

Ever since I was a little girl I have been taught to fear the ocean's waves, strength and the creatures within it. I would go to the beach and see the warning signs: sharks, jellyfish, strong currents, drop off points – they all led to danger. I would turn on the TV and watch “Shark Week” and “River Monsters,” also adding on to this idea of terror and misfortune within bodies of water. All of these experiences have led me to now fear the ocean that provides for so much of the life on our planet. I am afraid to go above my waist in the water because of its hidden secrets. I am personally drawn to the ocean because of its mysteries and its unknown aspects. The vastness of the ocean is what makes it so attractive and this lack of knowledge is the reason why we should be going down to the bottom of the ocean.

Why is the current world so resistant to the unknown and mysterious? The answers lie in pieces of human life. As a culture, we are sustained by curiosity but also blockaded by fear, which mainly stems from the unfamiliarity within new realms. We are propelled by funding and global competition to be the best. Our culture, clings to the easy and accessible ways of living and attach ourselves to beliefs, myths, and theories. The leap of faith into the unknown may be the answer to a variety of problems the world faces. The earth is a library that is open to study, but is often overlooked. This cultural fear of the ocean is interconnected specifically with accessibility, political goals and barriers, as well as religion and belief systems.

On May 31, 1911 100,000 people attended the launching of the Titanic, the largest movable man-made object. Building was commenced over the following year where she would undergo major construction. Naturally, the purpose of the Titanic was the presence of competition between shipping lines in the early 1900s. The need for extravagance and sophistication was also a huge motive in creating such a timeless vessel. On April 10, 1912, the Titanic departed from Southampton, England with a little over 2000 passengers and crewmembers. After various stops around the world, the vessel set sail for New York to complete the transatlantic crossing of one of the world's greatest ships.¹

11:30 pm on April 14 – The Titanic collided with an iceberg. The notion of an indestructible ship vanished as nature proved her power over man and technology was proved fallible. The ocean then consumed over 1500 passengers – those who did not survive the frigid and brutal waters. The story of the Titanic largely played into and supported the fear of the ocean, while also allowed public acknowledgement of the power of nature. The ship remains at the bottom of the ocean at 12,500 feet, 370 miles south-southeast of Newfoundland. The wreck had not been discovered until 1985, when a joint French-American expedition located it.²

Further exploration was only begun in 2001 when James Cameron led an expedition to film and photograph the Titanic for a movie that cost an estimated 200,000,000 dollars. This expedition was run seemingly to make money off this ship's tragic history. The main goal in shooting and researching the Titanic was to turn it into a movie, which is now one of the highest grossing films in history.³ The underlying

¹ History.com Staff.

² "Discovering Titanic"

³ Kingsbury, Rebecca.

question here appears to be, “Why was this vessel only studied to make a movie?” Capitalizing on a tragedy and spending millions of dollars for entertainment is disturbing in my mind. The Titanic is a true example of accidental discovery as the importance was not research but profit. Ulterior motives are common when ocean exploration occurs. Many of the discoveries and important information we have found in the ocean is by accident. We fear the ocean’s mysterious and strong personality, but don’t want to research its past and current spectacles. The ocean is a living history of the Earth as a whole and it is important to fully realize the capacity and significance of enormous areas of water. I believe the budgets we have to exploit the ocean are far more vast and plentiful than those aiming to learn from it.

The NOAA has an annual budget of about 23.7 million dollars for exploration where as NASA has about 3.8 billion.⁴ This ties in directly with accessibility since space is so much more universally observed. Astronomy is one of the oldest forms of science since it is so readily available.⁵ We have the ability to look up to the sky and make observations and predictions. The sky has always been a subject of study, but the ocean isn’t as easy to analyze since it is not transparent but opaque. No matter where you are or who you are, you can step outside and view the stars and sky, but you cannot walk along the shore and see the florescent and beautiful creatures along the bottom of the ocean. The ocean is just another avenue that needs to be more widely accepted as a valuable source of information. There are numerous instances in debate scenarios where the public states that space is more important or that there is nothing to find in the ocean.⁶ Part of this disinterest lies mainly in ignorance in my opinion. We believe the bottom of the ocean to be this dark, lifeless, pit but furthering the research we have in place can prove the ocean to be a valuable resource to humanity. Accessibility is a main factor limiting our knowledge in the ocean. The things we do know about the ocean are from shallow depth observations as well, which is only a small part of the ocean’s biodiversity.⁷ It is often said that the ocean hasn’t been explored simply because of its tremendous pressure changes but this is only a small part of the problem. We explore space, which has no oxygen or atmosphere, but we’ve developed rockets to withstand these barriers. Like space, we are able to develop technology to explore deep depths – it is just the inaccessibility we see in the ocean isn’t as apparent as the sky, which limits how we see the ocean’s worth.

Political objectives limit us towards further understanding the ocean. The space race created a barrier because it was only propelled by the need for pride rather than for scientific means. The main reason for the space program was the rivalry with Russia and its space program. While it is illogical to explore space when we haven’t fully explored the planet we live on, it is a human attribute to be competitive. We went to the extremes of funding and creating rockets and space equipment in order to be “number one.” This situation is similar to that of the Titanic. We only filmed and researched the vessel to create a high-grossing movie. The flaws within ocean research currently are the impure reasons behind exploration. The only reasons we venture into the depths of the deep are

⁴ Conathan, Michael.

⁵ "Ancient Wisdom, Old Books, Discoveries."

⁶ "Space Exploration Is a Waste of Money"

⁷ Friedersdorf, Conor.

to exploit it, whether it is for food or for other resources like oil. This is mainly because the funding we have for ocean exploration is little in comparison with other programs. Historically, this initial connection with the sky has also attributed to the way we view the ocean in terms of beliefs, whether they be mythical or religious.

Religion creates a rift between the ocean and humans as it pertains to specific connotations we have with the sea. When we view the Earth, we see the ocean as a hellish place filled with misfortune and grief.⁸ We see sublimity and danger, which creates a fear of this place we know little about. But, in contrast with this dark view, we look up to the sky and see the limitless. We see the sky as a place of the gods. It is unknown, like the ocean, but it holds only pure and magical things which we *want* to discover and are *eager* to learn more about. These ideas about nature stem partially from religious teachings and concepts, which have created a barrier between the world and the unknown. Psalms 19:1 states, “The heavens are declaring the glory of God; The skies above proclaim the work of his hands.”⁹ It is commonly perceived that good lies above and the evil lies below. With the ocean, it is viewed as a place of punishment, Jonah 1:12-15 states, “ ‘Lift me up and throw me into the sea, and the sea will calm down for you; for I know that is because of me that this violent storm has come upon you’ Then they lifted Jo’nah up and threw him into the sea, and the sea ceased its raging.” By applying these stories to the world around us, we create falsehoods and unreal circumstances. We know that there are not gods and angels living in the clouds; yet we still look up for a sign. I believe that we apply these same values to the ocean. We don’t necessarily see Hades down below but we see darkness, which signifies the unknown. Because we are afraid of the unknown, we create alternative realities, like “heaven” and “hell.” These fictional worlds intertwine with reality and we become mixed up with falsehoods, which alter our view of the world. These fictional and real views of the world create an almost personification of the world in which we apply literature and creativity to nature and real world applications.

In Ancient Egypt, there is a hieroglyph of the sky. It is depicted as a ceiling, which represents heaven, with the edges of the ceiling dropping down, which represents the heavens reaching down to the horizon, and is decorated with stars. The symbol for sky in this sense is synonymous with that of heaven and the stars. There is glory and awe in the sky.¹⁰ The god that represented the stars and sky was Nut. She was typically portrayed as a woman who was in the shape of a semicircle with her hands and feet touching the ground. Her father, Shu, who was the god of air, was holding up Nut and he was raising her above her husband Geb, the god of earth. It was said that if Shu were to meet Geb then chaos would ensue¹¹. This reasserts the value of the sky above the earth. We see a large separation between the sky and the earth—the sky is more divine while the earth is more fragile and disordered. We see ourselves in this sense as lesser than whatever lies above. This allows for us to worship the sky almost as if it has power over us—as if that is the only place for hope.

⁸ "The Astonishing Hidden World of the Deep Ocean."

⁹ "Jehovah's Witnesses-Official Website."

¹⁰ "Ancient Egypt: The Mythology."

¹¹ Alchin, Linda.

Furthermore, Nut had a son, Osiris. The tale of Osiris and Isis, his wife and Nut's daughter, enforces the misfortune of water. It is said that after Osiris returned from his journey of spreading knowledge, Seth, his evil brother, sealed him in a coffin and threw it into the Nile River. Isis was devastated and set out to find Osiris's body. His body was carried into the Green Sea and washed up on shore at Phoenicia where Isis later discovered it. She set out to bring his body back to Egypt and on this journey; she cast men off the side of the ship with rage into the sea to perish. The water's strong current threatened to carry them away from land so she dried up the river with a curse. Seth took Osiris's body again and ripped it into fourteen pieces, which he spread into the Nile River so crocodiles might eat them. Isis then found all but one piece and brought Osiris back to life so that they could conceive a son, Horus, to avenge his father's death. Later, Re, the sun god, looked into Horus's eyes as he prepared for war and only saw the color of The Great Green Sea. While this was occurring, Seth aimed a blow of fire at Horus's eyes so that he was temporarily blinded. Horus regained his sight and finally defeated Seth beside the Nile River and Horus, the hero, was declared as god of the sky.¹² Again, all connections with water are being used as punishment. As a reward for defeating Seth, Horus was declared god of the sky, since the sky is a form of reward. A large part of ancient myths are dedicated to the power of nature. There are very different connotations, however, within these natural elements. It has been seen as a pattern with which water, whether it is a sea or an ocean, is seen as a strong and deadly force.

Similar circumstances are found in Greek mythology. Phorkys is a sea god who watched over hidden dangers. He was married to Keto, meaning "whale" or "sea monster," and together they watched over all the large creatures in the sea. It said that their children were "dangerous sea-monsters: Skylla (the crab) is a monster who devoured passing sailors, Thoosa (the swift) mother of the rock-tossing cyclops Polyphemos, Ladon (strong flowing) a hundred-headed sea-serpent, Ekhidna (viper) a she-dragon, the Graiai (grey ones) spirits of the sea-foam, and the Gorgones (terrifying ones) whose petrifying gaze probably created the dangerous rocks and reefs of the sea."¹³ Even the sea gods display horror and misfortune. This pattern is consistent with that of the Egyptian myths and the Bible. Gods are used to personify the sky and the earth whereas the bible uses verses to personify the sea through characters. By associating gods and characters like Jonah or Nut to the land, we create notions about how these nonliving things might be. The connections we make from literature to earth to ourselves limit us towards advancement and halt our curiosity.

The ocean's value is often debated since some believe that not a lot lies below the surface areas we have explored. We should explore the ocean more simply because we don't know. We don't know what is at the bottom of the ocean, but we do know there is life. There are significant life forms which are almost alien to us. Why should we write off areas that are almost more terrestrial than space?¹⁴ In addition to new creatures we have also learned that the ocean controls climate and weather; therefore, the ocean could allow us to better understand things like global warming, climate change, and other

¹² "Ancient Egypt: The Mythology."

¹³ Atsma, Aaron J.

¹⁴ McClain, Craig, and Al Dove.

natural or human provoked occurrences.¹⁵ The possibilities are limitless since we don't know what is down in the ocean. We have only explored about 5% of the ocean so that is just all the more reason to explore the other 95%.¹⁶

From the ocean, we have begun developing medicine to cure diseases like cholera, and possibly certain cancers.¹⁷ Scientists have also begun exploring continental margins. From studies that use sound waves, Scientists have uncovered the ocean's history and evolution as it pertains to earth and its natural processes. By studying sub-seafloor imaging, we are able to compile records of magnitudes as well as timing of earthquakes, which has led to being able to predict earthquakes before they happen. The same is being done with tsunamis and landslides.¹⁸ The ocean covers about 72% of the planet but also drives the climate and weather patterns, which generate 70% of the oxygen we breathe. The ocean continually absorbs Carbon Dioxide, feeds clouds with rain-inducing moisture, provides food, transportation, and connects us as a society.¹⁹ The importance of the ocean in human existence is not debatable as we rely so much on the ocean for our livelihoods.

The ocean plays a major role in human lives not only through weather and air, but also in the economy and diets of almost all people. All around the world, there is a dependency on the ocean. We are connected to the ocean in all ways possible. It is said, "One of every 6 jobs in the U.S. is marine-related."²⁰ That being said, it is clear that a major part of our lives are dependent on the ocean. It is not just important in relation to where we go to work, but also what we have for dinner. Fish is a part of everyone's diet whether it is through straight consumption of the meat or through products produced using it. "Ocean ingredients, like algae and kelp, are used in making peanut butter, beer, soymilk and frozen foods... 36 percent of the world's total fisheries catch each year is ground up into fishmeal and oil to feed farmed fish, chickens and pigs."²¹ Ocean life is a main part of all human's diets around the world. Whether you are from North America or Asia, there is a good chance you rely on the ocean as a large source of your food. Not only does the ocean contribute food, it is also a main component in a lot of medical practices. Recently, "Scientists say unusual compounds and gene sequences in some marine creatures and plants could lead to anything from much-needed new antibiotics to cancer drugs."²² We have found organisms that allow us to treat diseases like asthma and arthritis. Since the ocean is almost new to us in terms of exploration, there are a number of possibilities we can gather from the ocean. Nature is more efficient and more intelligent than we are. By studying and observing the ocean rather than exploiting it, we can take knowledge rather than destroying what seems to be a library of answers to our questions.

¹⁵ "NOAA's National Ocean Service."

¹⁶ "Quora."

¹⁷ Hoshaw, Lindsey.

¹⁸ "What We Learn from the Oceans Using Soundwaves."

¹⁹ Cousteau, Jean-Michel

²⁰ "Oceans Impact the Economy."

²¹ "Five Reasons We Are All Connected to Oceans"

²² Morelle, Rebecca

The ocean is vast and undiscovered. There is no way to actually learn anything until we go and try. Uri Alon, a science professor, describes the creative process behind science, using the metaphor of a cloud as an in-between place. He describes A as the beginning, B as the intended result and C as another landing place: “The cloud stands guard at the boundary. It stands guard at the boundary between the known and the unknown, because in order to discover something truly new, at least one of your basic assumptions has to change, and that means that in science, we do something quite heroic. Every day, we try to bring ourselves to the boundary between the known and the unknown and face the cloud.”²³ By using science in a more creative and purposeful manner, we can allow ourselves to be immersed in curiosity rather than approaching a subject with preconceived thoughts. The unknown is one of the most inspiring things to look at scientifically and if we apply ourselves appropriately, I believe we can uncover the purpose, values, and treasures within the ocean.

²³ "Why Truly Innovative Science Demands a Leap into the Unknown."

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