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Marine Collisions in the Vertical: Submarines Surfacing

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It now seems so long ago that the story of the collision of the *U.S.S. Greeneville* and the *M/V Ehime Maru* dominated newspaper headlines and hourly news flashes on radio and television. In the wake of their collision off Oahu, the matter quickly shifted from a drama at sea to a drama in court, as investigation led to Navy hearings for determination of the collision's causes and culpability. At issue in those hearings were the performances of both crews, and particularly that of the crew of the *Greeneville*, for whom there loomed for a while the specter of trial by court martial for breach of the Uniform Code of Military Justice. Eventually, a formal board of inquiry made findings supporting its recommendation of disciplinary action short of court martial, and, after the *Greeneville's* captain resigned from the Service, the matter faded from public view.

There is more to a collision at sea than "mariner error" and the concomitant possibility of criminal or professional sanctions for mariners found to have erred. Somewhat like corporations, ships themselves are regarded as distinct legal persons by maritime law and courts; like corporations, ships are both bound by duty and at risk of liability for its breach. Indeed, in the particular circumstances of collision at sea, the legal positions of two vessels are determined largely by reference to their relative situations in the period leading up to their calamitous contact. Before any collision, one vessel is said to be "burdened" with regard to another, which is said, in turn, to be "privileged". The burdened vessel is always obliged to maneuver so as to avoid a privileged vessel, and failure of avoidance generally leaves the burdened vessel at least partially, if not exclusively, at fault and liable for the damages ensuing.

Rules of the Road regulate vessel traffic in both international and inland waters. Those pertaining to international waters are embodied both in a multilateral treaty to which seafaring nations are all parties and in the domestic law of the United States. When the *Ehime Maru* and the *Greeneville* steamed that day off the coast of Hawaii, the same collision avoidance rules applied to both the Japanese training vessel and the American nuclear submarine. For example, each was at all times required by Rule 5 of the Rules of the Road to "maintain a proper look-out by sight and hearing as well as by all available means in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision." Each vessel was at all times obliged by Rule 6 to proceed at a safe speed "so that she can take proper and effective action to the avoid collision and be stopped in a distance appropriate to the prevailing circumstances and conditions." Among the factors to be taken into consideration in determining a safe speed, Rule 6 lists the state of visibility and the maneuverability of the vessel "with special reference to stopping distance and turning ability in the prevailing conditions." Both vessels were obliged by Rule 7 to use all available means appropriate to the prevailing circumstances to determine if risk of collision exists, and to resolve any doubt by assuming that a risk exists.

The Rules of the Road refer to radar, but not to sonar. A vessel with radar is obliged by Rule 7 to make "proper use" of it for early detection of a collision risk and for systematic observation of detected vessels. The same rule dictates

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that, "Assumptions shall not be made on the basis of scanty information, especially scanty radar information." What Rule 7 says about vessels equipped with radar seems informative about what might be required by law of vessels equipped with sonar. According to Rule 2, "Nothing in these Rules shall exonerate any vessel, or the owner, master, or crew thereof, from the . . . neglect of any precaution which may be required by the ordinary practice of seamen or by the special circumstances of the case."

That marine collisions in general do not occur with greater frequency has often been explained by mariners with reference to the "big ocean-small boat" theory of probability. A corollary might take into account the third dimension in which submarines operate and the proportion of time at sea spent by a modern submarine at depths well out of the way of other vessels. There is, nevertheless, a small collection of reported judicial decisions involving submarines. The first, *Nantasket Beach Steamship Co. v. United States*, 292 F. 389 (D. Mass. 1923), appears to have been filed promptly after passage of the Act of Congress waiving sovereign immunity for the first time in cases in which damage was alleged to have been caused by a naval vessel. Five years earlier, the submarine *L-10* had collided with the *Mayflower*, a side-wheeler ferry carrying 1,200 passengers, while the two vessels were passing in a fogbound Boston Harbor, and the court found the submarine liable for proceeding at an immoderate speed on the wrong side of the channel. That the *L-10* was a submersible was of no legal moment. This was a collision case of the garden variety, and the government did not appeal. Shortly after the collision, the *L-10* transited the Atlantic and spent the rest of the war hunting German u-boats off the British Isles.

Submarines diving and surfacing have on occasion entangled themselves in fishing nets, especially those deployed in dragging or trawling for fish. In *Woodbury v. United States*, 75 F. Supp. 829 (D. Mass. 1948), vacated and remanded, 175 F.2d 854 (1st Cir. 1949), the *Sea Owl*, a veteran of three war cruises in the Pacific during WWII (and the winner of five battle stars), was conducting routine diving tests in a designated submarine operating area off the Massachusetts coast at Ipswich Bay. She was accompanied by a surface vessel, the *Falcon*, who flew the signal flags *How* and *Peter* from each yardarm. According to the International Code of Signals in effect at the time, the two flags together communicated to all mariners that "Submarines are operating in this vicinity; you should navigate with great caution."

On a clear day, in a calm sea, and after observing her by periscope, the *Sea Owl* snagged the nets of the trawler *Ariel*. The *Ariel*, which had not noticed the periscopes or their wakes, altered course into danger after the submarine went blind. Quick action on the part of the *Ariel's* crew separated the fishing boat from her net before the momentum of the submarine could drag her under. Afterward, the vessel's owner sued to recover the value of his lost nets. Judge Wyzanski, then serving on the federal district court in Massachusetts, found the submarine at fault for submerging on a course that would take the sub into dangerous proximity to the trawler. He declined to find the trawler also at fault for her failure to display signals indicating that she was trawling. On appeal, the fault of the submarine was affirmed. The words of Circuit Judge Woodbury writing for the court of appeals bear repeating:

We think it clear that the operation of a vessel below the surface where she cannot be seen and cannot give visual or audible signals, creating as it obviously does manifest "dangers of navigation and collision" not only to herself but to other vessels in the vicinity, constitutes a "special circumstance" . . . and thus invokes the so called "special circumstances" rule embodied as to inland waters in [what is now Rule 2, see above]. And we think that application of this latter rule requires the submerged vessel to "keep out of the

way" of the surface vessel regardless of their respective courses for in the very nature of the situation the ordinary surface vessel cannot know or be expected to know of the submarine's presence, whereas the latter with her periscopes and sound gear can not only know that a surface ship is in the vicinity but can also determine that vessel's course and speed

In short it seems to us that a submarine, operating as the Sea Owl was operating during the seven minute interval preceding her entanglement in the Ariel's net, is analogous to a surface vessel operating blacked-out at night as far as visibility is concerned. That is to say, we think it is just as difficult to see the periscopes of a submarine in the daytime as it is to see a blacked-out surface vessel at night. Therefore we regard as in point the Lind and Australia Star cases, supra, in which it was held, applying the "special circumstances" rule, that a blacked-out vessel, although on a normally holding-on course, is required to "keep out of the way" of a lighted vessel, although on a normally giving-way course, for the reason that it is "substantially impossible" for those on the lighted vessel to see the unlighted one very far away, and even if they should see her, to make out her course and speed, and for the further reason that the navigator of the lighted ship, knowing that his vessel could be plainly seen, would be "justified in supposing" that the navigators of the unlighted ship would shape the course of their vessel to avoid him, since they would know that their vessel could not be seen or anything done to avoid a collision with her until she was close at hand.

The court of appeals went on to reverse the judgment below excusing the trawler, finding that, while no rule explicitly obliged a trawler to signal that she was dragging her net, she was obliged in this instance to do so by what is now Rule 2 because she was trawling in a designated submarine operating area with actual notice of a submarine operating in her vicinity. Both vessels were therefore to blame for the collision.

In 1975, forty miles off Cadiz, the nuclear submarine *Von Steuben* was underway and submerged, serving as a target for the exercise of Spanish submarine hunting helicopters. The game was afoot in a military exercise area identified on navigation charts used by mariners. The sub's active (pinging) sonar was silent, in order to evade her hunters. By passive (listening) sonar, her crew detected a surface vessel approaching, and the sub was maneuvered to cross that vessel's wake, so that the submarine's noise might be shielded from the sonars of the helicopters above. What the crew of the sub did not realize was that the noise overhead was that of a tug, the *Fairplay X*, with an inoperative vessel, the liberty ship *Sealady*, following silently in tow. The *Von Steuben's* bow planes tangled in the submerged towline, jamming so that the sub threatened to sink to the bottom. In response to this predicament, her commander ordered an emergency surfacing maneuver, that is, he ordered the main ballast blown. The sub promptly came up under the towed vessel, lifting her out of the water and so seriously damaging her that she had to be beached in order to avert her sinking, which resulted in a total loss of both the vessel and her cargo. Owners of both tug and tow later sued the United States in the Southern District of New York, and, in *Brodosplas v. United States*, 1975 AMC 117 (S.D.N.Y. 1975), the court found the *Von Steuben* to be solely at fault for the collision. According to the court, fault for the collision lay not in the sub's ballast blow, but in her earlier turn across the tug's wake, which led to ensnarement, and thence to collision. It was apparently black letter law for the court that "A submarine submerged is a burdened vessel." No authority for that proposition is cited in the court's opinion. The court went on to identify several steps that, as burdened vessel, the sub might have taken that would have revealed the presence

of the tow. The most compelling of these was to coordinate communications ahead of time with the helicopters overhead, so that they might alert the submarine to what she could not see. Among the court's findings was the fact that "it is not the practice of the Navy to use picket boats while submarines are operating." For the court, "Such a policy is not evidence of what would be proper conduct, where maneuvers are being conducted in normally used sea lanes near a harbor." Regarding an emergency blow, the court was persuaded that:

The evidence is clear in showing that the surfacing of a submarine is a dangerous maneuver at any time. In an emergency blow there is no control over speed of surfacing. In the Von Steuben's situation, the use of the periscope or sonar would have been of no value, since the position of the submarine at the time of the order to blow was beyond the control of the vessel's crew.

In this case, the court was convinced that the captain had "acted properly in ordering the emergency blow. He had lost control of his ship, his stern planes were jammed, and the possibility of an irreversible plunge to the bottom of the ocean was very real." No appeal was made from the decision of the district court. The *Von Steuben* served another nineteen years before decommissioning in 1994.

It seems clear from the published reports that the *Greeneville* blew main ballast merely to demonstrate a maneuver (or the prowess of her crew in its execution), and not to escape from danger. By ordering that maneuver, her captain consciously surrendered control of her steering and speed, at a time when the sub was blind, that is, after he had downed scopes and taken her deeper.

For obvious reasons, the Navy refrains from advising the public in advance of the time, place, or nature of submarine operations, and our submarines operate routinely beneath the surface of international waters open to any vessel. It also seems that, at some time after 1946, when the *Falcon* accompanied the *Sea Owl*, but failed to warn off the *Ariel*, the Silent Service abandoned the practice of assigning surface escorts for submarines conducting surfacing and diving exercises. The Spanish helicopters chasing the *Von Steuben* might have saved the *Sealady*, had the intrusion of the tug and tow prompted them to switch roles from adversaries to airborne escorts for the American sub. They might then have warned off the tug and tow, or else alerted the sub below. Instead, because the role of safety escort had not been suggested in the planning or preparation for their joint exercise, they did nothing.

There is a whiff of hubris in assuming a modern submarine will always avoid other vessels while at the shallow depths they occupy in common. Detailing a surface or airborne escort for training evolutions at those depths seems no more than common sense, and would not materially jeopardize the secrets of submarine whereabouts or their capabilities. Perhaps that Old Navy way of doing things is getting another look where contemporary submariners gather to discuss the safety of their training and operations.