

The Mystery of the *Titanic*: What Really Happened

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Abstract

Buried in the depths of the ocean lies a magnificent structure, surviving only as a ghost from the past. The RMS Titanic lies across miles of seafloor as a result of the events leading up to, and on the night of, April 14, 1912, when the ship liner struck an iceberg and slowly began its descent into the Atlantic ocean forever (History.com Editors, 2009). The evidence of the accident still lies with the shipwreck today. Many historians throughout the years have speculated what really happened on that moonless night, many years ago, providing several answers still prominent to this day. The shipwreck was the result of a flaw when the ship was built, competition between another ship building company and White Star Line, and the natural circumstances of the night being almost too perfect for smooth sailing. These factors led to this tragic moment in history, allowing history the ability to learn whether or not more deaths could have been avoided, see from the perspective of the survivors, and understand what the wreck still means to the modern day.

Historical Context

On April 10, 1912, the *Titanic* left Southampton, England headed to New York City on her maiden voyage (Eyewitness editors, 2000). The luxury ocean liner, along with her sister Olympic liner, was termed “practically unsinkable” in *Shipbuilders Magazine*, which began a widespread myth of the ‘Unsinkable *Titanic*’ (History.com Editors, 2009). It was commonly spread that the ship was filled with the world’s wealthiest people basking in the most luxurious accommodations and immigrants packed in steerage (Eyewitness editors, 2000). On April 14, 2012, the ship lookout, Frederick Fleet, spotted an iceberg at 11:40 p.m., notifying the bridge “Iceberg, right ahead!” (*National Geographic Staff*, 2012). At 11:50 p.m., water began to flood the lower part of the ship after the iceberg ripped through six lower compartments (History.com Staff, 2009). The first lifeboat was successfully lowered into the water at 12:45 a.m. (*National Geographic Staff*, 2012). About 1500 people were left onboard after the last lifeboat departed at 2:05 a.m. from the doomed ship (History.com Editors, 2009). The *Titanic*’s deck grew deeper until breaking off and settling the stern back into the water until finally sinking at approximately 2:20 a.m. (Lange, 1999). Survivors’ accounts of the sinking recognize the *Titanic* sinking head first and then breaking in half before fully falling beneath the water’s surface (*National Archives and Records Administration*, 2018). However, after two government investigations, it was concluded that the ship sank in one piece and that it was the fault of diseased Captain E.J. Smith for racing the ship at 22.5 knots, roughly 26 mph, in a known ice field (Ewers, 2008). It wasn’t until 1985 when oceanographer, Robert Ballard, discovered the shipwreck, beginning the first of many expeditions, and the first of many investigations into what really led to the sinking of the most luxurious steam ship of its time (*National Geographic Society*, 2012).

Flaws in the construction of the ship. At the time of constructing the *Titanic*, she was built 900 feet long, 25 stories high, and weighed 46,000 tons (Basset, 1998). The ship was built with 16 watertight compartments, designed to withstand crashing into another ship and stay afloat for three days after collision (Basset, 1998). So, how did the great ocean liner sink in less than three hours from an iceberg that damaged only six (300 feet of the ship’s hull) of the 16 compartments? The answer could lie in the expansion joints. When constructing the ship, builders added an extra expansion

joint, one at the stern and another at the bow (as if knowing there was a flaw in the structure), allowing the hull to flex in heavy seas, however, both buckled at a shallow 10 degree angle (Copping, 2007). A naval architect, Roger Long, who had worked on the project explained that, “the design of the expansion joints in the ship was so unimaginably crude.” Researchers believe that this design flaw led to a faster sinking, which ate up time that the *Carpathia*, a ship that sailed nearby during the sinking, could have used to save the 1,500 souls still onboard the *Titanic* before it submerged their lives into the freezing waters (Copping, 2007). Another flaw in the design of the *Titanic* was the watertight compartments. While the bulkheads were in fact watertight, the walls between each compartment only extended a few feet above water, and therefore, allowed water to pour from one compartment to the next (History.com Editors, 2009). Perhaps more time spent on the design could have saved these people from their icy fate, but competition provides little room for saving lives.

White Star Line was at competition with Cunard Line. In 1907, rival company to White Star Line, Cunard Line, had launched two ships, *Mauretania* and *Lusitania* (Turner, 2006). The *Lusitania* quickly scaled the Atlantic Ocean, setting a record crossing with an average of 23.99 knots (Turner, 2006). A new generation of larger and faster ships were born, as well as a refueled competition. In order to surpass Cunard Line, J. Bruce Ismay, Chief executive of White Star, drew out ideas for three large, luxurious ships, thus birthing the *RMS Titanic*, along with two other sister ships (Eyewitness Editors, 2000). Perhaps the biggest mistake ever made leading up to the disaster, was the lack of lifeboats on the *Titanic*. Because White Star Line wanted to be considered far more luxurious than its competitor, it was decided that there would be only 16 lifeboats and 4 Engelhardt “collapsibles,” equipped to hold 1178 people, instead of the original plan of 32 lifeboats, so that the deck would look less cluttered (History on the Net, 2019). As a result of luxury over life, the ship could only save one third of the total passengers on board, only if each boat was filled to capacity (History.com Editors, 2009). While this mistake added to the tragic loss of lives, one competitive goal, in particular, contributed to the actual disaster itself, speed. Many *Titanic* researchers note that Captain Edward J. Smith was aiming for a faster transatlantic crossing than any Cunard Line ship, and therefore, was sailing at full speed, even after receiving several iceberg warnings (Boyle, 2012). A Chicago Examiner in 1912 confirmed that the *Titanic* did receive warnings of icefields that were ignored or unheeded (Golembiewski, 2019). By sailing too quickly into the icefield, the captain left very little room for lookouts to do their job precisely and should therefore take some blame for the accident that followed. However, Captain Smith could not alone take the full fault, and lookouts, on duty that night, had to worry about much more than high speeds.

The Titanic sank because of an optical illusion. Evidence suggests that the *Titanic* was sailing through odd atmospheric conditions the night it sank (Smithsonian Institute, 2012). British historian, Tim Maltin, discovered that an unusual optical illusion of extraordinary light refraction causing miraging was present and recorded by several ships in the area on April 14, 1912 (Smithsonian Institute, 2012). Captain Rostron, of the rescue ship *Carpathia* explained, “...about two or three miles from the position of the ‘Titanic’s’ wreckage we saw a huge ice-field extending as far as we could see, N.W. to S.E....I sent a Junior Officer to the top of the wheelhouse, and told him to count the icebergs 150 to 200 feet high; I sampled out one or two and told him to count the icebergs of about that size. He counted 25 large ones, 150 to 200 feet high, and stopped counting the smaller ones; there were dozens and dozens all over the place” It was possible for the lookouts to not notice many icebergs because of thermal inversion. The *Titanic* was sailing into the cold Labrador Current from warm Gulf Stream Waters, which is an extreme temperature change causing thermal inversion (Maltin, 2016). Layered cold air under warm air

created extraordinarily high air pressure leaving the area free of fog (Smithsonian Institute, 2012). Strong thermal inversions like this one are important in understanding the conditions present during the accident because of its ability to bend light, a phenomenon known as super-refraction (Maltin, 2016). Objects will appear higher and nearer than they truly are during super-refraction. *Titanic's* lookouts are recorded, explaining how there was a haze around the horizon (Maltin, 2016). This haze is known as a false horizon, which on the night of the sinking, masked the iceberg, obscuring it in a thick layer of "haze" (Smithsonian Institute, 2012). Not only did this marriage mask the iceberg, but it also masked the *Titanic* from Stanley Lord, captain of the *Californian*, which was sailing near the *Titanic* as the ship hit the iceberg. Lord had known the *Titanic* to be a great ocean liner, and decided that the ship he saw while sailing nearby, shortly before the collision, was not the *Titanic*, due to this odd phenomenon masking the top half of the ship (Smithsonian Institute, 2012). When crew members on *Titanic* tried signaling the *Californian*, the abnormal air prevented distress communication between the two ships (Maltin, 2016). This, along with thermal inversion creating a false horizon caused Lord to fail in locating the *Titanic*.

The large scale of lives lost could have been prevented. While it is obvious that the lack of lifeboats contributed to the estimated 1,517 lives lost, not so many, if any at all, would have perished if lifeboat regulations had been updated, if the evacuation was ran smoothly, and if there weren't class discrimination. Due to advancements in ship technology, the 1912 Board of Trade ruled that lifeboat regulations did not have to be updated (History on the Net Editors, 2000). This misjudgment came from Sir Alfred Chalmers, a member of the Board of Trade. He also felt that if there had been fewer lifeboats, more lives would have been saved because more people would have rushed to the boats, therefore filling them to capacity and thus saving more lives. (History on the Net Editors, 2000). Regulations from 1896 did not anticipate large ships such as the *Titanic*, and therefore did not require a suitable number of lifeboats, otherwise the designers of the ship would have had a correct amount. Sir Alfred Chalmers also touched on the idea that there would not have been enough time to load more than 16 lifeboats anyway. However, an hour had passed between the ship striking the ice and the loading of the first lifeboat (History.com Editors, 2019). The haphazard evacuation did not stop there however. When the first lifeboat left the ship, it was loaded with 28 people out of 65 available seats (Smithsonian Institute, 2012). This became the norm, with one lifeboat having only 12 people in it. By the time the *Titanic* sank, 472 available lifeboat seats were left unused and two collapsible lifeboats had failed to launch and simply floated into the water, (History.com Editors, 2019). These lifeboats were mainly filled with first class women. Of the total 319 first-class, woman passengers, 62% survived, while only 25% of the 709 third class, woman passengers survived (Henderson, 2017). Class distinctions caused a huge gap in the rush to lifeboats, but perhaps, if third class was able to intermingle with upper classes, more seats on lifeboats would have been utilized, and more lives would have been saved.

The survivors of the Titanic leave history with a greater understanding of the tragedy. Today, history learns from the aftermath of the tragic accident, specifically from the stories of survivors, which help understand what they felt on that dreadful night. Important survivors, from the *Titanic*, to note are Margaret Brown, Charles Joughin, Millvina Dean, Frederick Fleet, and Archibald Gracie IV. Margaret Brown, also known as the "Unsinkable Molly Brown," was known wildly for her work towards aiding *Titanic* victims by establishing the survivor's committee and raising ten thousand dollars for destitute survivors (Encyclopedia Titanica Editors, 2017). She was one of many brave women who helped people into lifeboats and later reconnecting families with survivors. Charles

Joughin is less like Brown and more notable in that, he drank a lot of alcohol. Joughin is credited as being the last person to set foot on the *Titanic*, before it totally submerged into the water (Hopper, 2017). Therefore, making him the last body to touch the freezing cold waters. Not only this, but he had been drinking during and leading up to the accident, which made his blood-alcohol concentration high enough to withstand freezing waters, forcing warm blood nearer to the surface of his skin, protecting himself from hypothermia longer than any sober passenger (Hopper, 2017). Joughin healed from the experience physically and mentally faster than science could explain, making him a textbook example of how to survive a shipwreck. While Charles Joughin was possibly the drunkest passenger on the *Titanic*, Millvina Dean was the youngest passenger. Dean, at only two months old, survived the sinking, and later went on to become the last survivor alive, until her death in 2009 (ATI Editors, 2017). Her family was going to settle in Kansas, but moved back to England after the accident. She is quoted saying that, "If it hadn't been for the ship going down, I'd be an American." The ship lookout, Frederick Fleet, had held the blame upon himself for some time after the accident. Suffering from depression, Fleet committed suicide in 1965, but is attributed by history as another life stolen by the *Titanic* tragedy (ATI Editors, 2017). Archibald Gracie IV is very important to history because of his account of the night of April 14, 1912 into the early morning of April 15, 1912 and after. Known as a hero for escorting women into lifeboats and later swimming to a wooden collapsible to save his own life, Gracie gives the most complete description of the tragedy, although dying less than eight months after the sinking because of complications from hypothermia (ATI Editors, 2017).

Conclusion

The *Titanic* is the most luxurious ocean liner to ever set sail, and the most famous peacetime, maritime disaster to ever occur. Everyone knows of the events of the *Titanic*, but few know of the reasons behind it, or the causes of so many needlessly lost lives. Construction of the ship held many faults, competition provided little room for success, and natural circumstances were less than ideal for smooth sailing. This combination was guaranteed disaster for a desirable ship with some of the wealthiest people in the world aboard. More lives, if not all, could have been saved had different decision been made regarding lifeboat regulations, evacuation procedures, and less class discrimination. Although a large scale of lives was lost, several people, such as the "Unsinkable" Molly Brown and Archibald Gracie IV, provided heroic attempts at saving more lives and giving history a wider view of the events on the *Titanic*. Specifically, survivors, like Frederick Fleet, allow history to understand the weight that the tragedy left on its victims. Other passengers, such as Millvina Dean and Charlie Joughin, survive as celebrities from the accident as the last survivor alive and the last passenger on the *Titanic*, respectively. Even today, with all that has been learned of the sinking of the *Titanic*, so much is still unknown, and several questions still bubble to the surface from the shipwreck. However, one can still learn of the trials of human hubris, when too much confidence is put into a "ship of dreams." Overconfidence that soon leads to the dramatic events of families ripped apart, thousands of deaths, and a deteriorating shipwreck at the bottom of the ocean.

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