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# Collision Law in the Next Millennium

Joseph C. Sweeney\*

*The Article predicts—based on present trends—what maritime transport may be like in the year 2025. Larger vessels will speed across the oceans, but their increased electronic wizardry will not bring an end to the recurring nightmare of collisions in crowded seas. The IMO may achieve near dictatorial powers to regulate vessel navigation and control pollution of the air and sea. In many ways vessels operations may resemble those traditional for aircraft, while expectations of privacy no longer exist. Human error can still be counted on to produce careless decisions that cause damage to one great ship and the total loss of another, with accompanying personal injuries and cargo damage.*

In 1887, Edward Bellamy, an American lawyer and author published his utopian novel, *Looking Backward—2000-1887*, in which he attempted to portray the American scene in 2000.<sup>1</sup> Over one million copies of the book were rapidly sold. Several of his predictions regarding social life in an industrial society are evident today, but his visionary socialism has not emerged.

Like Bellamy, this Article shall attempt to predict the future. Our time frame is much shorter than his and our subject matter—vessel collision and the limitation of shipowner liability—is different. Rather than hibernating for 113 years and “looking backward,” this Article shall use the example of a voyage of a liner service vessel from New York to Rotterdam in 2025, describing the problems encountered. Welcome aboard!

The U.S. flag vessel M/V OLERON STAR is a large, fast container-carrier, 70,000 gross tons, 900-foot length by 120-foot breadth with capacity to carry 5,000 new eighty-foot by eight-foot by eight foot containers, now constructed of a super-strength plastic. The containers are wheeled so as to roll-on and roll-off the ship; the total time to load and unload is only four hours at each port. The vessel is thus loaded almost automatically at its New York Harbor pier (actually in New Jersey). The vessel is operated by a Master, a chief mate, three junior mates and seven crew members. The corporate owner, Star Shipping Co. of New York has instantaneous communication with the ship and keeps a precise plot of the ship's location at all times together

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1. See EDWARD BELLAMY, *LOOKING BACKWARD—2000-1887* (1887).

with all the inputs to the ship's electronic navigation charts, thanks to satellite communication.

Prior to sailing and before loading, the vessel had tied up to the special electric-charge station for a new charge to be added to its submarine-type electric batteries required by the International Maritime Organization (IMO) Pollution Prevention Regulations, which require electric power to be put in operation within New York Harbor and at a radius of 100 miles from the Ambrose Light Station. At the Eastern end of the projected voyage, battery propulsion is again required by the IMO regulation in the English Channel from a line drawn between Penzance (Cornwall), England, and Ushant or Ouessant Isle (Brittany), France. Propulsion by polluting fossil fuels is forbidden in these pollution-free zones.<sup>2</sup>

The vessel had also taken on its more traditional form of bunkers, an alcohol and kerosene preparation that can be mixed with seawater and burned by the modified jet engines during open ocean sailing.

Navigation out of the Port of New York will be under the direction of the Federal Port Safety Authority (FPSA) (part of the U.S. Coast Guard) whose high-definition radars and computers have taken the place of harbor pilots. Masters of vessels are required to follow the directions of FPSA when preceded by the words "You are ordered to . . ." Violation of these orders is enforced by the Coast Guard in U.S. courts. In addition to its capacity for forward propulsion at forty to fifty knots, the vessel has omni-directional pushing capacity, making it unnecessary to have the assistance of tug boats and docking masters during the close maneuvers coming up to the pier.

The vessel's open ocean navigation is under the direction of the IMO's International Safety Enforcement Directorate (ISED) which controls the mandated multi-lane highways for vessels crossing the Atlantic Ocean in either direction. For this eastbound voyage the vessel will be directed to proceed at the speed of twenty knots from Point Alpha 2001 (the Ambrose Light Station) to Point Alpha 2002 (off Nantucket Island), then to Point Alpha 2003 (west of Cape Cod), which is the navigational gateway for Route A2000 of the IMO Atlantic Route system. Point Alpha 2003 is the first navigational checkpoint in a series of 12 checkpoints about 300 miles apart until the first European checkpoint off the Irish coast (Point Alpha 2015) is reached, also under the ISED. The most important function for the

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2. The battery operational requirement continues through the English Channel to a line drawn between Great Yarmouth (Norfolk), England, and the port of Den Helder, Netherlands.

master, assisted by the chief mate, is to correctly program the ship's Internal Navigation System with the correct latitude and longitude for New York, the correct Eastbound navigational gateway (Point Alpha 2003), and the correct preprogrammed voyage plan (Alpha 2000) for destination Rotterdam, spelled out in a voyage plan that has been previously filed with the ISED. The correctly filed inputs will then automatically feed the required information for the ship's electronic navigation chart (mandated by the IMO) and set the equipment known as "the black box" or Voyage Data Recorder (VDR) (also mandated by the IMO). Sensors in the ship will record more than 100 parameters that will automatically amend the navigation program for unanticipated changes in winds, currents, or engine performance.<sup>3</sup> The 100-sensor inputs plus information about courses and speeds made good, together with pitch, roll, and yaw information will all be recorded in the vessel's "black box" contained in a waterproof, damage-resistant container that is then attached to an orange-colored flotation device. Furthermore, a continuous videotape of the pilot house is kept in its own waterproof damage-resistant container, recording all movements, conversations, and orders in the pilot house during the voyage. In the pilot house, the conning officer has immediate control of the ship's engines and steering mechanisms, without any engine-order telegraph.

The video camera in the pilot house will record the entire voyage of three days. Thirty additional cameras are at work in the ship continuously recording twenty-four hours of observations. The open-ocean sailing speed varies from forty to fifty knots, finally beating the three-day ten-hour speed record of the S.S. UNITED STATES made on July 7, 1952. In fact, the ocean-crossing in three days has brought back valuable cargoes that had been traveling by air for many years. The problem for the ocean-surface vessel in the future will be competition from the huge lighter-than-air structures (blimps) now being constructed with nuclear power, which will make the Atlantic crossing in two days.

While engaged in open-ocean sailing under the ISED, all vessels registered with the directorate—in other words, all passenger and cargo ships of 300 gross tons or more—must travel only in the mandated traffic lanes listed in the ship's voyage plan; thus, the chances of an open-ocean collision with a similar vessel are greatly

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3. Flight Data Recorders on the "Concorde V" aircraft read more than 200 in-flight parameters during the ninety-minute crossing at speeds above Mach Two from New York to Paris.

reduced. Nevertheless, the IMO has been unable to persuade governments to require vessels *under* 300 tons—mostly private pleasure craft, tugs and service craft—to sail only in the traffic lanes mandated by IMO. Problems will also occur in the approaches to busy ports where several different multi-lane highways converge from different directions—as in Rotterdam.

On March 18, 2025, the M/V OLERON STAR was proceeding generally eastward in the English Channel when she entered the ISED's enlarged Vessel Traffic Management System (VTMS) that had originally been established in 1967 by IMCO as a traffic separation scheme. In this scheme, the French side is reserved for eastbound traffic and the English side is reserved for westbound traffic with a median line between the two schemes clearly shown on the electronic charts in use and on the ISED's radars located at Dover. From there, the officers of ISED direct the movements of all traffic in the Channel.<sup>4</sup>

At 0400 on March 18, 2025, the M/V OLERON STAR was proceeding on true course 068 at speed of twenty knots. The Master and the chief officer were on the bridge because they expected to make Rotterdam Harbor later that morning, and the Master was uneasy about the heavy traffic in the channel. There was a crew member standing by the helm, but the automatic pilot was engaged.<sup>5</sup> At 0430, the M/V OLERON STAR's officers noted a patchy fog situation and observed intermittently the two white masthead lights and the green side light of a ship that would later be identified as the M/T VISBY EXPRESS at an apparent distance of three miles, confirmed by ARPA.

The ship's ARPA was equipped with FLIR (forward-looking infra radar) providing a clear picture of the entire navigational picture to the observant mariner. Unhappily, no one was in continuous or even frequent observation with these state-of-the-art devices.

At no time did these officers hear fog signals. The M/T VISBY EXPRESS appeared to be crossing the intended course of the M/V OLERON STAR from port to starboard; accordingly, the M/V OLERON STAR's Master ordered a course change from 068 degrees to 078 degrees—an alteration of ten degrees to starboard. M/V OLERON STAR continued on this course while the Master attempted to contact the office of his port agent at Rotterdam to discuss recent

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4. As with the directives of the FPSA at New York, violations of directions to masters preceded by the words, "You are ordered to . . ." are enforceable by IMO's Safety Enforcement Directorate in the Tribunal of IMO by fine and suspension of navigation privileges of the vessel and her officers.

5. Normally the mate on watch also serves as look-out and helmsman.

problems in discharging procedures. When the M/V OLERON STAR's Master looked up from his conversation, the M/T VISBY EXPRESS was less than a half-mile away. Because New York time was six hours behind local time, there was no one at the Star Shipping Co. Office checking the navigation of the M/V OLERON STAR.

The M/T VISBY EXPRESS was an older vessel of Panamanian registry of 20,000 gross tons, 600-feet long, and 80 feet in beam with a cargo of bagged grain and rare essential oils on a voyage from Rotterdam to New York, proceeding on a true course of 240 degrees, having left Rotterdam at 0100 on the eighteenth. The third mate had the conn, but the ship was on automatic pilot, making about 15 knots in heavy fog and sounding fog signals. Both course and speed had been approved by the M/T VISBY EXPRESS's Master before he retired, although he would later testify that his night order directed that speed be reduced if fog signals were sounded. No reduction in speed occurred. At about 0420, the M/T VISBY EXPRESS's third mate looked at the ARPA scope and observed a contact that would be the M/V OLERON STAR on the starboard bow, then seven miles distant. Recalling the Master's order that the M/T VISBY EXPRESS was not to close a contact at a distance of less than five miles, the third officer altered course to port five degrees from 240 degrees to 235 degrees, at which point he went into the adjacent chart room to get a cup of hot coffee. On returning to the bridge a few minutes later, he was startled to observe that the distance to the contact was now less than three miles, and at constant bearing. The third officer altered course to port again by 4 degrees from 235 degrees to 231 degrees. It gradually occurred to the third officer that there was risk of collision, as he could now clearly see the two white masthead lights and the red side light of the M/V OLERON STAR at a distance of less than two miles and closing. At this point he went to the Intercom and cried, "Master on the Bridge, Pleeeeze!" The M/T VISBY EXPRESS's Master responded within seconds and immediately blew the five short-blast danger signal, ordered the helm at first hard starboard and then hard port. Collision inevitably followed at 0438 on March 18, 2025.

ISED's radar plots are recorded and preserved for a limited time, and the officers on watch at the ISED station at Dover will testify that the M/V OLERON STAR was just barely on her right side of the VTMS separating line, but the M/T VISBY EXPRESS had crossed into the same traffic lane as the M/V OLERON STAR and was not navigating on her proper side of the VTMS line. In terms of the 1972 COLREGS, as amended, the navigational situation when each vessel was in sight of the other was a crossing situation. This was also

obvious from the ARPA, if attention had been paid by bridge personnel on both ships. While there was considerable traffic in the English Channel at the time of collision, it did not appear that the navigation of the two colliding vessels had been impaired by the presence of other vessels.

In the collision, the bow of the M/V OLERON STAR struck the starboard side of the M/T VISBY EXPRESS forward of the central bridge area at an angle of about forty degrees. It was a deep penetration, piercing both of the double hulls of the M/T VISBY EXPRESS and reached the port deep tanks, from which the oil cargo escaped as the waves permitted the ship to rise and fall. The additional sea water rapidly compromised the seaworthiness of the M/T VISBY EXPRESS. An emergency call for assistance was not answered, as the only available salvor was engaged on another job and was not available. The Master, officers and crew of the M/T VISBY EXPRESS were able to transfer to the M/V OLERON STAR before she sank, with several serious personal injuries. A large portion of the oil cargo spilled out before the M/T VISBY EXPRESS sank; this would eventually wash up on the coast of England near the Brighton resort because of the prevailing tides and currents. A clotted mass of polluted sea weed and heavy oil floated to the beaches, killing hundreds of sea birds and forcing closure of the beaches with great financial loss to the seaside hotels and restaurants. Finally, as a result of the force of the collision, four containers of the M/V OLERON STAR were cast overboard and lost.

Since the last P & I Club “demutualized” and became a traditional fixed-premium insurance company, there had been a merger of these insurers with cargo insurers so that questions of cargo damage would not be litigated under the revised Hamburg Rules, leaving only the question of responsibility for the collision between the shipowners to be decided by litigation or arbitration.

The American owners of the M/V OLERON STAR briefly considered litigation in Panama or Greece, but rejected those possibilities. The Greek owners of the M/T VISBY EXPRESS immediately rejected the possibility of litigation in New York where the waiting list for trial of a nonjury civil action exceeded ten years.

Furthermore, limitation of shipowner liability was no longer a factor in U.S. courts. Because of the satellite communication between the M/V OLERON STAR’s bridge and the corporate owner, it became impossible to establish the absence of privity or knowledge. Congress finally excluded personal injury and death claims from the American statute in 2010 and repealed the entire statute in 2015. Thereafter, the

United States Supreme Court held that U.S. courts could not apply any foreign limitation of shipowner liability because Congress had stated a public policy eliminating all forms of limitation of liability in transport law.

Both owners and their hull insurers are investigating the possibility of trial before the Law of the Sea Tribunal at Hamburg, established in 1997 under the 1982 United Nations Convention on the Law of the Sea, where the jurisdiction has been expanded to include civil litigation dealing with collision, pollution, and other maritime disasters. The masters and watch officers of both the polluting and the colliding vessels will face criminal prosecution in the United Kingdom, the United States, or Panama, or before the IMO Tribunal. Heavy fines and suspension of licenses can be anticipated.

Predictions often collide with changed circumstances, random events, and new technologies. Twenty-five years ago who could have predicted the widespread use of personal computers, cellular phones, and the Internet? Who can tell how many of the above predictions will come true? It will be time to review them at the Tulane University Admiralty Law Institute in 2025.



