

*Curiosity Over Greed Will Save
the Ocean*

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I fell in love with rhythm and that led me to the ocean. The pull of waves that I see beneath my eyelids has always calmed me. When I sit in the sand, my shorts thoroughly wet, imagining all of the life beneath the surface, that pull that I have felt for my whole life becomes a deep longing to just let the waves take me under over and over. It is overwhelming, my love of a world deeper than the one I live in. It is rhythm and beauty in the unknown, controlled by the waxing and waning of the moon; it is a world unexplored and we cannot understand its power. My love for it is inexplicable and I want to save this little world in my soul.

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Disintegration and Integration. I wish I could know why our society seems to continue to fall apart, and the materialistic culture we have created scares me. I am afraid of the destruction of things we cannot repair; I listen as my father talks about why we can't eat this type of fish because of the rarity of what was once abundant, or how I should get scuba certified this summer before the coral reefs all disappear. I look at the waves of the ocean moving in and out and think that I see a jellyfish on a wave, but as it comes closer I can see it is another plastic bag. The catalyst of the disintegration of this world that is still so unexplored is our dysfunctional society. Can we find balance, balance between humans and the natural world, balance between cultures? How can we save the oceans when we ourselves, as a race, need saving? We cannot go back to how things were in the past so how are we going to create a positive, selfless future that combines our human needs and those of the ocean?

Marine ecosystems are as diverse, or even more so, as those on land. Beneath the surface of the ocean, there are mountains and deserts, forests, coral reefs, and much more. We have only scratched the surface of what lies beneath the waves; we still haven't explored around 97 % of the ocean. In just that remaining three percent we have already found some of the most diverse life on the planet.¹ Already we are losing species we know nothing about. For example the Hammerhead shark populations are quickly declining and there is still barely any information about them.²

The beauty and mystery of the unknown has called to man in the past. We expanded westward, with a twofold purpose: we explored un-mapped territories, and at the same time we were able to expand the power of a nation. The ocean is something we can't live in but we seem to be doing our best to use it for our own purposes. At first there was a balance. We took what was needed and the ocean recovered. But as time went on we continued to grow and took as much as we had in the past. As our societies become more complex and corrupt the disasters of the land leaked into the sea; we overfished, and continue to do so today. In a different way, we are taking the ocean and turning it into a place to discard our problems.

¹ Gallo, David. "Underwater Astonishments." TED. March 2007. Web. 12 Apr. 2014.

² Skerry, Brian. "The Ocean's Glory—and Horror." TED. Apr. 2010. Web. 12 Apr. 2014.

We are dumping our problems into the ocean and destroying the coral reefs—home to 25% of marine life.³ The water temperature continues to rise due to pollution from humans; our boats trawl along the bottom to catch fish and bring up large amounts of other marine life that are then discarded as waste. Selfishly, I want these corals to exist for at least the millions of years they already have, so that I am able to explore the abundance of untouched marine life in the ocean's gardens, but 30% of them have vanished since 1980. Coral reefs are some of the most diverse ecosystems of life; they support local communities through tourism, and some of the marine life that are supported by them are now being used to develop cures for different diseases such as cancer.⁴ We are destroying not only homes for many different life forms but one of the beauties of the natural world in the overindulgence of society in the earth's resources.

Bluefin tuna is a specialty food, now found all over the world in sushi restaurants and fine dining establishments. What most people don't know as they eat the beautiful red flesh of this fish is that it is on the brink of extinction due to overfishing. As humanity has grown technologically, the ways we can hunt food have become more sophisticated to the point that no animal can truly escape us if we want it. I believe that we have become too advanced when it comes to the hunt of wild creatures such as fish. We are destroying populations of what were otherwise abundant life in order to eat it. We tend to work our way down the food chain, starting with predators like the bluefin tuna, sharks, and cod. As we fish each species to the brink of extinction its prey becomes over abundant and so we move on to them; we will continue to work our way down until there are no fish left, only plankton and worms. For over 1.2 billion people, fish is a key part of their diet, and even more people rely on jobs in the fishing industry.⁵ We need to let the ocean recover and maintain sustainable levels of fishing, so as not to disturb the ecosystems, because once one species is gone it is a domino effect and we will be knocked over too. The ocean is integrated into our society in a way that if we continue the process of decimating fish populations and poisoning the ocean's waters then all of the things that it does for us will be gone. Without the ocean's ecosystem services, life on earth will cease to include humans.

The ocean has been delaying climate change's drastic effects for those on land, but at the cost of marine life. The ocean is a natural regulator of the earth's temperature by absorbing and cleaning carbon dioxide. When the ocean soaks up the carbon dioxide it soaks up with it 80% of the added heat in the atmosphere, and so we may not be able to see the drastic changes to come because the ocean is working to soften the blow. But the sea surface temperature continues to rise 1% annually and the amount of carbon dioxide in the water has led to oxygen starvation, which creates ocean deserts where no life exists. We are not accepting the reality of our situation on land let alone the ocean's and will continue to ignore it until something really drastic happens to shock us into changing.⁶

³ Danson, Ted, and Michael D'orso. *Oceana: Our Endangered Oceans and what we can do to save them*. New York: Rodale, 2011. Print.

⁴ "Importance of Coral Reefs". NOAA ocean service Education. U.S. Department of Commerce. Mar. 25 2008. Web. 1 May. 2014.

⁵ *The End of the Line*. Dir. Rupert Murray. National Geographic. 2009. Film.

⁶ Danson, Ted, and Michael D'orso. *Oceana: Our Endangered Oceans and what we can do to save them*. New York: Rodale, 2011. Print.

With temperature rises, the ocean's acidity is rising also. In our burning of fossil fuels the carbon dioxide that is absorbed by the ocean is altering the water chemistry. For the past 300 million years the ocean's acidity levels have been slightly basic but with just the past two centuries there has been a 25% increase in the ocean's acidity. With the rate that we are burning fossil fuels, the ocean is absorbing more carbon dioxide and will continue to increase in acidity. When carbon dioxide dissolves in the ocean it creates carbonic acid, which inhibits the growth of coral, oysters, shrimp, lobster and plankton. The ocean absorbs one third of human made carbon dioxide which is roughly 22 million tons of it a day. We cannot know if the ocean will even be able to continue taking in increasing amounts of carbon dioxide. If the ocean stops absorbing, we will no longer have this safeguard against global warming—then the drastic changes of the sea will be shifted onto land.⁷

The ocean is absorbing more than just carbon dioxide for us though; nitrogen oxides, pollutants that come from the burning of fossil fuels, are filtered in the ocean at night.⁸ We still do not know its affects on the ocean but it seems to be a gift that the ocean is giving us; it does not harm it and it takes in what pollutes the air that we need to breathe and cleans it. The unknown of the ocean, the unexplored could be integrated into our own cultures more than we know. It is already working as a boundary between us and our mistakes, as with global warming. It must be understood that the ocean is doing more things for us than just regurgitating fish: it makes earth livable. We think of the ocean as inexhaustible in its resources, but we are quickly threatening the major source of life on earth.

The beautiful forests of the sea, the kelp forests, were severely threatened by the hunting of sea otters. Sea otters have some of the warmest fur because unlike other marine mammals they do not have a layer of blubber to help keep them warm—their fur is the container of their body heat. Fur trading in the 19th and early 20th century brought the sea otter population to near extinction. At that time, roughly 50 otters found refuge along the Big Sur coastline; all of the sea otters currently living along the California coast are descended from these few otters. When populations of sea otters were scarce, the kelp forests slowly disappeared. The sea urchin's primary predator is the sea otter and when we brought the otter to near extinction the sea urchins thrived. Sea urchins eat kelp, and so our materialistic desire for sea otter fur decimated not only a species but also the entire ecosystem that was supported by it. Even though we stopped harvesting sea otters for their fur in 1911, the sea otters still face a sluggish recovery, the cause of which is mostly unknown. One thing we know is that through the pollution of California's coastal waters the marine life has become more susceptible to infectious diseases, and oil spills have killed much sea life. A sea otter's fur is vital to their survival and if even a small amount of leaked oil gets onto their fur they can die of hypothermia. We are threatening nature's coping mechanisms for dealing with human actions, so even if we were to stop harming the ocean now it may not be able to recover.⁹

⁷ "Ocean Acidification: Carbon Dioxide is Putting Shelled Animals at Risk." National Geographic. National Geographic Society. n.d. Web. 24 Apr. 2014.

⁸ "Research Highlight: The Ocean as Air Filter." Scripps Institution of Oceanography UC San Diego. Scripps

⁹ Monterey Bay Aquarium. "Research and Conservation at the Monterey Bay Aquarium." PDF. Monterey Bay Aquarium.org. Monterey Bay Aquarium. 2010. Web. 19 Apr. 2014.

The rhythm of the ocean is changing as we pollute it with oil spills and carbon dioxide poisoning, but I still watch it and am still drawn to the pull of the tides as if they were undisturbed by human life. The ocean is still moving and creating and we have to respect what is left of the 71% of the Earth's surface and its attempts to save us.¹⁰ I am not the only one who can sit on a beach staring at the waves and lose myself, and I hope I am not the last. I cannot bear to watch the life disappear from underneath the waves, as the ocean becomes a shell. Humanity's curiosity has been pushed aside by the greed and comforts of the 21st century. We have to protect curiosity and the wonder of the unknown, which has led to many of the greatest achievements of mankind, because it can save the ocean.

Marine Sanctuaries are a first step toward protection that most marine scientists agree has to become widespread. The goal of these sanctuaries is to: "Improve the coverage of what we have, obtain greater effectiveness of what we do, and sustain what we have into the future"(Earle 24). Currently less than 1% of the ocean is protected in these sanctuaries where fishing and other destructive activities are not allowed but curiosity is encouraged in the form of scuba diving and snorkeling. One of the justifications of the money and energy put into these sanctuaries is the hope that marine life increases and then spills into unprotected areas for fisherman.¹¹ It saddens me that we have gotten to the point that we need a justification to protect life.

My hope for the future is for us to be able to let marine life thrive, and for fishing to be maintained at sustainable levels. I think one of the ways we can achieve this is by fostering the curiosity and education of humankind in marine life. If we promote access to diving, snorkeling and underwater webcams in marine sanctuaries (and also coral reefs and other beautiful marine habitats that are in danger), it will cause people to explore the world they can't see and become more invested in it. This is only a first step. I feel that especially in middle school, when children are developing their acute sense of justice and self, there should be an emphasis on current events such as oil spills, ocean acidity levels, hydraulic fracturing, and drilling for oil. This would empower future generations to be able to understand the problems of the world that they are inheriting and begin to come up with ideas about how to change it. Education is one of the most powerful tools in the world; one of the reasons that people tend to 'not care' about a situation is that they don't really understand it. In the end, we as consumers hold the power over corporations that contribute to the disintegration of the earth's resources like the ocean. If we decide that something is worth fighting for, we have immense power.

We can't expect a perfect world anytime in the near future, but we can have the hope for a better one. At the rate we are fishing, there will be no fish in the sea in roughly 50 years, the ocean will continue to acidify, and may rise to the point that coasts like California will be moving inland, and people living there will be forced to move inland to survive.¹² The ocean is already 71% of the earth's surface; how long before it

¹⁰ Danson, Ted, and Michael D'orso. *Oceana: Our Endangered Oceans and what we can do to save them*. New York: Rodale, 2011. Print.

¹¹ Earle, Sylvia A. *The World is Blue: How our Fate and the Ocean's are one*. Washington D.C.: National Geographic, 2009. Print.

¹² *The End of the Line*. Dir. Rupert Murray. National Geographic. 2009. Film.

becomes 100%?¹³ The major contribution to all of these factors is climate change. The best thing you as an individual can do to decrease global warming is to reduce your carbon footprint, in small ways or large—look for appliances that are energy efficient, carpool if possible, and take less flights with lots of connections. Choose to eat sustainably harvested seafood—fish that weren't trawled or overfished. Be curious, and go for that dive that you have always longed to go on. Investigate the unknown realm of the ocean and spread the word. Talk to people you know about the problems we are facing and teach your kids about both the beauty of life in the ocean *and* how it is threatened, because what will we have if we don't have the ocean?

¹³ Danson, Ted, and Michael D'orso. *Oceana: Our Endangered Oceans and what we can do to save them*. New York: Rodale, 2011. Print.

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