most modern medium endurance cutter, the 270' Famous class (which is usually and erroneously referred to as the *Bear* class, after the first vessel in the class), represents the Service's greatest effort to achieve fleet modernization since 1965. Ironically, it also represents the Service's greatest missed opportunity for achieving naval interoperability through commonality of platforms, systems, training, and a mutual support infrastructure. The design and acquisition cycle for these thirteen cutters began in 1975. As previously discussed with regard to high endurance cutters, consideration was given at that time to purchasing *Oliver Hazard Perry*-class FFG-7s to make a bonafide military contribution to national security and to maintain a capability to effectively perform peacetime missions. The decision to build the 270' WMEC rather than the FFG-7 was certainly influenced by cost considerations, but the dominating factor was one of mission identity—a recurring, almost cyclical Coast Guard dilemma. In the mid-seventies the senior decision makers perceived fisheries law enforcement to be the major offshore mission for the foreseeable future. The Magnuson Act (the Fisheries Conservation Management Act of 1976) required actual enforcement of U.S. law as opposed to the previous mission of patrolling the fishing grounds to inspect vessels for compliance with international treaties. In addition, it was apparent that the Coast Guard's leadership was once again distancing itself from recent wartime involvement (Operation Market Time, in Vietnam) with a view toward regaining the white hat or good guy image in the public eye. In addition to the traditional search and rescue mission, the Coast Guard saw its major contribution to national security in the protection of continental shelf resources. Military readiness as a mission area of concern would lie dormant for the next ten years, to be resurrected after implementation of the Maritime Defense Zone concept and formation of the NAVGARD Board.

Thus, the Coast Guard purchased the Famous class to meet its perceived major mission into the 21st century.

Captain R. G. Moore, USCG (Ret.), a proponent but constructive critic of the 270' class, offered the following assessment: "The first major problem area was implicit in the design criteria used, and stems from the almost exclusive preoccupation with the *envisioned* requirements of fisheries law

enforcement. There seems little room for doubt that the *Bear* Class was primarily designed for that single mission, and as a single mission platform represents a marked departure from the Coast Guard's proven multi-mission concept. As a result, the ships have almost no margin by which to absorb change and are, in some respects, deficient in what it takes to perform non-fisheries activities well."<sup>16</sup>

Ironically for the Famous class, world events relegated fisheries law enforcement to a fairly minor mission area several years before the *Bear* was launched. In 1979 President Carter banished the Soviet and Soviet-bloc fishing fleets from fishing under permit in the American exclusive economic zone (EEZ or 200-mile limit) as an economic sanction against the Soviet Union for its invasion of Afghanistan. Though since then the Soviet and Soviet-bloc fishing fleets have been easing back, in joint ventures with U.S. companies, the rise in narcotics trafficking as a national security issue has changed the Coast Guard's major law enforcement mission emphasis from fisheries to the suppression of international drug smuggling.<sup>17</sup>

The first of the 270s became operational for peacetime missions in late 1983. Nine others have since been delivered and the remaining three are approaching completion. None of these ships has received its designed wartime weapon systems. As is the usual practice, "space and weight considerations have been reserved for retrofit." The weapons allowance issue remains unresolved as of this writing, although it was addressed as a major concern in a 1983 U.S. General Accounting Office report to the Secretary of Transportation: "The first cutter was delivered in January 1983; yet, the Coast Guard is uncertain when or if it will receive Navy weapon systems to help fulfill the Coast Guard's wartime mission. . . . Due to Navy budgetary constraints the only weapons currently being delivered for use onboard the cutters are the Mk-75 76mm gun, the Mk-92 gun fire control system, and the SLQ-32 electronic warfare system."<sup>18</sup> The additional weapons intended for the 270' WMEC included the Mk-36 chaff launcher, Phalanx CIWS, Harpoon, tactical towed array sonar (TACTAS), and one LAMPS I SH-2 helicopter. At a glance these weapons certainly appear to be adequate for a corvette-sized vessel. The reality of the issue, however, is that Navy funding for these systems is not forthcoming, and there are several reasons for this. One reason is that the Coast Guard attempted to pioneer its own computer-based command, display, and control (COMDAC) system in order to automate most of the bridge and CIC functions. This system has not lived up to expectations. It is quite expensive (\$163.4 million in 1975 dollars), has not reduced operating costs as was anticipated, and is not compatible with Navy shipboard systems, thus having no data-link capability. Surprisingly, it does not even have a data-link capability with other cutters of the same class or with Coast Guard aircraft. Moreover, it requires specific software to interface with the (proposed) weapon systems, and the Navy is unwilling

to fund the software as well.<sup>19</sup> Another reason for the Navy's reluctance to fund the 270' cutters' weapon suite is that the ships are too slow (19.5 knots flank) to perform the wartime escort and ASW mission. Thus, the Navy foresees no wartime tasking for these ships other than outer perimeter defense of the nation's major ports against saboteurs, which is, after all, a part of the MDZ concept.

The Famous-class ASW capability (assuming that the weapons, sensors, and computer interface could be funded and retrofitted) was based entirely on the assumed availability of the LAMPS I helicopter (and its Navy pilots and accompanying support detachment) for Coast Guard use in wartime. The design rationale for the 270s was that speed was not necessary since TACTAS was most effective only at lower speeds, and that the helicopter would prosecute the attack. Consideration was not given to the speeds required for escort duties in the 1980s and beyond, nor to the warrior's maxim that "speed is life." The ship's 19-knot speed was considered sufficient for offshore fisheries patrols; wartime capabilities were merely an "add-on" to justify the cost of acquisition by a multimission service.

### Fast Patrol Boats

The Coast Guard has a fleet of some ninety commissioned patrol boats that historically has been thought of as a ready fast patrol boat (FPB) fleet in reserve.<sup>20</sup> The Service's patrol boats have served well in wartime. In World War II 83-footers were shipped to Europe to perform combat search and rescue during amphibious landings. In the 1950s the 95' Cape class were equipped with a basic sonar and Hedgehog antisubmarine rockets; their ASW mission was directed toward coastal defense in the diesel submarine and cold war environment. In the 1960s, 82' Point-class patrol boats were shipped to Vietnam in support of Operation Market Time, the success of which forced the enemy to rely almost exclusively on the inland Ho Chi Minh Trail for logistics support.<sup>21</sup> Today, the 25 to 35-year-old Point and Cape-class patrol boats are being phased out of service and replaced by the 110' Island-class fast patrol boats (the Coast Guard hull designator for all patrol boats, regardless of size or speed capability, is WPB). Eighteen 110' WPBs are presently in commission, with another nineteen under construction. In addition, a follow-on class of fast patrol boats is planned, the 120' Heritage class, which will begin production in 1991 if the prototype proves to be successful.

The practical surface platform of choice for Third World nations is the fast patrol boat or missile attack boat. Most major powers, particularly the Soviet Union, also maintain a sizeable, capable missile/patrol boat fleet, as a review of *Jane's Fighting Ships* will attest. Specifically, the Soviet Union maintains nearly 300 FPBs, North Korea 250, and the People's Republic of

China 900. Other significant FPB threats include Libya, Iran, Cuba, and Nicaragua. Yet the U.S. FPB capability, when expressed in terms of ready units of genuine combat potential, ranks alongside that of Angola, Romania, and Bahrain.<sup>22</sup>

In recognition of this shortfall in the surface force mix, particularly as applicable to meeting requirements for low intensity conflicts, the Navy has funded a significant portion of the Coast Guard's FPB acquisition cost. However, as discussed in the previous sections on high endurance and medium endurance cutters, space and weight reservations for weapons and sensors (and surplus electrical capacity to power sensors and drive missile launchers) were included in the design of the Island-class WPBs, but the warfighting capability of these potentially very capable platforms exists only on paper. Their peacetime weapons outfit consists of one 20mm machine gun and two M-60 light machine guns. The only sensor is a surface search radar. In a "come as you are" war of any scale, will there be time for retrofit and crew training? Will there be shipyard space available and weapon systems waiting on the shelves? I think not, and I have found no indications to the contrary.

In April 1988, five 110' WPBs were placed on alert for deployment to the Persian Gulf to support U.S. naval forces and merchant shipping there. They were the right platforms to counter the primary surface threat, i.e., fast attack boats and suicide craft. The 110s are fast, highly maneuverable, and are a low-cost (expendable) platform. Fortunately, the Coast Guard and the Navy recognized the fact that these boats were not equipped to do the job in their peacetime configuration, so a plan was issued to perform a quick retrofit with weapons that were sufficient to meet the existing surface threat (although insufficient to meet any greater threat). The minimum time foreseen for retrofit, crew training, and transit to station was in excess of 60 days, and this of course was in a peacetime environment with a dedicated shipyard priority. Clearly, in a wartime environment this process would take even longer. As it turned out, the deployment was cancelled due to vehement Congressional opposition which influenced the President against signing the approving order, so we never found out how long a "mini-retrofit" would actually take.<sup>23</sup> However, I believe that this incident demonstrates the infeasibility of planning force structures with "paper weapons."

The navy does have six fast missile boats, the PHMs, that pack a potent punch, but it plans no new ones. And—"at 100 million dollars per copy, the fragile PHM (Patrol Hydrofoil Missile), the country's only missile-armed FPB platform, hardly represents the kind of expendable low-value unit that is the hallmark of a successful FPB design."<sup>24</sup> I hasten to add, by way of comparison, that the Coast Guard 110' Island class and proposed Heritage class<sup>25</sup> are produced at \$7 million per boat. In terms of capabilities, the Island-class boats have a top speed of over 29 knots, and this can easily be upgraded to over 40 knots, which would enable them to compare very favorably with hydrofoils

and the missile boats of other nations.<sup>26</sup> In this light, the Coast Guard's patrol boats are quite a defense bargain as a low-mix force multiplier, with a potential for a fleet of 73 boats in commission by the end of this century.

The majority of the maritime nations of the world, and those nations who maintain naval forces, believe that fast patrol boats and/or missile boats are a valuable part of their surface forces mix. But significantly, the United States has not maintained a combat ready FPB force, despite the many potential (and historical) wartime or low intensity conflict missions which include: chokepoint control, escort, and defense; close blockade; operations in mine-threatened waters; picket boat duty (within the MDZ—or—in support of anchored amphibious assault groups); landing craft escort in support of amphibious operations; antiterrorist and special operations; coastal surveillance and interdiction (within the MDZ—or—forward deployed as in Vietnam); defense against enemy FPBs; and orange force simulators in fleet training.<sup>27</sup>

However, these valuable platforms will be of little use to the nation beyond their peacetime duties if the ships and their crews are not equipped and trained to deploy and to fight at a moment's notice. The Warsaw Pact nations do not operate their fast patrol/missile boats on a "space and weight reservation" proviso for weapon systems retrofits. Nor should we.

## Aircraft

The Coast Guard has been even more parochial in its approach to acquiring aircraft that are peacetime mission-specific than it has been for ships, which are justified as being wartime capable through retrofit. With the exception of the venerable C-130, there has been little interoperability between DoD and USCG airframes, component systems, support availability, and crew training for similar types of aircraft. Exacerbating this problem is the fact that two of the Coast Guard's major airframe types are foreign-designed and built (although U.S. assembled, mainly using U.S. engines and avionics) and have proven to be difficult to support even in peacetime.

There are really only three wartime missions for Coast Guard aircraft: ocean surveillance, logistics support, and combat search and rescue. To this end, most of the Service's aircraft, both fixed-wing and rotary-wing, have wartime tasking in support of the east and west coast MDZ commanders, and this is certainly appropriate for their capabilities. Current readiness planning has two C-130 squadrons, of three planes each, listed for overseas deployment, leaving 23 C-130s available for tasking within the respective MDZs. However, the C-130 is the only aircraft that the Coast Guard possesses that is truly interoperable with those of the other services, and it is, I believe, a potential candidate for backfilling DoD requirements arising from shortfalls at commencement of hostilities or due to C-130 attrition in theater. According

to defense analyst Jeffrey Record: “. . . more than a few Army officers have come privately to believe that the Air Force cannot be counted upon to meet the full spectrum of the Army’s future fixed-wing tactical airlift needs . . . [because of] the Air Force’s longstanding failure to come up with a replacement for the C-130 (indeed, its willingness to cut the existing C-130 fleet by one-third in order to pay for and man the C-17 fleet).”<sup>28</sup> Coast Guard C-130s have ocean surveillance as a primary wartime mission, with logistics supply as a secondary mission. However, from my correspondence with USCG Headquarters Office of Defense Operations: “. . . surveillance will be subordinated to logistics when the rubber meets the road . . . for the most part we can expect to see the C-130s become their respective fleet CINC’s air logistics arm.”<sup>29</sup> Because of the interservice commonality of this aircraft, I can also envision a potential for their being commandeered (appropriated) for intra-theater tactical airlift should the need arise.

Where the Coast Guard lacks service interoperability to a fault, for both peacetime and wartime missions, is in its acquisition of the French-built Dassault Falcon jet (service-designated HU-25A). The rationale for purchasing 41 of these airframes was that they would provide “dash” capability to incidents offshore and would finally bring the Coast Guard into the jet age. Field experience has shown that these aircraft have very limited endurance even for peacetime surveillance work (approximately four hours endurance, averaging two hours or less actual on-scene time); but more significant is the fact that they have a low reliability record, complicated by difficulties in parts acquisition from France.<sup>30</sup> According to Vice Admiral D. C. Thompson: “. . . we are on our own in terms of supporting the HU-25, the Falcon jet . . . we suffered a lot of down time from cannibalization and long lead-time for spares for the power plant but we are recovering from that . . . and now we need airframe parts as they begin to wear out or get worn and go out of tolerance. We’ve had some difficulty acquiring the airframe parts. We’ve had problems coming to terms with the French in terms of pricing . . . it was much more difficult to get an audit, and since we were sole source for the aircraft, the audit ultimately had to be worked with the French Government.”<sup>31</sup>

When and if these aircraft are needed in wartime, it appears unlikely that the availability of spare parts from Dassault in France will improve. Indeed, as a major manufacturer of military (i.e., Mirage jet fighters) as well as transport aircraft, in all likelihood the needs of the U.S. Coast Guard will place quite low on the list of French priorities in the event of war in Europe.

The Falcon jet’s sole wartime mission is ocean surveillance within the MDZ. Its short legs and lack of cargo capacity (other than executive transport) preclude any other mission. For peacetime missions it carries a fairly sophisticated array of radar and optical (including infrared) surveillance equipment. However, it carries no long-range electronic sensors and thus is

severely limited in a contemporary environment of hostilities. Once again, to quote Vice Admiral Thompson: "As we look at the Coast Guard's participation in the Maritime Defense Zone, we will be exploring the possibility of increased sensor capability, or perhaps some different equipment to help us in the offshore areas. There's a crying need to know who's out there and what they are up to. We are still limited considerably by our sensor capability."<sup>32</sup>

To return to the theme of interoperability, the Coast Guard—even if bound and determined to purchase a modified business jet—missed or deliberately overlooked an opportunity to purchase an American-built aircraft of very similar characteristics to the Falcon jet and one that is in the DoD and Federal Service inventory. Just as the HU-25 is a modified Dassault Falcon "bizjet," the Navy's T-47 is a modified Cessna Citation bizjet. To date, Cessna has built 15 T-47As for Navy navigator training, and Cessna has a modified version of the same airframe for the Air Force's tanker transport training system. The Air Force is considering the purchase of 211 of these aircraft for pilot training.<sup>33</sup> Coast Guard use of the same airframe would have resulted in commonality of parts, engines, some avionics, and the potential for the Federal Stock System as a central point of supply; and most importantly, any wartime scenario would not interrupt the availability of parts and airframe components from this American manufacturer. As for training, the joint utilization of this aircraft, despite its varying modifications for USN, USAF, and USCG use, would have resulted in a larger pool of type-rated pilots.

With 41 Falcons now in service, it is too late for the Coast Guard to rethink this idea. Let us hope that when the HU-25 needs replacement in fifteen years, the Service's military readiness mission and the concept of joint service interoperability will occupy a substantial portion of the needs analysis when airframe procurement is being considered.

The Coast Guard's French-built Aerospatiale HH-65 Dolphin medium-range helicopters have shortcomings similar to those of the Falcon. Although intended for shipboard as well as land-based use, these aircraft were acquired solely for peacetime missions and have no wartime application other than harbor surveillance within MDZ sub-sectors. If desperately needed because of wartime helicopter attrition, they could be used by aircraft carriers or their escorts as plane guard rescue vehicles, but they have no intra-theater combat SAR capability: no armor, no inflight refueling capability to overcome their short legs, and only a small payload capacity.

Refreshingly, the Coast Guard is taking a step in the right direction with procurement of the Sikorsky HH-60 helicopter to replace its aged fleet of HH-3s. Thirty-five aircraft will be produced as the HH-60J variant for the Coast Guard in a joint contract with the Navy for fifty-three new aircraft.<sup>34</sup> The Army operates the HH-60A Black Hawk variant, and since 1986 the Navy has been building 24 HH-60 LAMPS III helicopters per year.<sup>35</sup> This new

aircraft will be supportable through commonality of American-built parts and airframes. In addition, it will be built to military specifications as opposed to international civil aeronautics specifications as is the case with the HU-25 and HH-65. Another step in the right direction (towards militarily useful aircraft) is that the HH-60J will be the first Coast Guard helicopter capable of carrying external loads from installed hard points. Although akin to the "space and weight reservations" philosophy that the Service maintains toward surface platforms for wartime use, no weapons retrofit is currently envisioned for the HH-60J. However, this mode of construction would indicate the potential for a Navy retrofit if the need arose for additional airframes due to wartime attrition of LAMPS helicopters.

Since May of 1987 the Coast Guard has operated two Grumman E-2C Hawkeye electronic surveillance aircraft, which are on loan from the Navy and operated in Coast Guard livery. These aircraft are being used for the detection of drug smuggling aircraft and most certainly will be returned to the Navy in time of war or national emergency. However, this program is of joint-service value from a training standpoint that will in time produce a larger pool of experienced E-2C pilots and systems operators from which to draw in wartime.

The Coast Guard performed well in World War II as a fully integrated component of the Navy. Though in December 1941 the Coast Guard had only eleven high endurance cutters, because the war lasted so long it had the time to retrofit, augment, or build new ships. Eight divisions (46 ships) of the patrol frigate (PF) class and five divisions (29 ships) of the destroyer escort (DE) class were all Coast Guard manned, providing for more than a third of the total U.S. escort ship capability in the Atlantic theater.<sup>36</sup> In Vietnam, the Service's peacetime weapons and sensors installed aboard the high endurance cutters were sufficient for the tasks assigned (i.e., coastal surveillance and interdiction and naval gunfire support). The 82' patrol boats assigned to coastal interdiction and riverine warfare required only the installation of a few additional machine guns and mortars.

Today however, American naval forces face a variety of threats from increasingly sophisticated and capable weapon systems. The lucrative and often politically motivated international arms market has provided Third World nations with substantial capability to harm American naval forces in any limited or unlimited conflict (damage to the frigates *Stark* and *Samuel B. Roberts* in the Persian Gulf being notable recent examples). Thus, the Coast Guard, as a naval force-in-being with a wartime mission, must acquire and equip its major platforms in peacetime to meet any wartime contingency. And it must train its people accordingly. The Coast Guard is organized on paper to support the maritime strategy, with some major air and surface platforms forward deployed but with the remainder assigned to MDZ tasking,



a mission without which the main body of the nation's naval forces could not be forward deployed for very long. But the Service's role of coastal defense and protection of the coastal sea lines of communication cannot be realistically accomplished without warfare-capable platforms.

To provide but one example, the Gulf of Mexico and the Caribbean Sea are areas that the Coast Guard patrols heavily and regularly in peacetime. In the event of hostilities between Nato and the Warsaw Pact forces, it can be predicted that Cuban forces (which now include more than 200 modern tactical aircraft, many patrol combatants, and two Foxtrot-class submarines) would be a direct threat to Nato supplies originating from American Gulf Coast ports.<sup>37</sup> In support of forward deployed naval forces, Coast Guard high endurance cutters or frigates operating in concert with fast patrol boats and land-based naval air could counter or neutralize this threat, but only if properly equipped and trained.

Coast Guard commanders cannot be prepared to fulfill their wartime responsibilities when all they have at their disposal are space and weight reservations for weapon systems that may or may not be available when needed. Retrofitting satisfies only the budgeteer and the requirements for maintaining a notional force on paper. A military service with *Semper Paratus* [Always Ready] for its motto will need more than space and weight reservations in the next "come as you are" war. Forty-four years of peacetime requirements have dominated acquisition and construction decisions to the detriment of the Coast Guard's underlying readiness mission and military force capabilities. Commonsense solutions, such as buying frigate-class ships that have been proven in production, must be taken seriously in the future.<sup>38</sup>

Complicating the Coast Guard's preoccupation with meeting peacetime tasking to the detriment of wartime preparedness has been an uneasy relationship with the Navy's force planners. In the past decade the Navy has feared that providing the Coast Guard with state-of-the-art interoperable weapon systems would create a significant drain on its own budget. Moreover, the Navy has feared that Congress would count a fully capable WHEC/WMEC/WPB fleet as a part of the 600-ship fleet. This fear is unsubstantiated as the issue has never been addressed in the Congress or in any politico-military forum. The Coast Guard should not be viewed as a threat to the Navy's budget. It is a "defense bargain": a naval augmentation force-in-being that is a low-cost solution to the need for the additional resources required to compensate for the declining numbers of medium and small-sized Navy vessels. Coast Guard forces not only help to reduce the resource shortfall, but also release more Navy forces to forward deploy.<sup>39</sup>

The Coast Guard has a long and proud tradition of contributing significantly to the nation's security and defense. But at the present time and for the foreseeable future, *Semper Paratus* no longer applies, because the Coast Guard is not prepared to fight.

## Notes

1. Robert E. Johnson, *Guardians of the Sea: History of the United States Coast Guard 1915 to the Present* (Annapolis: U.S. Naval Institute Press, 1987), p. 256.
2. Admiral Paul A. Yost, Jr., "Coast Guard Has Key Role in Major Elements of National Security," *ROA National Security Report*, August 1988, pp. 1, 3, 4-5.
3. Commander Bruce Stubbs, "The Coast Guard's Dilemma," U.S. Naval Institute *Proceedings*, April 1987, p. 46.
4. Lieutenant John N. Leonard, "The Coast Guard, Readiness, and the 'NBT' (Next Big Thing)," *USCGA Alumni Bulletin*, August/September 1988, p. 17.
5. *Ibid.*, p. 19.
6. FACT FILE, *USCG Community Relations Branch (G-CP-3)*, 1988-89, p. 21.
7. Lieutenant Paul H. Crissy, "Opinion and Commentary," *USCGA Alumni Bulletin*, August/September 1988, p. 3.
8. Letter from Lieutenant Commander D. A. DiIulio (G-ODO) to Lieutenant Commander W. L. Ross, 22 December 1988.
9. Norman Polmar, "Memorandum for Dr. Dov S. Zakheim/DUSD(P&R)," dated 3 September 1986 (copy provided to the author by USCG HQ G-ODO).
10. Extracts from *The Guard and Reserve in the Total Force* (Washington, D.C.: National Defense University Press), p. 72.
11. *Ibid.*, p. 73.
12. The traditional "shipdriver's" lament is that most of our cutters were designed around their towing bitt, with the main battery welded to the "pointy end" as an afterthought . . . and there is much credence to this.
13. Lieutenant Richard E. Tinsman, "Slashing the FFG-7s," *Proceedings*, April 1984, p. 133.
14. The NAVGARD Board is comprised of eight Coast Guard and ten Navy flag officers and meets when necessary to establish Navy/USCG coordination of policy, employment, outfitting, and manning of facilities and/or programs of mutual interest. The Board is co-chaired by the VCNO and the Vice COMDT.
15. Letter from DiIulio to Ross.
16. Captain Robert G. Moore, "The Bear Facts," *Proceedings*, August 1983, p. 114.
17. Because the 270' delivery program has been delayed several years due to contracting disputes and shipyard strikes, and because those that are in commission are being used for drug patrols, the old "miscellaneous" WMECs have been handling the bulk of the fisheries patrols. I patrolled the Atlantic area from 1982-84 aboard the 44-year-old, 180', 12-knot *Evergreen* and she handled the job quite well, seizing two foreign fishing vessels and three drug smugglers who stumbled across her bow.
18. U.S. General Accounting Office, *The Coast Guard Needs Navy Weapon Systems to Meet Wartime Mission Requirements*, Report to the Secretary of Transportation (Washington: 1984), pp. 1-2.
19. *Ibid.*, pp. 2-3.
20. Lieutenant C. A. Abel and Lieutenant H. A. Black, "Missing the Boat," *Proceedings*, September 1988, p. 63.
21. Johnson, pp. 245-246, 331-338.
22. Abel and Black, p. 62.
23. Related from personal experience as commanding officer of the USCGC *Vashon* (WPB 1308), 1986-88. The *Vashon* was one of the five ships proposed for this deployment. Congress opposed the deployment out of concern for the Coast Guard's efforts in fighting the drug war in a time of fiscal austerity and reduced patrols due to lack of fuel money.
24. Abel and Black, p. 62.
25. "The New 120 Footers," *Proceedings*, September 1988, p. 63.
26. The Island-class boats were built under license to a modified British Vosper-Thornycroft FPB design. Because of legal and contractual restrictions, the Coast Guard could not alter the engines, reduction gears, shafting, or screws during construction. Prior to construction, however, the engine manufacturer had upgraded the engine's brake horsepower (BHP) on all available models and thus the engines had to be governed down from 4,000 BHP each to 3,000 BHP each so as not to break the shafts at full power. All that is required to utilize full power available is to change the propeller shafts with ones of larger diameter and to reset the governors. The Coast Guard sees no need to do this with the vessels in their peacetime configuration.
27. Abel and Black, pp. 57-61.

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28. Jeffrey Record, "Determining Future U.S. Tactical Airlift Requirements," *Special Report—International Defense Publishers*, 1987, pp. 13-14.

29. Letter from DiIulio to Ross.

30. HU-25 Falcon jets (officially referred to as the HU-25A Guardian) were my primary air cover for Caribbean drug interdiction operations during my tenure as CO of USCGC *Vashon*. Because of their unreliability and long lead-time for parts, I received an average of three sorties per year from these "hangar queens."

31. Vice Admiral D. C. Thompson, "Interview," *Proceedings*, October 1986, p. 168.

32. *Ibid.*, p. 174.

33. J. Mac McClellan, "Cessna T-47: The Navy's Super Citation," *Flying*, December 1988, pp. 70-76.

34. PA1 Brad Terrill, "New Helicopter Joins Air Fleet," *USCG Commandant's Bulletin*, December 1988, p. 14.

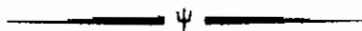
35. U.S. Army War College, *Forces/Capabilities Handbook: Volume II, Weapon Systems*, 1 September 1987, pp. 3-39.

36. Rear Admiral Kenneth G. Wiman, "The Destroyer Escort in the Coast Guard," *USCG Engineer's Digest*, Summer 1984, p. 3.

37. Lieutenant Dennis T. Stokowski, "The FFG-7s in War and Peace," *Proceedings*, April 1984, p. 114.

38. Commander Ronald Fraser, "The Coast Guard: Quo Vadis?" *Proceedings*, February 1984, p. 45.

39. "Navy/Coast Guard Long Term Ship Procurement Policies," an unpublished, internal "think piece" provided to the author by USCG HQ Defense Operations Office (G-ODO), 22 December 1988.



"Vastly superior though the British navy was to the French in Napoleon's time, its tasks were so numerous and onerous that, to quote again, it could not be in force everywhere, and there was always the chance that a hostile division might fall in with an important convoy. Protection localized with the convoy, that is, a body of armed ships in company, was therefore necessary, and the force of these armed ships was proportioned to the importance of the enterprise. It is necessary in this day of ours to remember that the convoys did sail to and fro, and that they were thus protected, fortified, so to say, by armed vessels. . . ."

*Naval Strategy*

A. T. Mahan (1911)

Little, Brown (1918), pp. 208-209