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was considered a "skilled seaman and experienced navigator … and studied carefully all things pertaining to the sea." His principal talent as a self-taught navigator appeared to be "dead reckoning," celestial navigation and "an inborn sense of the sea, or wind and weather."

The crude navigational tools of his era, the quadrant or astrolabe, were almost worthless on a rolling sea and "no one, as far as we know, ever took an accurate reading with a quadrant or astrolabe on the open sea in the 15th century." The compasses of the time couldn't account for magnetic variations. An "ampolleta," or hourglass, depended entirely on the personnel who took the measurements and the movement of the ship.

To measure distance, objects were thrown overboard and the time it took the boat to pass by them was recorded. Needless to say, such methods could not take into account prevailing currents or extreme weather.

To make things even more complicated, Columbus admitted to having two logbooks, an "accurate" one for himself and another that purported to demonstrate a lesser distance so as to not alarm crew members and mask his real route from future mariners.

The genesis of the lunar program was a speech by President John Kennedy in 1962, proclaiming America's intent to land on the moon. In contrast, Columbus's journey was his own conception propelled by the twin objectives of "God and gold." Whereas the American goal took seven years to complete, Columbus spent 10 years just to lobby the English, Portuguese and eventually the Spanish monarchs to subsidize his trip.

At the outset of Columbus's first voyage, there was little known of the Dark Sea or "Mar Tenebroso" as the Atlantic was called. At that time, very few sailors had ventured more than 7 to 10 days from land. Consider then the difficulty of convincing and then managing a crew to venture 33 days into an unknown world!

Though it is by now virtually undisputed that Columbus and the educated population of his time understood the earth to be round, nevertheless almost everything else they knew about it was "spectacularly wrong." The best estimates of the earth's size were off by six times and not only excluded the American continent but the Pacific Ocean as well. As a result, Columbus' expeditions were roughly 8,000 miles off-target!

Compare that to Armstrong's trip, which was supported by more than 400,000 NASA employees, tens of millions of dollars and state-of-the-art computer and navigational equipment. Furthermore, the route and procedures involved were more than thoroughly known and tested. Armstrong had been involved in all of NASAs space projects, Mercury, Gemini and the earlier Apollo flights. His first actual space flight was at age 38 aboard Gemini VIII, which made 55 orbits of the earth and performed the first docking with another spacecraft, a task essential to a lunar landing.

Much was known about moon flight before Armstrong became commander of