

Derek Wan

## No One's Business?

Apathy loves company – perhaps that's why it's difficult for many to feel consistently that the world needs fixing. Of course, most people tacitly understand that current modes of living are unsustainable, but they can't afford to dwell too much on the issue; doing so breeds feelings of guilt because it's often too inconvenient or costly to convert one's lifestyle into a greener venture. Indifference, therefore, is not always an intentional, malicious choice of attitude. Sometimes apathy is simply the waste byproduct of attempts to avoid a certain unpleasant nagging from one's conscience.

Unfortunately, this particular species of apathy is especially contagious in matters concerning the ocean and its plastic due to a number of misconceptions. The ocean comprises approximately 1.3 billion cubic kilometers of water, a figure that, to some, suggests that the ocean is too large to be hurt by human abuse (Eakins & Sharman). Furthermore, more than half the world's population lives at least 150 kilometers from an ocean, a fact that creates the illusion that the majority of plastic is safely isolated from marine environments, and that any plastic that does end up in the ocean must therefore be mostly due to the wasteful actions of some lucrative, faraway industrial giant which we can't control anyway ("UN Atlas: 44 Percent of Us Live in Coastal Areas").

However, in truth, the ocean is far from invincible, and ocean plastic is not solely attributable to large corporations.

Floods, typhoons, tsunamis, and hurricanes sometimes contribute to this image of invincibility, creating the false impression that the ocean is a powerful entity to be feared, always lurking just beyond the shoreline waiting for a chance to wreak havoc. But we often forget that

water is inherently passive: its shape is determined by its container, its state of matter by the temperature, and its force by ocean winds and tidal earthquakes. The ocean isn't our enemy; marine disasters are simply the freak offspring of warm ocean waters, low air pressure, and wind, all agents of chance ("What Causes Hurricanes?"). Furthermore, even large bodies of water harbor a belying fragility: due to water's properties as the universal solvent, the ocean inhales toxic chemicals and debris easily – often too easily – poisoning itself and the ecosystems it nurtures.

This suffocating of the sea, sadly, isn't the result of just industrial carelessness. Any plastic that infiltrates the city sewer system is potential ocean waste – that means even litter on the streets is fair game. Rain may wash debris into gutters and sewers leading to water treatment plants, which, unfortunately, are not entirely foolproof because excessive rain may overwhelm the system, causing garbage to leak into the ocean (Amaral). Considering that over 51 billion pieces of litter land on American roads each year, the amount of plastic trash that oozes out to sea builds up substantially (2009 National Visible Litter Survey and Litter Cost Study). In other words, a significant portion of ocean plastic can be traced back to the apathy of city dwellers, not big business.

To combat this cultural disregard for the environment, it's worth re-examining why the ocean deserves attention and the roots of this cultural apathy.

Firstly, we need to recognize that the problem belongs to us instead of avoiding it. We cannot defer the problem to future generations because doing so implies that plastic pollution is not urgent or serious enough to be dealt with now, when in reality at least 4.8 million metric tons of plastic infect the ocean each year (Andrady et al.). To change this mentality, we need to accept some basic facts. An idea belongs to the people who create it; by that same logic, plastic

pollution clearly belongs to humans because we create plastic. Furthermore, ownership also entails responsibility. Because humans are the sole creators and users of plastic, we determine whether the material decomposes contently in a landfill or rots maliciously in a reef through our actions and attentiveness. Therefore, because our decisions have a potential impact on innocent marine life, we have an obligation to accept plastic pollution as a purely human construct and attempt to rectify the situation.

Ignore this philosophical justification, and the problem may soon migrate to land. The ocean's wide surface area exposes much of its floating trash to sunlight, degrading plastic in as little as a year (Harris). Though this may sound like a boon, keep in mind that plastic fragments are magnets for toxic ocean pollutants, such as mercury and carcinogenic DDT (Chen). Plastic trash disperses even more quickly once degraded, carrying its toxic hitchhikers along as well. When marine animals ingest these concentrated particles of poison, they either die prematurely or survive long enough to introduce the chemicals into the human food chain. In other words, plastic poisoning isn't just some distant, "over-there" threat; it's real and is likely to plague humans even more severely in the near future, as more and more of our marine harvests become saturated with pollutants.

So, it seems that we cannot escape the ocean's cries for help, on both abstract and physical bases. Yet our culture of indifference persists, in part, because people whose plastic ends up in the ocean typically don't think of themselves as criminal litterers. On one hand, some people simply are not aware that street litter is potential ocean waste. On the other hand, it is a common human tendency to rationalize our transgressions; research from Harvard University found that behaving dishonestly "increased moral disengagement and motivated forgetting of moral rules" (Bazerman et al.). In other words, people who act counter to set rules often find a

way to justify their violations. Therefore, people who litter are unlikely to wallow in guilt; more likely, they alleviate their guilt by rationalizing their littering, through excuses such as “there was no garbage can nearby” or “it was a small bag.” This defensive self-exemption thus creates a disconnect between the general public and the health of the ocean, creating the misconception that ocean plastic is always someone else’s problem, someone else’s responsibility.

However, part of this indifference also exists because not all littering is done intentionally. Even plastic that is taken care of relatively responsibly sometimes becomes litter; plastic bags may be blown from trash cans onto the street and into storm drains, which guide the plastic into the ocean where it becomes a potential threat to the marine organisms that eat it (Six Degrees of Separation). Though those whose plastic ends up in the ocean in this manner do their part, this unfortunate circumstance still exists and contributes to a culture of apathy; people tend to think that their actions don’t hurt the ocean when they inaccurately – but justifiably – believe they are disposing of their trash safely. These misbeliefs prevent people from feeling guilt when they hear about plastic pollution, widening the perceived gap between the actions of the public and the health of the ocean.

Clearly, in reality there are few people to whom ocean pollution does not belong. Plastics, oceans, and Mankind are, for the moment, inextricably intertwined, and you’ve heard the apocalyptic forecasts before. But we have since become jaded to these calls for action because they emphasize the direness and helplessness of our situation. Perhaps, then, a new mentality should be embraced. Accepting the problem optimistically for what it is may be a more effective way of coping with a decaying ocean than being frightened by and ignoring the prospect. We can’t throw away the problem; we tried that already with our plastic trash, and that’s how we got into this mess in the first place.

Threats posed by plastic pollution – such as poisoning, strangulation, and the destruction of marine ecosystems – do seem intimidating and unconquerable, but only because they are less well-known among the public, compared to issues such as global warming. While many have been educated on ways to reduce their carbon footprints, few understand how exactly they should go about saving the ocean from plastic. That lack of familiarity tends to breed fear, understandably, because oblivion only makes solutions seem even more out of reach; without an adequate understanding of the problem, we only see a crude silhouette of the behemoth and none of the chinks in its armor.

Thus, to alleviate some of this fear, we need to understand some basic facts about plastic pollution and consider the contaminated ocean as we do the contaminated atmosphere: as a simple, though not necessarily easy, issue to resolve. At its core is this conflict: humans are drawn to plastic because it's convenient and sturdy, but convenience means it's far too easy for plastic to escape into the ocean – given its ubiquity – and sturdiness means it's far too difficult to get rid of plastic. And permanent human product seldom bodes well for the environment: think radioactive waste.

Therefore, at least three options exist: eliminate the human attraction to plastic, isolate plastic from the seas more effectively, or convert plastic monomers into biodegradable products. The first and third options would require an equally viable substitute material; the second would require vigilance from all plastic users. Thankfully, these solutions are all within the reach of a few years. German researchers have already begun experimenting with liquid wood – a renewable, biodegradable, and durable material that may be a viable plastic substitute – and changing the habits of the public could be accomplished through effective education on environmental awareness (Giuggio & Trimarchi).

These solutions are not necessarily easy to accomplish, but they are straightforward, clear, and simple. And simple solutions are all the public needs to know because people must believe that the problem is solvable and that their efforts will yield progress; no one enjoys working in vain. Take global warming, for example. It's a troubling issue, but few people are frightened because its solution seems straightforward: reduce your carbon footprint by walking, biking, or taking the bus. According to a report by the Environment Oregon Research and Policy Center, the state of Oregon reduced pollution by over 13.5% from 2005 levels in just two years, from 2007 to 2009 (Baumann et al.). This progress was made possible, undoubtedly, because the people of Oregon believed that they could effect change through minor sacrifices and greater attentiveness. Similar progress can be made in issues concerning plastic as well, given that we approach the problem in a similarly optimistic light. We can't expect to see much change without the belief that progress is within reach.

By instilling this sense of optimism, only then can we hope to stymie the spread of apathy and inspire ownership of the problem. All positive change first requires recognizing the problem – we can do so by accepting that plastic pollution, indeed, belongs to humans.

## Works Cited

- Amaral, Kimberly. "Plastics in Our Oceans." *Plastics in Our Oceans*. Woods Hole Oceanographic Institution, n.d. Web. 19 May 2015.  
<<http://www.whoi.edu/science/B/people/kamaral/plasticsarticle.html>>.
- Andrady, Anthony, Roland Geyer, Jenna R. Jambeck, Kara Lavender Law, Ramani Narayan, Miriam Perryman, Theodore R. Siegler, and Chris Wilcox. "Plastic Waste Inputs from Land into the Ocean." *Science* 347.6223 (2015): 768-71. Web. 5 June 2015.
- Baumann, Jeremiah, Elizabeth Ridlington, and Sarah Payne. *Global Warming Solutions: A Progress Report*. Rep. Portland: Environment Oregon Research and Policy Center, 2009. Print.
- Bazerman, Max H., Francesca Gino, and Lisa L. Shu. "Dishonest Deed, Clear Conscience: When Cheating Leads to Moral Disengagement and Motivated Forgetting." *Personality and Social Psychology Bulletin*. Society for Personality and Social Psychology, Mar. 2011. Web. 23 May 2015. <<http://psp.sagepub.com/content/37/3/330.abstract>>.
- Chen, Angus. "Ninety-nine Percent of the Ocean's Plastic Is Missing." *News.science*mag. Science, 30 June 2014. Web. 23 May 2015. <<http://news.sciencemag.org/environment/2014/06/ninety-nine-percent-oceans-plastic-missing>>.
- Eakins, B.W., and G.F. Sharman. "Volumes of the World's Oceans from ETOPO1." *Volumes of the World's Oceans from ETOPO1*. National Centers for Environmental Information, 2010. Web. 17 May 2015. <[http://ngdc.noaa.gov/mgg/global/etopo1\\_ocean\\_volumes.html](http://ngdc.noaa.gov/mgg/global/etopo1_ocean_volumes.html)>.
- Giuggio, Vicki M., Maria Trimarchi. "Top 10 Eco-Friendly Substitutes for Plastic." *HowStuffWorks*. HowStuffWorks.com, 18 May 2009. Web. 03 June 2015.  
<<http://science.howstuffworks.com/environmental/green-tech/sustainable/5-plastic-substitutes.htm#page=6>>.

Harris, William. "How Long Does It Take for Plastics to Biodegrade?" *HowStuffWorks*.

HowStuffWorks.com, 15 Dec. 2010. Web. 23 May 2015.

<<http://science.howstuffworks.com/science-vs-myth/everyday-myths/how-long-does-it-take-for-plastics-to-biodegrade.htm>>.

*Six Degrees of Separation*. Digital image. Class 501, n.d. Web. 23 May 2015.

<<http://bpc276.weebly.com/uploads/2/4/1/5/24153417/six-degrees-of-separation.jpg>>.

"UN Atlas: 44 Percent of Us Live in Coastal Areas." *Coastal Challenges.com*. Coastal Challenges, 31

Jan. 2010. Web. 16 May 2015. <<http://coastalchallenges.com/2010/01/31/un-atlas-60-of-us-live-in-the-coastal-areas/>>.

"What Causes Hurricanes?" *Weather Questions*. Weather Street, 29 May 2013. Web. 10 June 2015.

<[http://www.weatherquestions.com/What\\_causes\\_hurricanes.htm](http://www.weatherquestions.com/What_causes_hurricanes.htm)>.

*2009 National Visible Litter Survey and Litter Cost Study*. Rep. Mid Atlantic Solid Waste Consultants,

18 Sept. 2009. Web. 19 May 2015. <[http://www.kab.org/site/DocServer/Final\\_KAB\\_Report\\_9-18-09.pdf?docID=4561](http://www.kab.org/site/DocServer/Final_KAB_Report_9-18-09.pdf?docID=4561)>.

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I first met the ocean when I was six years old. My parents had given in to my begging for a trip to Hawaii, and so I found myself diving in off the coast of Honolulu that sunny July afternoon.

The initial scene that greeted my eyes burned bright, so bright that it seemed to have been printed on the back of my eyelids because I could never completely blink away the image even years later. Beneath the surface was a shifting kaleidoscope of light, color, and *life*. Fish danced beneath my fingertips, and when I reached out to touch them, they parted to reveal an even more vivid ocean floor: a shelf of eclectic zoophytes, synchronizing their movements with the waves on the surface. Refracted sun rays cast mysterious hues over the whole spectacle; it was almost as if some director were shifting a spotlight on a grand stage, first presenting the pearly clams of the Pacific Ocean, then the distinctive schools of surgeonfish, then the scuttling crabs indigenous to Hawaii – all in a fraction of a second.

Ten years later in California, the ocean and I met again, but I almost didn't recognize it. The sun's glint on the surface of the water was interrupted by all sorts of plastic detritus, and if I even managed to glimpse the ocean floor, it was through transparent plastic wrap.

I miss the ocean I once knew. I attempt to inspire sympathy for my old friend in my work.