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The Sea Turtle as a Marketing Symbol for the Anti-Plastics Movement

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ABSTRACT

The anti-plastic straw movement uses the sea turtle to bring an empathetic symbol to broaden the scope of the plastics problem in the ocean, giving the public a powerful visual image for the first time in the history of the anti-plastics movement. In this thesis, I build on existing conversations on charismatic megafauna and flagship species, to explore the emerging anti-plastic straw movement and its use of the sea turtle as a symbol. I also provide an analysis of the imagery and comments on social media sites of green marketing companies and non-governmental organizations. These social media sites, such as Instagram, are the primary vehicle for attracting clients, supporters, and donations.

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INTRODUCTION

Sea turtles are a resilient marine species that have long migration patterns across the globe. It is known that females always return back to the same nesting site they hatched at to lay their eggs each year (Oceans Today NOAA, n.d.) The sea turtle may encounter obstacles, such as plastics in the oceans, where in some cases they ingest plastics which causes health issues. The species starts to decline as sea turtles are harmed in the wild since the females are not able to make it back to their nesting sites and new sea turtles are not introduced into the ecosystem. This represents one of many problems plastic inflicts on marine life. In 2015, the sea turtle became the face of the anti-plastic straw movement, a niche of the anti-plastics movement. The anti-plastics movement is a widespread action that has joined individuals and businesses together to reduce the consumption of single-use plastics.

The plastic straw became a well-known issue to the public starting in 2015, when a scientist named Christine Figgener published an 8-minute video on YouTube of an Olive Ridley sea turtle with a straw up its nostril. The graphic video has been viewed by over thirty million people and circulated around the world. This brought the sea turtle to the forefront of the anti-plastics movement and many green marketing companies, companies that sell products to help the environment and non-governmental organizations (NGOs) began to use the sea turtle to promote the anti-plastic straw ban.

This video triggered a surge in literature about the sea turtle as well as studies conducted. The surge included an increase in infographics and statistics about the anti-plastics movement, and most critically linked the sea turtle to the statistics about the plastic straw. The sea turtle is also promoted within social media platforms - specifically with NGOs and green marketing

companies. The amount of support for the anti-plastic straw ban can be measured through the followers, shares, comments, and likes. These comments are most commonly anthropomorphized. It is a frequent occurrence to see individuals comment based on their feelings for the sea turtle in relation with the plastic straw. Granted, this is a new issue in the environment, there aren't published statistics including the number of supporters and profits from these companies. Nevertheless, green marketing companies and NGOs heard the message from the public and started producing alternative plastic products in tandem with the increase in studies, statistics, and infographics triggered by Figgenger's YouTube video.

It is clear there is an overwhelming problem of plastic pollution in the ocean and this problem existed well before Figgenger's YouTube video in 2015. The amount of plastics in the oceans were unimaginable prior to this video and Figgenger established a visceral connection between the public and the sea turtle giving the public a level of attachment to the issue. The sea turtle became heavily anthropomorphized by the public to the extent that green marketing companies and NGOs recognized this concept and marketed the sea turtle to promote the anti-plastic straw ban from a strategic business perspective.

I will discuss a niche of the anti-plastics movement, focusing on plastic straws to facilitate a conversation about how the sea turtle is a successful icon to promote the anti-plastic straw ban. Green marketing companies use the sea turtle to promote the anti-plastic straw movement while also profiting off of their alternative plastic straw products. NGOs use the sea turtle to promote the anti-plastic straw movement by raising awareness on the health and environmental problems posed by plastics and creating solutions to empower the public to become part of this change.

I am using the sea turtle generically to refer to many different species of the sea turtle. Green marketing companies and NGOs do not identify each species of the sea turtle in their marketing strategies. I am using the sea turtle to represent all endangered and threatened species of sea turtles because the organizations employing the symbol of the sea turtle are using sea turtle species interchangeably to represent the anti-plastic straw movement.

This paper aims to explore the notion of the sea turtle as an icon to promote the anti-plastic straw movement and this analysis will be through a variety of statistics on the sea turtle, social media accounts and comments, as well as news articles and YouTube videos.

Interest

I have always been fascinated with sea turtles since high school. I volunteered to help conserve sea turtles and their habitats in 2011, and ever since then I have studied the sea turtle and the fascinating qualities of the species. I was one of many people who viewed Christine Figgener's YouTube video, I was shocked and did not realize all of the groups and organizations that started to take action against plastics in the ocean until I began my preliminary thesis research.

I am inspired by how many people want to take action against plastics in the oceans, and I want to continue to explore these complex notions and ways companies and organizations encourage the public to join the anti-plastics movement through the sea turtle within my analysis.

Methods

My analysis focuses on the content of YouTube videos, Instagram and Facebook posts, followers and the comments that stem from this, artwork, advertisements, and statistical data as well as literature and scientific studies about the sea turtle. This content represents a large sample of users and indication of public engagement and offers a rich pool to select from in terms of my primary source data.

In order to determine whether green marketing companies and NGOs are successful in using the sea turtle to promote the anti-plastic straw movement, I researched the number of followers of each Instagram account, the frequency of posts, content posted, and interactions and impressions with the public focusing on captions and dialogue.

My research also analyzed literature, studies and statistics on the sea turtle before and after 2015, inferring that there has been an increase of literature and published studies on the sea turtle in conjunction with the plastic straw. This supports my argument that the sea turtle is successful in the public perspective to promote the anti-plastic straw movement.

Why is this Important?

Plastic straws are small and seem harmless, but they are single-use plastics that contribute to the growing problem of plastic pollution. Straws are unable to be recycled and most end up in landfills for in the ocean. Banning plastic straws may be the first step of a much-needed behavior change in our disposable culture. With larger corporations phasing out plastic straws, this is just a start to continue to develop sustainable and financially sound alternatives.

Literature Review

My analysis of the anti-plastic straw movement draws from a range of different disciplines. As foundational texts, I looked primarily to the fields of environmental science and conservation studies. Following an overview of key texts from these fields, this review explores the existing conversation on charismatic megafauna and the practices of marketing and conservation on public perception and involvement.

Upon examination of these texts, it becomes clear that mammals are often used as visual symbols to focus the attention on a single-species to encompass strategic objectives to raise public awareness and/or financial support for conservation to convey the issue to the public. This is widely due to the ability of mammals to capture the imagination and direct public attention to focus concern on less visible environmental problems.

Beginning with a discussion of foundational text about charismatic megafauna is crucial, as this data and language is frequently a point of contention within conversations about mammals and the environment. The term “charisma” is often described as subjective and relative among people, able to be enhanced or constructed artificially, notably by marketing and culture (Ducarme et al. 2012, 3). Animals are often used as evocative visual symbols in the promotion phase of product marketing because they are a familiar part of all cultures (Feldhamer et al. 2003, 67). Examples of these cases include the killer whale turned to a famous charismatic species after the successful movie *Free Willy* (1993) or the Giant Panda in the logo of the World Wildlife Fund (WWF). Other common species include the bald eagle, blue whale, kangaroo and koala (Barney et al. 2010, 43).

A term widely used in this literature for charismatic megafauna is referred to as ‘flagship species’ which is a species that stands for or promotes conservation in a general or regional sense. Flagship species are chosen to raise awareness, promote action, raise funding, and provide a socio-economic role rather than an ecological one. This may support rather than compete with wider conservation priorities (Walpole et al. 2001, 544). The socio-economic concept provides flagship species or charismatic species as symbols to stimulate conservation awareness and action (Ducarme et al. 2012, 4). Other terms in the field such as umbrella species, which represent a multitude of other species, indicator species, which refer to environmental change, and keystone species, which play a vital role in the ecosystem also relate to conservation. Flagship species is the most common term mentioned about charismatic megafauna and campaigns as flagship species promotes conservation in a general or regional sense (Leader-Williams 2000, 54).

Walpole et al. (2001) describes Leader-Williams et al. (2000)’s concept of success. This may be as simple as providing revenues for wider conservation in protected areas where flagship species is located. Walpole (2001) argues that some but not all of these resources should be used for flagship species through awareness campaigns that focus on flagships as symbols for the natural environment. The success for these species is proven through growth in numbers and influence of prominent environmental organizations such as the World Wildlife Fund, The Humane Society of the United States and Greenpeace, which have further contributed to public awareness and concern for marine mammals (Kellert 1999, 55).

Studies that are considered ‘flagship species’ include elephants and rhinos, since they are the largest terrestrial animals that took on the significance for Africa’s wildlife preservation

(Western 1987, 33). The giant panda is also used in the logo for the World Wildlife Foundation for worldwide conservation efforts to secure financial support (Dietz et al. 1994, 23). These examples prove a marketing aspect and appeal to the public.

In addition to this there are often different tactics to inform the public, but Nowell and Jackson (1996) argue that when money is involved, there is a dumbing down of statistics for single-species. This supports the claim Barney et al. (2010) concluded through their study. Nowell and Jackson (1996) use the example of the Sunda Island Tiger, explaining the national and cultural significance the mammal has in India. The violent potential of tigers to injure and kill humans is often left out when seeking to protect the reduction and habitat loss of tigers. Goodman et al. (2013) also argues that the celebritization of charismatic megafauna, given their ability to attract attention and concern may have serious implications for the scope of environmental governance and brings the diversity of biodiversity conservation into question. This may take away from the actual needs of the species and environment.

Some other texts that inform my research are Feldhamer et al. (2002) as cited in the study by Barney et al. (2010). This author analyzes charismatic megafauna are featured in board games, websites, newspaper and magazine articles, television shows, films and food. Barney (2010) also builds upon the argument Leader-Williams et al. (2000) makes about flagship species, and describes educational programs that promote charismatic megafauna. Educational programs at zoos, museums, nature centers and national parks attract and feature charismatic megafauna and are often eco tourist attractions, but there are little studies done on these programs to examine their effects on public knowledge, attitudes and behavior.

Feldhamer et al. (2003) later researched public empathy and marketing strategy in terms of charismatic megafauna. Feldhamer argues that visual images used in advertising and marketing create metaphors just as words do. This study examined the frequency of different mammal groups that appeared on beer and cider bottles throughout the world. Feldhamer found that the use of mammalian images that project the attributes of strength, power, or tenacity were preferred as marketing symbols on beer and cider bottles. The preference of attributes associated with charismatic megafauna reflects how people generally relate to these species, as it was evident that cultural perception and public empathy towards mammalian megafauna are recognized by breweries and evident in their marketing and advertising strategy (Feldhamer et al. 2003, 7).

An additional study by Barney et al. (2010) examines the attitudes and behavior towards charismatic megafauna, using the dolphin as a case study. Dolphins and other mammals often elicit positive, aesthetic, and humanistic views (Kellert 1999, 132). Barney argues that the focus on the dolphin is largely because of the emotional appeal as campaigns to protect mammals bring larger public support than campaigns against widespread issues like climate change. Barney infers that the growing number of educational programs and at aquaria and marine stations, offering resources, posters, displays and videos, arguing that programs that educate the public, shift the behaviors of the public. Barney examined the effects of educational level knowledge and attitudes about the dolphin through a questionnaire process, asking a variety of questions about dolphins. This study found that most people recognized the dolphin's marine habitat and appearance as a mammal. Understanding grew more sophisticated with age and educational exposure as experts were more likely than novices to subscribe to an environmentally friendly,

eco-scientific view of dolphins. Barney also expresses the need for more research in this field as there are not many studies conducted. (Barney et al. 2010, 41).

In the field of conservation studies, Goodman et al. (2013) studies the role of charismatic megafauna and the mainstreaming of ecological concerns. Goodman continues the research of Feldhamer et al. (2003) claiming that the marketing ability of charismatic megafauna give the public the perception that they are making a difference making them an ‘environment saving’ star. This is seen in businesses, whether as the face, voice or embodiment of concerns about climate change, clean water, overfishing, where the goal is to get the public to think, care and change in order to ‘save the environment.’ Goodman argues that the celebrification of animals traces how animal celebrity can tell us about ‘human socially constructed natural world’ aligning with the work of Leader-Williams et al. (2000) and Mellors (2015).

Mellors (2015) explores the conservation of charismatic megafauna in Indonesia, and argues that national-level practices have connected with global conservation norms, but when translated back to local levels, this work has proved problematic. Goodman (2013) argues the ‘saving’ effect encourages the public to play into global conservation norms, as the public feels they are making a difference if they support a popular campaign. Goodman fears that the celebritization of charismatic megafauna has the potential to lose sight of the conservation basis and the help for the cause.

Aristotle’s theory of Pathos appeals to charismatic megafauna through emotions. According to Ramage and Bean (1998), “[Pathos] appeals to our sense of identity and self interest exploit common biases; we naturally bend in the direction of what is advantageous to us, what serves our interests or the interests of any group we believe ourselves a part of.” In the case

of charismatic megafauna, individuals, businesses, organizations and corporations may take this species and use it to advance their goals, whether it is profits to supporters. “Pathos thus refers to both the emotional and the imaginative impact of the message on an audience, the power with which the writer’s message moves the audience to decision or action.”(Henning 2014).

According to Henning, the ability to use charismatic megafauna successfully is based on marketing decisions that target specific goals.

The sea turtle has not been studied in literature as part of charismatic megafauna and considered a flagship species as there is a lack of research in the field. However, the sea turtle continues to emerge as a keystone species in literature (Kinan-Kelly 2005, 195). In contrast, Feldhamer et al. (2003) argues that people can easily relate to mammals and are better used in marketing efforts than reptiles. The mammal is widely used, but now as the sea turtle emerges I argue that it is perceived as a mammal due to its anthropomorphic qualities. As Morgan (2016) describes, sea turtles elicit human qualities as turtles breathe and reproduce on land and have emotions similar to the human and shed saline tears. I argue that the sea turtle is becoming a part of charismatic megafauna and considered flagship species through the emergence of the anti-plastic straw movement.

My analysis aims to build upon these concepts about charismatic megafauna to contribute to research in conservation studies, as there is a lack of research in the field, focusing on the sea turtle as a flagship species as mentioned by Leader-Williams et al. (2000) and the role it plays in the anti-plastic straw movement. I will continue this conversation through an analysis of NGOs and green marketing companies and their involvement in the promotion of the anti-plastic straw movement.

CHAPTER 1: BACKGROUND

Today in the US, about 500 million straws are used per day (Science Mag 2018). According to Science Adventures in 2018, the worldwide total volume of produced plastic waste reached 8.3 billion tons. That is more than 800,000 Eiffel Towers combined. These statistics are common and use language that is relatable and persuasive to the public. Moreover, it is important because plastics never biodegrade in the oceans and will always leave a trace, even if they are not seen by the naked eye (Montanari 2017).

Statistics on plastics are often widespread and sources are not always credible. For example, on social media, there are statistics and infographics, but it is regularly unclear as the sources are not published. It is also easy to trust companies and organizations that provide statistics that are colorful and interactive. This may lead to false information circulated on these platforms. To build upon a comprehensive understanding of what plastics are, I will introduce the history of plastics, how they were created, and the magnitude of pollution plastics have caused in the environment.

Introduction of the Plastic

Plastic debris were first found in the oceans and studied in the 1960s. Plastic is formed out of polyethylene that is a polymer most commonly produced and it is the most popular plastic in the world (Polymer Science Learning Center, n.d.). The word plastic originally meant “pliable and easily shaped” (Science History Institute, n.d.). The word later became a category for polymers which are long repetitive molecules primarily made of carbon. Polymers are what gives plastics their ability to mold into different shapes (BBC 2014). Later, synthetic polymers were

created using carbon atoms provided by petroleum and fossil fuels. These synthetic polymers are made up of long chains of atoms, which make them strong, lightweight and flexible. This is what makes plastics useful (Science History Institute, n.d.).

The first synthetic polymer was created in 1869 by John Wesley Hyatt. Hyatt discovered that plastic could be crafted into a variety of shapes and for the first time human manufacturing was not constrained by the limits of nature (Science History Institute, n.d.). It was not until World War II in 1939 where plastics became important to military success. Plastics provided substitutes to natural resources and enabled the development and proliferation of parachutes, ropes, and other military technology. Plastic production in the United States increased 300% during this time (Science History Institute, n.d.).

Starting in the 1960s, the public became aware of environmental problems such as pollution and plastics. In 1962, Rachel Carson wrote *Silent Spring*, exposing the dangers of chemical pesticides. In 1969, the Santa Barbara Oil Spill occurred, spewing 3-million gallons of crude oil into the ocean (Mai-Duc 2015). Plastic waste began to concern the public as awareness spread about the environmental issue. The plastic straw is just one of many plastics created that harm the environment.

History of Plastic Straws

In 2017, plastic straws ranked number five in a list of the top 10 items collected. Plastic straws ranked higher than plastic grocery bags ranking at number eight (Ocean Conservancy 2017). Starting at the end of the 19th century, the straw was created

According to a long standing oral history, a man named Marvin Stone invented the first paper drinking straw in 1880. After a few methods of refining his design, he patented the product in 1888 and started to mass produce paper straws. Later, in 1937, Joseph B. Friedman invented a bendable version of this straw and patented this design. In 1939, Friedman formed the Flexible Straw Corporation, also known as the Flex-Straw Company, and by the late 1940s the bendable straw was used across the nation (Broda-Bahm 2002). The bendable straw was well received by the medical community serving as a single-use option that was disposable and it created a method less likely to spread illness (TIME, n.d.).

Starting in the 1960s, the manufacturing infrastructure was advanced enough to mass produce plastic straws (Gibbens 2018). In 1969, the Flex-Straw Company sold their patents, trademarks, and licensing agreements to the Maryland Cup Corporation that sells about 500 million plastic straws annually (Broda-Bahm 2002). Later, in 1983, The Fort Howard Corporation bought the Maryland Cup Corporation and continued to produce the plastic straw. During the 1980s, new concepts for the plastic straw such as jumbo and crazy straws were produced (Gibbens 2018).

The plastic straw is one of many products that were made to meet the demands of society, while looking for convenient items to be taken on-the-go. One of the world's largest plastic producers, Plastics Europe, reports that 1.5 million tons of plastic were produced in 1950 and by 2015, the world produced 322 million tons of plastic (Gibbens 2018). The plastic bag is among other popular plastic options that were introduced in 1965 as an alternate option for shopping bags (UN Environment, n.d.).

The Plastic Bag Ban

Plastic bags are also made out of polymers - the same material as plastic straws. By 1979, the plastic bag became used widely around the world. At this time, plastic companies marketed their products to be superior to paper and reusable bags. By the mid-1980s, plastic bags replaced almost all paper and alternative bags around the world (UN Environment, n.d.).

In 1997, a sailor and researcher named Captain Charles Moore discovered the Great Pacific Garbage patch, a collection of marine debris, filled with plastics in the middle of the ocean (Earth Island Journal 2009). Captain Moore was the first person to bring the discovery of pollution in the oceans to the public. Countries around the world became concerned with the problems plastic posed in the oceans and started to take action (Montanari 2017). A rise in literature on plastic pollution and scientific studies on plastics in the oceans brought statistics and data to the public, providing shocking information about the problems plastic bag pollution has in the oceans.

The public became more conscious about the environment with this information since the public can relate to the effects plastics have on the environment (Rosenthal 2008). Plastic bags are found all over the world and are part of a disposable culture. A surge of companies and organizations were created to combat plastic pollution starting in the early 2000s. 5Gyres was founded in 2009 to investigate unanswered questions about plastic pollution. Campaigns against plastic pollution were formed encouraging the public to reduce plastic bag consumption. Alternative options for plastic bags, such as reusable bags were created. As of 2018, reusable bags have become widespread across the world.

In 2002, Bangladesh became the first country to place a ban on plastic bags after the bags clogged the cities drainage system during a flood (Onyanga-Omara 2013). Ireland followed Bangladesh by posing a 15-cent fee on plastic bags that reduced the countries bag use in three months (Rosenthal 2008). In 2014, California became the first state in the US to pose legislation on single-use plastic bags by charging a 10-cent minimum for a plastic bag (National Conference of State Legislatures 2018). By 2017, over two-dozen countries around the world sought to reduce the plastic bag through fees and bans (UN Environment, n.d.).

In 2018, there is a trend in phasing out plastic bags from the reduction in use, taxes for plastic bags, to bans around the world. #BeatPlasticPollution was the 2018 theme for World Environment Day (UN Environment, n.d.). Often, countries and cities charge a tax for a plastic bag. This money goes back into the government to protect the environment. For example, in Ireland, the money from the plastic bag tax goes to the ministry for environment enforcement and clean-up projects (Rosenthal 2008). Legislation continues to be pushed around the world to prevent the use of disposable plastic bags, but this is still an ongoing process. In 2011, one million plastic bags were consumed every minute (UN Environment, n.d.). Plastic bags are still abundant due to differences in disposal and recycling systems. Plastic bags end up in and are found around the ocean.

Ocean Circulation of Plastics

The demand for plastics continued to increase as plastic bags and straws became part of a global disposable culture. Many countries could not keep up with proper waste and disposal

systems - resulting in plastics reaching the oceans and affecting marine life. Plastics are carried around the ocean through currents and plastics congregate within specific areas in the ocean.

There are five major gyres in the oceans. A gyre is a large system of rotating ocean currents (NOAA, n.d.). These gyres generate currents which are driven by wind, tides, temperature, salinity, and nutrient flow. There are five major gyres located around the world: the North and South Pacific Subtropical gyres, the North and South Atlantic Subtropical gyres, and the Indian Ocean Subtropical Gyre.

The circulation system in the ocean is controlled by thermohaline circulation. In this circulation system, winds drive ocean currents at the top 100 meters of the ocean surface. Below the top 100 meters, deep ocean currents are controlled by differences in density, that is controlled by temperature and salinity (NOAA, n.d.). In the Northern Hemisphere, the currents move in a clockwise motion. In the Southern Hemisphere, the currents move in a counterclockwise motion. These circulation patterns drive plastics and debris together - accumulating within the five gyres.

These gyres are also locations where marine species such as sea turtles migrate. The plastic debris in the gyres create obstacles for marine species, some get caught in debris and ingest plastics (NOAA, n.d.). It is unknown where the plastic straw from Figgener's YouTube video was ingested by the Olive Ridley sea turtle, but some scientists argue that there is a higher chance of plastic harming marine life in these gyres (Franeker et al. 2015, 89). On average it takes about 10 years for plastic to cycle back out of the gyre if it isn't eaten by marine life or sunk to the bottom of the ocean already. Alternatives are being produced to reduce plastic

pollution in the ocean. One solution includes compostable and biodegradable plastics, which can reduce plastic pollution if disposed of properly.

Compostable/Biodegradable Plastics

There is a distinguishable difference between compostable, biodegradable, and degradable plastics. Compostable plastics are a new form of plastics that are biodegradable through composting. Most are composed of renewable raw materials such as starch and cellulose and break down into carbon dioxide, water, and biomass at the same rate as cellulose. When broken down, they do not leave any toxic material behind (World Centric, n.d.). Biodegradable plastics have no time limit set as to when the product breaks down through the help of microorganisms. These plastics can leave toxic material behind (Pela Case 2016).

There is a common misconception that compostable plastic will be able to break down in any environment. This is not correct, as compostable plastic will not biodegrade in a landfill. These plastics need to be in a proper composting environment consisting of air, moisture and sunlight (Pela Case 2016). Some compostable plastics will breakdown in a home composting environment and others need to be sent to an industrial composting facility where these plastics reach a certain temperature to decompose (UrthPact 2017).

If biodegradable and compostable plastics are not disposed of properly they will end up in the oceans - further contributing to the plastic pollution problem. Biodegradable and compostable plastics are not able to be recycled. These plastics will get sorted out from recyclable plastics, as they will contaminate recycled materials that takes away the purpose of recycling (Pela Case 2016). For example, Greenware, a product owned by Fabri-Kal, is a mass

manufactured compostable plastics line of cups, lids, and to-go-boxes that are entirely plant-based and 100% compostable in industrial facilities. Greenware is widely used at restaurants and workplaces. I have often seen this product in the trash or recycling bin rather than collected to be sent to an industrial composting facility. It is important to distinguish the difference between plastics and compostable plastics as this is a new concept within the field and even more so since this product may be ending up in the oceans through the lack of attention to its disposal.

Introduction of Plastics into Oceans

Plastics are most commonly introduced into the oceans through incorrect disposal. This occurs when people litter and plastics enter run-offs, sewer systems, and waterways (WWF 2016). Plastics are also carried by wind or rain to the sea from landfills and litter from the streets is often captured by storm drains who filter into the ocean where they continue to break down into smaller pieces until they are tiny pieces named microplastics that are not able to be seen by the naked eye. Microplastics are small plastic pieces less than five millimeters long which can be harmful to the ocean and aquatic life (NOAA 2018) Although microplastics are small, they will never break down and will exist in the ocean forever. Microplastics pose a huge threat to aquatic life, as these plastics are mistaken as food by wildlife and their ingestion causes adverse health effects, higher mortality rates, and steep declines in populations of marine life. According to the United Nations Clean Seas Campaign, it is estimated that there are 51 trillion microplastic particles in the oceans today. That is 500 times more stars than there are in the galaxy (5gyres, n.d.). These microplastics continue to affect sea life, especially sea turtles that have long

migration patterns as they have a higher chance of ingesting microplastics which leave major health effects on the sea turtle.

Olive Ridley Sea Turtle

There are seven species of sea turtles; Green, Hawksbill, Kemp's Ridley, Leatherback, Loggerhead, Olive Ridley, and Flatback. All but the Flatback species migrate thousands of miles around the globe each year. The Olive Ridley is one of the smallest sea turtle species, about 2 to 2.5 ft with weights up to 100 lbs. Olive Ridley's are mostly carnivorous, feeding on jellyfish, snails, crabs, and shrimp. Although this species has an average lifespan of about 50 years, plastic pollution has posed a huge threat towards their life span and survival (National Geographic, n.d.).

The International Union for Conservation of Nature's Red List of Threatened Species (IUCN Red List 2018) is one of the most comprehensive databases for the conservation status of animal, fungi, and plant species. The IUCN Red List is used by government agencies, NGOs and other organizations to indicate the status of species. This list provides the status of each species as well as the trend that indicates whether the species is improving or declining. All seven species of the sea turtle are listed on the IUCN Red List. Six of the seven species are considered threatened. The IUCN Red List classifies the Olive Ridley sea turtle as vulnerable with a population trend that is decreasing. The Olive ridley sea turtle is considered to be facing a high risk of extinction in the wild. Endangerment factors for the Olive Ridley include: ocean pollution, entanglement in fishing gear, poaching, illegal trade, coastal development and tourism (SeeTurtle 2018). There are international laws in place to reduce plastic consumption to help

conserve sea turtles. Yet the scope of the plastics issue is very large and sea turtles are commonly harmed.

For centuries, the sea turtle has served as a cultural core in the Pacific. The sea turtle is an essential part of the ecosystem - maintaining the balance of the food chain and enriching the beaches they nest on. In traditional regions of Micronesia, Melanesia, and Polynesia the sea turtle facilitates spiritual and practical relationships dating back to the origin of these islands. The sea turtle is not just an animal, but it is a symbol of prosperity within these islands. The culture of these islands and their biodiversity will decline without the sea turtle.

Plastic pollution in the ocean makes up 60-to-90% of all marine debris (Surfers Against Sewage, n.d.). After the discovery of the Great Pacific Garbage Patch, the public was introduced to the abundance of plastics in the ocean. The magnitude of this issue produced a variety of studies, literature and research into the issue of plastics - focusing on the plastic bag. This created the plastic bag ban that is an ongoing movement, similar to the anti-plastic straw movement as statistics and organizations were created to combat the issue of plastic bags.

Policy and Future Legislation

As studies on environmental pollution increase, the growth in statistics about plastic pollution in the ocean continues to produce shocking statistics. Environmentalists continue to emphasize the urgency in reducing plastic straw consumption through graphic imagery, statistics, and campaigns to attract attention from the public. As awareness and support for the anti-plastics movement continues, large corporations such as Starbucks are offering an alternative plastic lid in place of the plastic straw, showing their support by offering alternatives to the plastic straw

(Nace 2018). As corporations and businesses pledge their support and invest in alternative plastics, this may indicate financial incentives, a growing market, and a shift in attitudes towards plastic straws. This spurs into legislation, as in November 2018, when the European Union passed a ban on single-use plastics by 2021.

According to Marine Litter Watch (2018) plastic straw are ranked 7th on a top 10 list of harmful plastics. In Europe, 80-to-85% of marine litter is considered to be a major threat to marine and coastal biodiversity on European beaches. In June 2008, European Parliament introduced a marine directive to protect the environment across Europe. Starting in 2012, initial assessments were made and programs were established. By 2017 a Marine Strategy Framework was introduced. This legislation requires all members within the European Union to ensure that quantities and composition of marine litter do not harm the marine or coastal environment, which is part of an objective to reach “good environmental status” by 2020 (European Commission 2017). With recent legislation passed in November 2018, the European Parliament is now focusing on providing alternatives to plastics, specifically for biodegradable straws. The ban on single-use plastics includes straws, plates, utensils and cotton swabs (Yeginsu 2018). European Parliament is leading a global shift towards the reduction of single-use plastics, pushing other countries to do the same, providing a financial market and incentives for businesses to create alternatives to single-use plastics.

In July 2018, Starbucks and McDonald’s joined together with Closed Loop Partners, an investment platform that supports sustainable consumer goods to develop a recyclable and/or compostable plastic alternatives. Closed Loop Partners often supports other companies and

organizations that provide strong financial returns in conjunction with tangible social impact (McDonald's 2018).

Closed Loop Partners designed the NextGen Cup Consortium and Challenge which invites innovators, entrepreneurs, industry experts, and recyclers to submit their ideas for the next generation of recyclables and compostables. Erin Simon, the Director of Sustainability Research and Development and Material Science at World Wildlife Fund voices an emphasis towards collaboration and changing legislation. "Working together across the entire value chain of these major companies will allow us to create a comprehensive and lasting solution to this critical conservation challenge" (McDonald's 2018). With support from NGOs like the World Wildlife Fund, the support for the anti-plastic straw movement continues to grow. NextGen will provide an advisory council, including leaders from large scale environmental NGOs to judge this competition.

Starbucks and McDonald's aren't the only large corporations pledging their support. In May 2018, Alaska Airlines pledged to ditch plastic straws for marine-friendly stir sticks (Drumheller 2018). In June 2018, McDonald's publicized their decision to phase out plastic straws and start using paper straws at all of their locations across the United Kingdom and Ireland (Wamsley 2018). In July 2018, the Marriott Corporation announced phasing straws out by 2019 and offering straws upon request (Schneider 2018). American Airlines also pledged their support in July, announcing a switch from plastic straws and drink stirrers to biodegradable alternatives made from bamboo. American Airlines will eliminate more than 71,000 pounds of plastic a year (Associated Press 2018).

Banning plastic straws is partially from public pressures to ban plastic straws. If companies ignore public demand then this will damage their brand and sales. In the past, Starbucks has been outspoken about their politics and the sea turtle video by Figgenger accelerated the decision to create a lid and phase out plastic straws. If Starbucks did not take action, this would have hurt their brand (Kestenbaum 2018). Recently, McDonald's was pressured by a petition on SumOfUs with over 400,000 signatures (Wamsley 2018) after it was reported that McDonald's uses 1.8 million straws a day in the U.K. (Vaughan 2018). A petition directed towards Disney World to stop using plastic lids and straws was started by a 10-year old and has 34,834 supporters. This proved to be a success as Disney announced by mid-2019 that all single-use plastics will be banned at their parks, hotels, and cruise ships. Disney announced their decision stating this decision was based on recent announcements from Starbucks and McDonald's (Change.org 2018). Pressure from the public and changes in large corporations have proven that the anti-plastic straw movement is growing and a global shift is happening.

In February 2018, Scotland announced a ban on plastic straws by the end of 2019, becoming the first UK nation to join this movement. In May 2018, Vancouver became the first major Canadian city to announce a ban on plastic straws taking effect in Fall 2019. This ban includes enforcement policies, punishing offenders with a \$250 ticket through complaints and spot-checks (Woods 2018). In July 2018, Seattle became the first U.S. city to ban single-use plastic straws and utensils in the food service (Wootson Jr. 2018). Similar to the European Union, Seattle is asking individuals, businesses, and corporations to stop providing plastic straws and switch to paper straws or a compostable alternative.

Campaigns have proven to be a successful method of awareness for Seattle. In September 2017, 150 businesses participated in a “Strawless in Seattle” campaign by the Lonely Whale, a connector between NGOs, influencers, corporations and policymakers to drive market and policy change on behalf of the ocean (Lonely Whale 2018), and to reduce the use of plastic straws (Wootson Jr. 2018). Operating with the hashtag for social media, #StopSucking, this campaign used social media as a driver for support. Strawless Ocean (2017) estimated that 2.3 million plastic straws were removed from the city as a result of the campaign. The name of the campaign put a spin on the 1993 movie, *Sleepless in Seattle* to also provide a commercial aspect the public could relate to, increasing awareness for this campaign.

From 2015 to 2018, individuals, cities, organizations, companies, corporations and more have joined the anti-plastic straw movement. Since Figgener’s graphic video of a sea turtle with a straw up its nose in 2015, NGOs and organizations conspire together to raise public awareness. As individuals unite against plastic straws, companies have begun to see a financial incentive in designing and producing alternative products. With both public pressure and financial incentives, cities are moving towards banning plastic straws and legislation has been created in support of the anti-plastic straw movement.

In order to understand why legislation has only emerged in 2018, three years after the release of Figgener’s YouTube video, this paper will provide a comprehensive analysis of both green marketing companies and NGOs that use the sea turtle as a symbol to promote the anti-plastic straw movement.

CHAPTER 2: YouTube Video and Green Marketing Companies

Three green marketing companies, Final Straw, Aardvark Straw, and Net Zero Straw, all for-profit companies, sell alternative options to plastic straws. These companies use the sea turtle to promote the anti-plastic straw movement through their use of comical language and social media pages. They use refreshing language, that is a positive aspect within the field of Environmental Science, which can be quite pessimistic at times. On social media, these companies target specific age groups and audiences through sponsored posts (Mellors 2015). Each company uses powerful images of the sea turtle incorporated with plastic straws and anthropomorphic comments to promote the anti-plastic straw movement. These three green marketing companies provide successful alternatives to plastic straws. Each company drives towards their own profits, but still promotes the anti-plastic straw movement (Ducarme 2012).

Figgener's YouTube video is incorporated within these three companies, each promoting the anti-plastic straw movement through call-to-action marketing campaigns, making the public feel that they are making a difference in buying their product.

YouTube Video - Christine Figgener

As mentioned in the introduction, on August 10th, 2015, a video published on YouTube by Christine Figgener, a marine biologist at Texas A&M University was released. This video documented a team of researchers in Costa Rica extracting a 10 to 12 cm plastic straw from the nostril of an Olive Ridley sea turtle (YouTube 2015). This video is a total of eight minutes and six seconds long. Figgener is holding the camera filming a researcher extract the plastic straw with pliers. Blood is seen dripping from the turtle's nose and flippers. Tears can be seen and

crying is heard from the turtle. As of December 12, 2018, Christine Figgenger's YouTube video (YouTube 2015) had 33,342,923 views, 224k likes, 25k dislikes, and 74,961 comments with replies.



Figure 1: Screenshot of Christine Figgenger's YouTube video (2015).

The anthropomorphic aspect of the sea turtle may stem from the fact that the sea turtle is not like most marine animals (Feldhamer et al. 2002, 67). Sea turtles breathe through their nostrils and mouth into their lungs, like humans.

Turtles cry too, shedding saline tears. When you kill it, you may see the turtle cry. It has meat like an animal, not like a fish. It is like a person. Turtles belong in the ocean yet breathe air and reproduce on land (Morgan 2016, 4).

The public can relate to the sea turtle as the viewer can visually see and hear the turtle cry. The turtle is perceived as a resilient creature and the imagery in this video pushed the sea turtle to be a face for the anti-plastic straw movement (Ramage and Bean 1998).

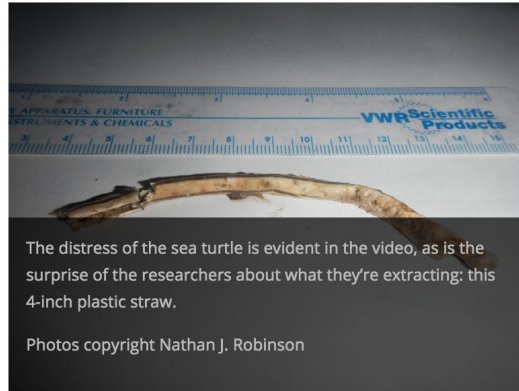


Figure 2: The plastic straw extracted from the Olive Ridley's nostril (Cuda and Glazner 2015).

This video spread throughout the world and the public became aware of the problem plastic straws pose to sea turtles and the oceans. This resulted in the anthropomorphization of the sea turtle - specifically seen within the comments. When analyzing the comments, about 60% are about the appearance of the turtle and how “cute” this species is or how “bad” they feel for the turtle in the video. The other 40% of comments consist of people pledging to reduce their plastic consumption and the need for a plastic straw ban. These comments serve as a way the public engages with the YouTube video, as comments are still generating today.



Figure 3: Various comments on Figgenger's YouTube video, heavily anthropomorphizing the sea turtle (YouTube 2018).

After the spread of Figgenger's YouTube video, she created a GoFundMe page to raise money towards Olive Ridley sea turtle conservation. Figgenger's page is similar to green marketing companies and NGOs as she is using the sea turtle to her advantage to promote the anti-plastic straw movement (Henning 2014). GoFundMe is a for-profit crowdfunding platform that allows people to raise money for events or causes (GoFundMe n.d.). GoFundMe was established in 2010 and in the first seven years the platform raised 5 billion dollars for two million campaigns with 50 million donors. According to Bloomberg in 2017, GoFundMe keeps 5% of the profits. GoFundMe gives the individual donating the option to be anonymous or use their name.

Figgenger's research focuses on conservation management plans to protect Olive Ridley sea turtles. Figgenger plans to track Olive Ridley sea turtle migration patterns to see if their migration patterns intersect through one of the five gyres. Her research will contribute to evidence on sea turtle migration and plastic pollution. So far, Figgenger has raised \$17,445 out of a goal of \$75,000 over 39 months with a total of 378 donations, 301 comments and 2k shares (GoFundMe 2018).

Comments on Figgenger's GoFundMe page anthropomorphize the sea turtle similar to the YouTube video. About 75% of the comments are about protecting the environment and implementing a plastic straw ban. 25% of the comments are about feelings the person has about the sea turtle. These comments demonstrate that engagement and awareness about the anti-plastic straw movement increased since Figgenger's YouTube video and the sea turtle is used to promote public engagement.

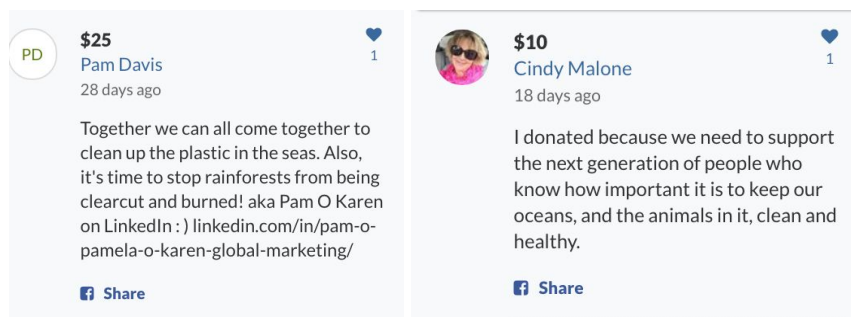


Figure 4: Comments on Christine Figgenger’s GoFundMe page (2018).

Figgenger’s YouTube video and GoFundMe page use the sea turtle to promote the anti-plastic straw movement through imagery and comments. After the release of the video, the public used the sea turtle to relate to the plastic straw problem in the ocean and pushed their feelings on the sea turtle - anthropomorphizing the animal. The public uproar about the plastic straw problem in the oceans gathered the attention of green marketing companies that noticed a market for alternative plastic straws. These companies use the sea turtle as a symbol in the anti-plastic straw movement to promote awareness for this issue while also profiting off of their product. As Western (1987) would argue, the sea turtle is also continuing to develop as a flagship species.

Green Marketing Companies: Final Straw, Aardvark Straw, & Net Zero Straw

FinalStraw is the first company to design a metal straw that folds into a keychain. This straw is constructed to travel with the average individual on a daily basis and an alternative when the need for a plastic straw arises. The sea turtle is heavily anthropomorphized within FinalStraw’s Instagram and Facebook pages.

Aardvark Straw is the first company to create long lasting, durable paper straws. These straws are 100% decomposable in marine environments - creating a straw that will not contribute to the plastic straw problem in the ocean. This company has a “special edition” sea turtle print which also donates 15% of proceeds towards sea turtle conservation.

Net Zero Straw also uses the same concept as FinalStraw, seeing as their product is also a straw that folds into a keychain. This straw is designed to collapse and travel on the go with the individual. In the company logo, the sea turtle is used, where “Net Zero” is written above the turtle and “Straw” is written on the turtle shell.

I will analyze these three green marketing companies arguing that they use the sea turtle as a symbol to promote the anti-plastic straw movement through infographics, statistics, social media (comments, likes, and followers), literature, and publications on the product.

FinalStraw

FinalStraw is, “The Original, Reusable, Collapsible Straw” (Final Straw 2018). The company’s mission is to “Reduce plastic straw use by giving people a convenient, collapsible reusable alternative” (FinalStraw 2018). This company uses powerful images of the sea turtle on their social media pages, providing captions that anthropomorphize the sea turtle. Their promotional YouTube videos feature a character of a mermaid who carries around a stuffed animal sea turtle. This mermaid often extracts a plastic straw from the nostril of this stuffed turtle, mirroring Figgenger’s YouTube video. Articles and publications promoting the anti-plastic straw movement feature the company and often allude back to Figgenger’s YouTube video as well. This company hopes to raise public awareness about the devastating impact of plastic

pollution and put pressure on restaurants to stop serving single-use straws. Through this effort, FinalStraw markets itself to promote the anti-plastic straw movement using the sea turtle.

Originating in October 2017 on Kickstarter, this campaign raised 1.8 million dollars, receiving overwhelming support from the public. A Kickstarter is similar to a GoFundMe campaign, where backers donate money and pledge their support for the product, to fund the creation (Kickstarter n.d.).

One straw comes in a compact case that can easily fit on a keychain. The straw is metal and folds so it is easily taken in and out of the case. The straw is 9 inches long and made of stainless steel, foldable into four sections that are three inches long, and 1.25 inches wide that fit into a container about three inches (Rose 2018). These metal straws come in both silver and rainbow. These cases come in different colors, including “Sea Tur-Teal” using the sea turtle to promote their product. One package is \$24.50 and comes with a straw, case, drying rack, and cleaning squeegee. Each product is BPA free, dishwasher safe and has a lifetime guarantee. This straw described as, “Clean, compact, and totally badass: For anyone who wants to rid their lives - and the planet - of single use plastic” (FinalStraw 2018) This thought leadership brings optimism within the field of Environmental Science. FinalStraw attracts the public through visuals and language using the sea turtle to promote their product and the anti-plastic straw movement.

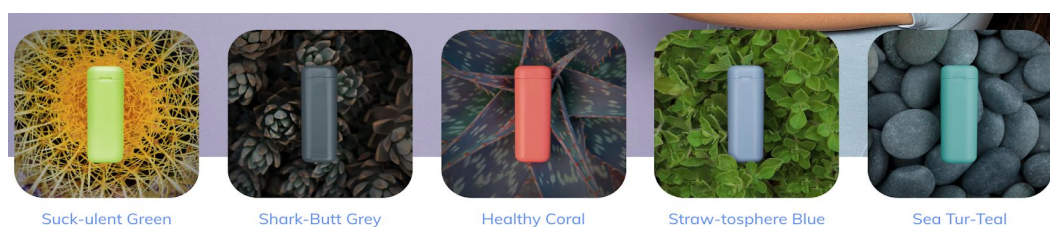





Figure 5: Comical color names for keychain cases. “Sea Tur-Teal” plays upon the use of the sea turtle and is a marketing technique that encourages consumers to buy their product (FinalStraw 2018).

FinalStraw promotes themselves on social media by using the hashtag #SuckResponsibly. On Instagram (@_finalstraw_) they have 27.6k followers, on Facebook (@suckresponsibly) they have 16k likes and on Twitter (@suckresponsibly) they have 1,053 followers. It is clear that FinalStraw uses their Instagram to market their products most frequently as most supporters are found on this platform.

FinalStraw's first Instagram post on November 6, 2017 consisted of an image of a baby sea turtle holding its flipper up with the caption, "Seattle is banning plastic straws on Jan. 1, 2018. This 'lil dude approves, and so do we!" This post has 523 likes and 12 comments. FinalStraw's Instagram presence began with the sea turtle and the plastic straw. The sea turtle has continued to be a successful icon to both market their product as well as promote the anti-plastic straw movement (Mellors 2015). Another Instagram post on May 22, 2018 included a picture of an adult sea turtle in the ocean on World Turtle Day. A segment captioned with this post, "We are incredibly lucky to share our planet with these beautiful living dinosaurs, so join us on our mission to show them some  by ditching single-use plastic; especially plastic straws that get stuck up their nostrils! Tag your turtle-loving friends in the comments!  

FinalStraw's use of language and emojis promote the turtle and the plastic straw with 783 likes and 17 comments, showing an increase in public interest in their product. On October 26, 2018 one of FinalStraw's latest posts about the sea turtle consisted of an up close shot of a sea turtle's head. Captioned, "Hey. Peep my clean and straw-free nose. Isn't it fabulous? Let's keep it that way" and it has 3,742 likes and 8 comments. FinalStraw has consistently used the sea turtle to

promote the anti-plastics movement to build their consumer base as well as promote the anti-plastic straw movement (Henning 2014).

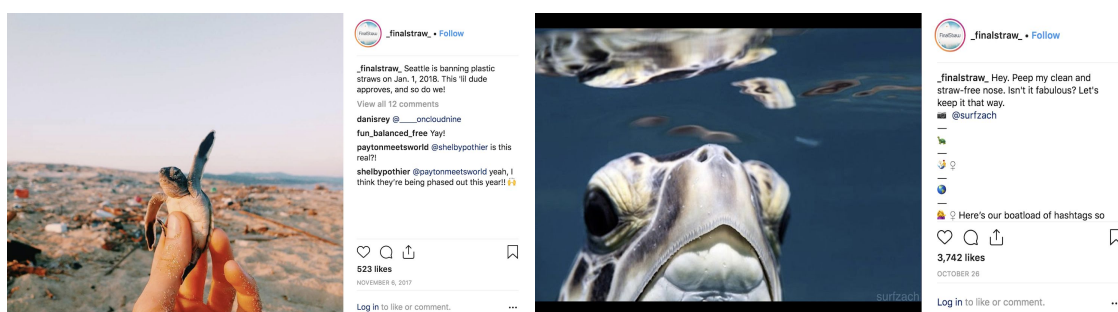


Figure 6: FinalStraw’s first Instagram post (left) using the sea turtle and the plastic straw to promote the anti-plastic straw movement a month after the launch of the company. FinalStraw’s latest Instagram post (right) still using the sea turtle and the plastic straw to promote the anti-plastic movement and their product a year later. Source: Instagram 2018.

On November 20, 2018, FinalStraw announced on Instagram the P.A.R.E. (Plastic Abuse Resistance Education) Program which introduced a program to resist single-use plastic. The turtle, Franklin the turtle, a main character in a popular animated children’s show in the early 2000s, is in this post is wearing a shirt printed “P.A.R.E.” and is standing up on two legs as a human would. FinalStraw is anthropomorphizing the sea turtle within this image and using the hashtags #SaveTheTurtles with the turtle emoji, promoting the anti-plastic straw movement, and their product (Barney et al. 2010). This post has 1,063 likes and 14 comments. Starting in November 2018, FinalStraw introduced a number of educational and promotional programs, like P.A.R.E. including donating \$1 per straw to 5gyres, a NGO focusing on plastic education and research. Partnering with an NGO like 5gyres gives this green marketing company credibility and a strength in statistics and public trust in the product to make a difference in the anti-plastic straw movement (Dietz et al. 1994).



Figure 7: FinalStraw’s P.A.R.E. Program introduced on Instagram in late November 2018 (Instagram 2018).

FinalStraw also pays for sponsored posts that are posts the company pays for to target certain age groups and demographics to have their posts appear on social media accounts when the public is scrolling through their newsfeeds and timelines.

FinalStraw’s promotional YouTube videos have also aided to the sale of their product and the promotion of the sea turtle in the anti-plastics movement. As mentioned earlier, in their videos and across their website, FinalStraw frequently uses a mermaid that often has a stuffed turtle, gathering attention to their product. This video has 205,003 views as of November 13, 2018 with 497 likes and 66 comments. FinalStraw’s latest YouTube video released on December 4, 2018 reached 13,571 views, 154 likes and 16 comments in just the first week it was released. The market for FinalStraw is growing based on the views and comments, which is largely based on the companies ability to successfully use the sea turtle as a symbol to promote the anti-plastics movement (Dietz et al. 1994).



Figure 8: Screenshot of FinalStraw’s promotional YouTube video (2017).

The FinalStraw team consists of a staff of seven people. CEO and Co-Founder, Emma Rose Cohen is from Santa Fe, New Mexico. From 2004 to 2009 she attended University of California, Santa Barbara and received a B.S. in Neuroscience. She then went on to the University of New Mexico, Robert O. Anderson School of Management from 2013 – 2014 and then to Harvard Extension School receiving a Master of Liberal Arts in Environmental Management and Sustainability from 2014 – 2016 (Linkedin 2018). Cohen is also a Sustainability Specialist at Los Alamos National Laboratory starting in 2014 to present and has been working there in conjunction to her FinalStraw company. Co-Founder Miles Pepper graduated from Analy High School in 2013 - he is 23 years old. Pepper has been working in the entertainment and media industry and lives in Los Angeles (Rose 2018).

On October 7, 2018 FinalStraw received publicity on Shark Tank, a business themed television show that provides entrepreneurs the ability to present their product to “Sharks” who are tough, self-made, multi-millionaire and billionaire individuals for a chance to get an investment in their product (American Broadcasting Company, n.d.). Both Co-Founders, Cohen and Pepper, pitched their product to the Sharks by bringing the mermaid frequently used in their

YouTube videos acting through scenes, including extracting a plastic straw from the stuffed animal sea turtle and having 5,700 plastic straws drop from the ceiling to represent the number of plastic straws used per second in the United States (Berger 2018). Cohen and Pepper hoped for a \$625,000 investment in exchange for a five percent company stake. Negotiations occurred but the Sharks did not fund the venture as they felt that the market for collapsible straws was premature. In their pitch, plastic straws were used in conjunction with the sea turtle to promote the anti-plastic straw movement that still is a successful tactic despite their unsuccessful outcome as FinalStraw gained an average of 100 to 300 likes on their posts about the sea turtle (Mellors 2015).

The warehouse for FinalStraw is based out of Los Angeles. The straws and cases are made in China. Returns are handled through a request form and are reviewed on a case by case basis. Only regular priced items are refunded. Yet on their website, they have a price of \$29.50 crossed out in red to a reduced price of \$24.50. It is unclear whether this product is “on sale” or not, and their terms and conditions state items that are on sale are non-refundable. If items are non-refundable and consumers are unhappy with this product for any reason, the straw may be tossed in the trash since there are no recycling options for this product - further contributing to the pollution problem in the ocean. FinalStraw may be profiting off of peak load pricing, where the company capitalizes on high prices while consumer buy-in is high, as FinalStraw is still a corporation that is dependent on profits (Ducarme et al. 2012).

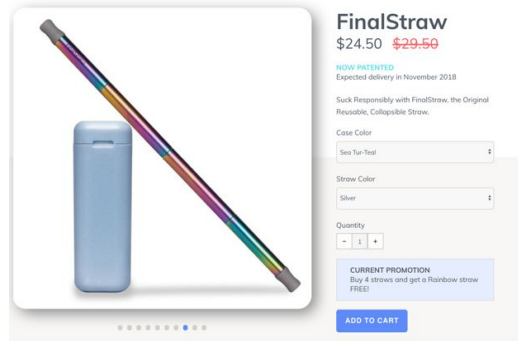


Figure 9: The FinalStraw price difference. The question of whether this straw is “on sale” or not (FinalStraw 2018).

FinalStraw made their initial product announcement in October 2017, but it wasn’t until late November 2018 when their product was shipped out and patented. During this span of time, competing products were made. According to sources from Amazon and Crestline, alternative collapsible straws sell for a fraction of FinalStraw’s price. Competing straws may have been manufactured as other companies felt that there is a market for alternative plastic straws and they expect the anti-plastic straw movement to increase in support.

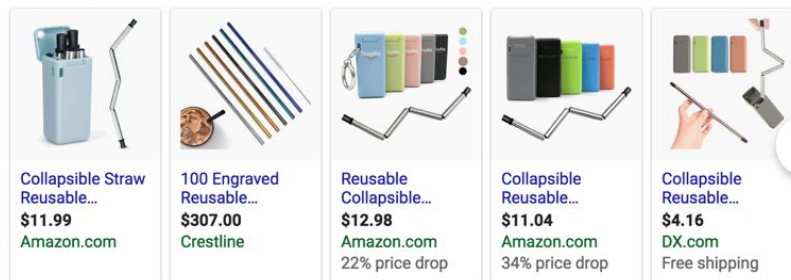


Figure 10: Competing products to FinalStraw (Google 2018).

FinalStraw successfully uses the sea turtle to their advantage to promote their product and the anti-plastic straw movement. This is shown through their Instagram posts, followers, comments and likes, their YouTube videos, and product pitch on Shark Tank as the interest in

this product has only increased since their launch in 2017. FinalStraw continues to strengthen through introducing credible statistics and educating their followers on social media. Consumers began to receive the product starting mid-November 2018. FinalStraw works hard to produce their product in a timely manner to profit financially while also focusing on their marketing side, using the sea turtle to promote the anti-plastics movement.

Aardvark Straw

Aardvark Straw provides a 100% compostable straw that is long lasting and durable from the first sip to the last (Aardvark Straw, n.d.). Every Aardvark Straw has the ability to break down completely in marine environments. This company is the first to create a product that does not contribute to the plastics problem further seeing as the straw breaks down it leaves no trace. Aardvark's mission, "to change the world one sip at a time, but changing the way people see and use single-use plastics - starting with the plastic straw!" (Aardvark Straw 2018) promotes the anti-plastic straw movement and the company's financial gain (Dietz et al. 1994). Aardvark Straw uses the sea turtle as a symbol to promote the anti-plastic straw movement through credible infographics that include the image of the sea turtle, links to articles about sea turtles and plastic straws, a straw line with a sea turtle print pattern, social media posts providing images of the sea turtle and an entire section on their web page that explains the harmful effects plastic straws have on sea turtles, linking back to Figgenger's YouTube video.

Aardvark Straw is based out of Fort Wayne, Indiana and is connected with Marvin Stone's original paper straw patent and company. Aardvark Straws were reintroduced in 2007 as a response to the anti-plastics movement as buyers of plastic straws started to look for more

sustainable options (Walpole et al. 2001). Aardvark Straw predicted the demand for alternatives plastic straws prior to Figgener’s YouTube video in 2015. In 2015, Aardvark Straw introduced a custom printing ability to their straws possibly anticipating an increase in their product after the release of Figgener’s YouTube video.

Aardvark Straw provides comprehensive information about the contents of their product. All materials are non-toxic, BPA-free, and elemental chlorine free. The straws are also FDA food grade and compliant (Aardvark Straw, n.d.). Aardvark Straw was included in 5gyres’ B.A.N (Better Alternatives Now) List 2.0 in November 2017, as part of a case study to understand the performance of bioplastic products and packaging in the ocean and in a backyard composting bin (5gyres 2017). Aardvark straw was the fastest to breakdown and leaves no traces proving to be a strong alternative to plastic straws. Aardvark Straw takes about 30 to 60 days to breakdown in a normal composting environment.

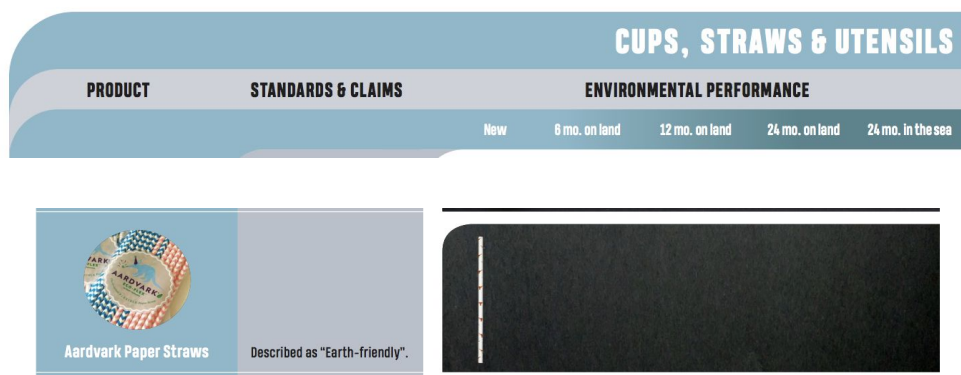


Figure 11: Aardvark Straw’s lifespan, the shortest out of all 6 tested in the case study (5Gyres 2017).

Aardvark Straw uses the sea turtle as a symbol to promote the anti-plastic straw movement while also promoting their product for financial gain (Dietz et al. 1994). Aardvark has a designated webpage for the sea turtle explaining the detrimental effects that plastic straws have

on the sea turtle by providing a link to Figgener's YouTube video, while including links to their sea turtle print paper drinking straws. Aardvark uses captivating language relating to the public saying,

Like most of the viewing public, we were horrified to see the awful video of a sea turtle suffering from a plastic straw lodged in its nose. In response, we have created a special Aardvark eco-friendly paper straw that represents the importance of using paper over plastic for our marine life (Aardvark Straw, n.d.)

The use of this language makes the public feel as if buying this product will make a difference, since the strategic placement of the turtle print straws are below Figgener's YouTube video.

Aardvark Straw is supporting the anti-plastic straw movement through the image of the sea turtle printed on their products, while also profiting off of the sales of these products. These special sea turtle print paper straws come in jumbo and regular 7.75" Eco-flex and start from \$7.99, but are out of stock. The only other option to buy the sea turtle print straw is to buy 72 packs for \$300.

To encourage sea turtle conservation and raise awareness for the anti-plastic straw movement, Aardvark donates 15% of sea turtle straw sales to the Sea Turtle Care Center at the South Carolina Aquarium. "Choose Aardvark's biodegradable and compostable paper straws - the sea turtles thank you!" (Aardvark Straw, n.d.). Aardvark provides incentives to buy their product, as the public will feel they are helping the sea turtle population and supporting the anti-plastic straw movement (Mellors 2015).



Figure 12: Examples of Aardvark Straw's sea turtle print paper straw (2018).

Aardvark Straw uses the sea turtle through infographics and promotes the anti-plastics movement by using the sea turtle to relate to the public through statistics while also claiming a need for their product. Aardvark Straw is affiliated with NGOs such as 5gyres, The Last Plastic Straw, and the Plastic Pollution Coalition, giving the public reassurance that this product will make a difference in the anti-plastic straw movement (Norwell and Jackson 1996).

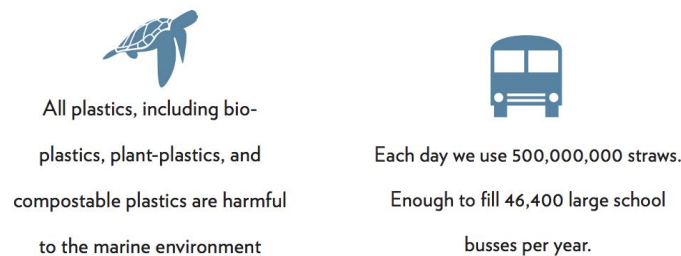


Figure 13: Examples of infographic provided on the website. Aardvark Straw uses personable language and imagery of the sea turtle to relate to the public (2018).

Aardvark Straw uses social media to promote the sea turtle within the sea turtle straw print and support the anti-plastic straw movement. On Instagram (@aardvarkstraws), Aardvark

has 4,814 followers and averages about 200 to 300 likes per post. On Facebook (@aardvarkstraws), the company has 5,226 likes and an average of 10 to 20 shares per post. On Twitter (@AardvarkStraws) Aardvark has 1,034 followers and an average of 7 likes per tweet. Aardvark's Twitter does not seem to be used frequently as the Instagram and Facebook are updated often. Aardvark Straw uses Facebook to post articles that they are featured in. Recently in September 2018, Aardvark's turtle print straw was featured in an article by ABC reporting on restaurants in Myrtle Beach, South Carolina participating in the growing trend for straws served only upon request.

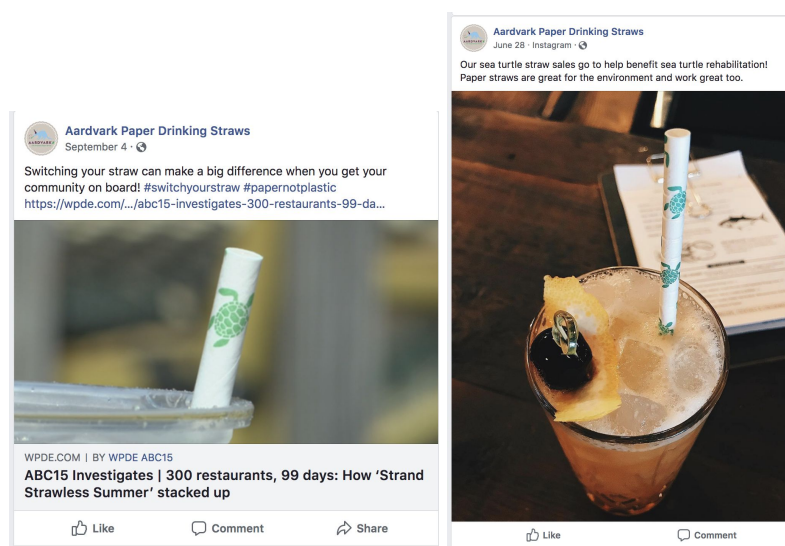


Figure 14: To the left, Aardvark turtle print straw in media (Facebook 2018).

Aardvark Straw also successfully uses the sea turtle as a symbol to promote the anti-plastics movement through their Instagram account. Aardvark's first post about the sea turtle originated in November 2015 - three months after Figgenger's YouTube video was released. This post only has 19 likes and one comment. This is the first time Aardvark Straw posted content that anthropomorphized the sea turtle in conjunction with their product. In June 2018, Aardvark

Straw posted similar content, promoting their sea turtle print straw while supporting the anti-plastic straw movement indicating the company’s support with sea turtle rehabilitation. This post has 340 likes and 20 comments. The increase in likes and comments from 2015 to 2018 may indicate public engagement in the anti-plastic straw movement. This support may have come from using the sea turtle as a symbol for their company, since the demand for alternative plastic straws has proven to increase since 2015.



Figure 15: Aardvark Straw’s first post anthropomorphizing the sea turtle in November 2015 (left) and Ardvard’s recent post anthropomorphizing the sea turtle in June 2018 (right). Source: Instagram 2015 and 2018.

Aardvark Straw strives to educate the public on the harmful effects of plastic straws. On a webpage designed to explain this, the first article provided contains a sea turtle with a speech bubble, “Would I like a straw?! You’ve gotta be joking...” (Aardvark Straw 2018). By providing this article as the first one to read when navigating this webpage - Aardvark uses the sea turtle to promote the anti-plastic straw movement while also promoting the company values and products (Ducarme 2012).

Aardvark Straw successfully provides a compostable alternative to plastic straws that will not contribute to the plastics problem. The demand for the sea turtle straws are so high that many

versions are sold out and there is a 10 to 12 week shipping time. Aardvark has marketed their product successfully using the sea turtle as a symbol to make a profit and promote the anti-plastic straw movement simultaneously.

Net Zero Straw

Net Zero Straw is a collapsible straw that is meant to be brought anywhere and everywhere. Their slogan, “Save the environment one sip at a time” encourages the public to join the anti-plastic straw movement (Net Zero Straw 2018). This company uses the sea turtle to promote the anti-plastics movement in conjunction with their profits through their logo and word placement, alluding to Figgener’s YouTube video, and through their social media accounts, comments, likes and shares. Net Zero Straw provides the public with links to all of their statistics and uses language to relate to the public, increasing awareness, while also promoting the anti-plastic straw movement using the sea turtle.

The Net Zero Straw is 9 inches long and folds down to 2.5 inches into a keychain case. The straw is BPA free and safe to use with hot or cold drinks. The straw references the sea turtle in the color selection by providing, “Sea Turtle Green” as an provided option. Each straw is \$29.99 but marked on sale for \$19.99 and one dollar from each Net Zero Straw sale supports marine conservation. Net Zero Straw’s decision to mark down the straw and donate proceeds towards marine conservation promotes the anti-plastic straw movement while also providing an incentive for the public to buy this product.



Figure 16: Net Zero Straw case and colors (Net Zero Straw 2018).

Net Zero Straw places an emphasis on education behind the anti-plastic straw movement as a tactic to increase buy-in. There is a screenshot from Figgenger’s YouTube video in a section explaining how ocean pollution affects marine life. “We’ve all seen that heart wrenching video, where researchers off the coast of Costa Rica remove a plastic straw embedded in the nostril of an olive ridley sea turtle, an endangered species” (Net Zero Straw, n.d.). Net Zero Straw appears to have the assumption that the public has already viewed Figgenger’s YouTube video and by using a screen shot of the Olive Ridley sea turtle in Figgenger’s YouTube video, the sea turtle is used to encourage the public to make a change. The sea turtle is used to promote the anti-plastic straw movement while the company is making profits on the sale of their products (Dietz et al. 1994).

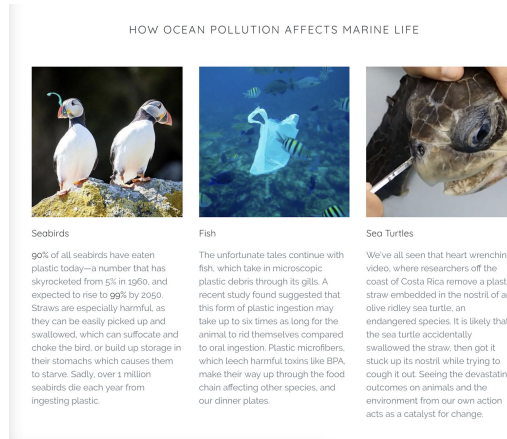


Figure 17: Use of imagery, including a clip from Figgenger’s YouTube video to captivate the public to buy their product (Net Zero Straw 2018).

The logo of Net Zero Straw consists of a sea turtle. The strategic placement of the title on the sea turtle promotes the anti-plastics movement and the product simultaneously. “Net Zero” is placed above the sea turtle shell and “Straw” is placed on the bottom of the sea turtle shell. This company is using the sea turtle by placing text inside the shell, simulating the plastic straw in Figgenger’s Olive Ridley sea turtle, promoting the anti-plastics movement while advertising their company.



Figure 18: The Net Zero Straw logo is a sea turtle (Net Zero Straw 2018).

Net Zero Straw promotes the sea turtle as a symbol in the anti-plastic straw movement through their social media pages. Their Instagram (@netzerostraw) has 10.5k followers and their Facebook (@netzerostraw) has 1,233 likes. Net Zero Straw shows a stronger presence of the sea turtle through their Instagram. Net Zero Straw's first Instagram post was shortly after the creation of their Instagram on August 15, 2018. This first post, on August 23, 2018, shows a sea turtle wearing a plastic bag in conjunction with a credible statistic from the Environmental Protection Agency. This post has 160 likes and 2 comments. This post also has the location at The Great Pacific Garbage Patch indicating an emphasis on the anti-plastics movement. Four months later Net Zero Straw continued to use the sea turtle as a symbol to promote the anti-plastic straw movement. On December 13, 2018, a post showed a black and white sea turtle with plastic contents in its shell. This post provided a shocking statistic about the decline of sea turtles in terms of the ingestion of plastics. This post has 570 likes and 10 comments. The increase in the amount of likes and comments within four months shows a trend between the demand for alternative plastic straws and the public interest in the anti-plastic straw movement - proving the sea turtle is an effective way to promote the anti-plastic straw movement.

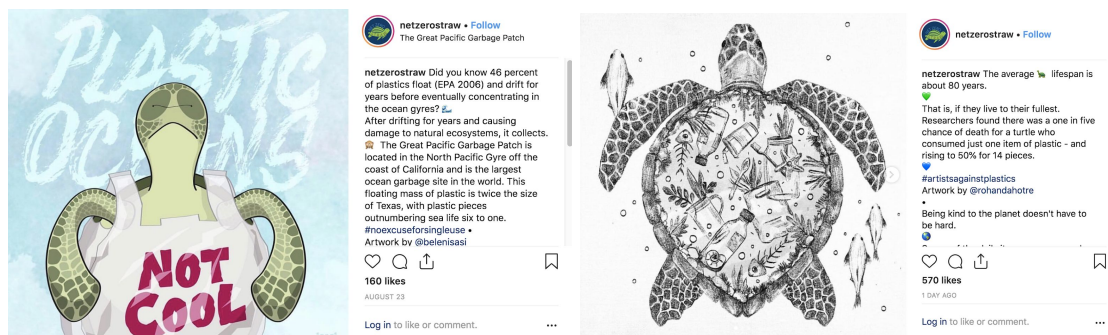


Figure 19: Net Zero Straw's first sea turtle post (left) and Net Zero Straw's sea turtle post four months later (right) (Instagram 2018).

Net Zero Straw provides a section promoting their product within the anti-plastic straw movement, offering their straw as one alternative method and listing many ways to stop plastic pollution. Net Zero Straw encourages the public by saying, “Every action is meaningful” (Net Zero Straw 2018). There is also a section informing the public of laws and regulations within the anti-plastic straw movement. Cities such as Vancouver, Seattle, and Miami Beach have taken steps to limit plastic straw use. Major baseball stadiums for the Chicago White Sox and San Francisco Giants are shifting to paper or biodegradable straws. Net Zero Straw keeps the public informed by providing educational information while promoting the anti-plastic straw movement.

Net Zero Straw most effectively uses the image of the sea turtle to promote the anti-plastic straw movement through their logo and the strategic placement of the name of the company. Net Zero Straw also gained interest very quickly over a span of four months when analyzing their social media presence. The posts of sea turtles most commonly had an increase in the amount of likes showing that the sea turtle is a successful icon in the anti-plastics movement.

Section Conclusion

Each of these three green marketing companies have unique ways of promoting the sea turtle in the anti-plastics movement while profiting off of their alternative straw design. FinalStraw uses a combination of YouTube videos featuring a mermaid extracting a plastic straw from a stuffed sea turtle to resist single-use plastic, using a sea turtle as a mascot to both profit off of their product but also promote the anti-plastic straw movement. Aardvark Straw uses a combination of statistics to educate the public and a special edition sea turtle print straw that

references Figgener's YouTube video to gather support for their compostable straw and use the sea turtle to promote the anti-plastic straw movement. Net Zero Straw uses the sea turtle through their logo, with strategic placement of wording and allusion to Figgener's YouTube video, making the public both aware of the anti-plastic straw movement while selling their product.

There is a correlation on Instagram with these three companies in terms of the amount of likes generated on posts about sea turtles starting in 2015 to present. Posts with sea turtles tended to have the most amount of likes and in 2015 the amount of likes continued to increase and are continuing to increase. These three companies also provide statistics most commonly related to the plastic straw when there is an image of the sea turtle provided as an image.

These companies will continue to develop their marketing strategies using the sea turtle as a point of interest for the public in the anti-plastic straw movement. These companies will profit off of their products while creating new ideas for public engagement for their product as the green marketing field becomes more competitive. NGOs use the sea turtle as a symbol to build momentum around the anti-plastic straw movement by raising awareness on the health and environmental problems posed by plastics to make solutions more accessible and empowering people to become part of this change. Both the green marketing companies and NGOs use the sea turtle to promote the anti-plastic straw movement.

CHAPTER 3: Non-Governmental Organizations (NGOs)

NGOs focusing on the anti-plastic straw movement were some of the first to take action in response to Figgenger's YouTube video. These NGOs have employed the sea turtle as a symbol to build momentum for the movement as well as support their organization and causes.

The Plastic Pollution Coalition and The Last Plastic Straw are two organizations that provide educational resources to change the way individuals and businesses think about plastic pollution and disposable culture on a larger scale. Similar to green marketing companies, these NGOs use imagery of the sea turtle throughout their websites, provide statistics and infographics, promote themselves on social media and provide links to Figgenger's YouTube video. However, NGOs are different than green marketing companies as the sea turtle is used to promote the anti-plastic straw movement to raise awareness on the health and environmental problems posed by plastics, to provide solutions that are more accessible, and to empower the public to become part of this change (Barney et al. 2010). The anti-plastic straw movement is just the first step in global action towards the detrimental effects of plastic on the environment.

Plastic Pollution Coalition

The Plastic Pollution Coalition (PPC) is a growing global alliance of more than 700 organizations, businesses, and influential thinkers in over 60 countries working toward a world free of plastic pollution and its toxic impact on humans, animals, waterways, and oceans and the environment (Plastic Pollution Coalition 2018). The PPC also has a movement which provides the public with resources addressing the plastics problem and how to take action. The PPC also

provides the latest news from around the world about the ocean, environment, science, policy, and culture.

There are many ways you can help stop plastic pollution.

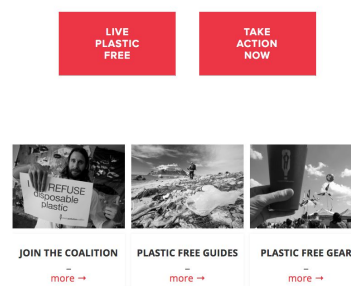


Figure 20: The Plastic Pollution Coalition inviting individuals and businesses to take action (PPC 2018).

The PPC is headquartered in Berkeley, California. Dianna Cohen, one of the co-founders of the Plastic Pollution Coalition and the Chief Executive Officer, is an active face for the company as an artist and activist. Notable individuals who support the PPC include Jeff Bridges, Margaret Atwood, Chevy Chase and more. The PPC also has a Scientific Advisory Board, with a wide array of individuals with Ph.Ds who work for the Scripps Institution of Oceanography to the National Geographic. The Plastic Pollution Coalition also has Youth Ambassadors from around the world, giving a multi-generational presence within their organization. With a large supporting group from many different backgrounds, this NGO builds a scope around the sea turtle to increase the public to join the coalition (Goodman et al. 2013).

Cohen has publicized her support for the anti-plastic straw movement through the media. In 2018, she was quoted in a *Business Insider* article stating, “We look at straws as one of the

gateway issues to help people start thinking about the global plastic pollution problem. They've been designed to be used for a very short amount of time, and then be tossed away" (Brueck 2018).

The Plastic Pollution Coalition is successful in providing statistics that are backed by credible sources. This organization does not hesitate to provide shocking statistics such as, "By 2050, the oceans will contain more plastic than fish by weight." (Ocean Conservancy 2018). Many of the statistics they provide are supported by peer-reviewed studies. For example, they cite Thompson et al. (2009) saying, "Over 260 species, including invertebrates, turtles, fish, seabirds and mammals, have been reported to ingest or become entangled in plastic debris." These statistics provide the public with accurate information, reassuring the public that this issue is ongoing and involvement needs to happen to take action against single-use plastics (Norwell and Jackson 1996).

The PPC Movement is currently conducting a global fast food plastic survey on the world's 100 largest Fast Food Companies to determine whether they distribute plastic bags, plastic straws and foam cups and containers in each country they operate in. These three items were in the top 10 of the Ocean Conservancy's 2017 International Coastal Cleanup. The PPC is using its network as well as social media to engage with these companies and gather information. "Plastic straws, commonly distributed by the Fast Food industry, have been shown to cause fatal harm to sea creatures" (Plastic Pollution Coalition, n.d.). Provided in this sentence, which is included in the initial proposal, a link to an article on The Telegraph titled, "Plastic straw removed from turtle's nose by marine biologists in heartbreaking video" is linked so the public can be more informed of the harmful effects of the plastic straw. The PPC is referencing back to

Figgenger’s video in hopes to both promote the anti-plastic straw movement but promote the public appeal in their survey to gather support.

The PPC promotes a pledge to support the 4Rs: refuse, reduce, reuse, and recycle. The PPC asks the public to refuse plastic when possible, reduce consumption of plastic goods, reuse durable, non-toxic straws and choose alternatives when possible as well as recycle what cannot be refused, reduced or reused. The PPC also has pledges that focus on specific issues such as the plastic straw. When supporting these pledges, the public promises to be aware of these issues as well as promote them in their local communities.

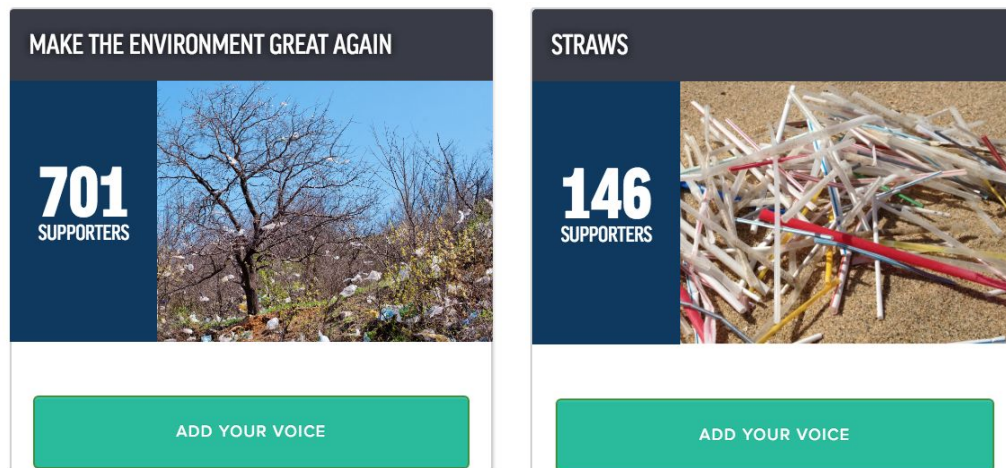


Figure 21: Campaigns and number of supporters for PPC pledges (2018).

The PPC also utilizes social media to post to local politicians, asking for legislation towards plastic pollution. When clicking “ADD YOUR VOICE” on the straw campaign above, the public is directed to a page that links directly to twitter when signing the pledge. This is pushing engagement to shift the way individuals and businesses think and act about plastic pollution on a larger scale.



Figure 22: Plastic Straw campaign that pushes supporters to post to twitter to encourage local politicians to take action (2018).

The PPC uses imagery to encourage donations. In their take action section, the campaigns and pledges are provided above the donation pages. The sea turtle is used as a symbol for the anti-plastic straw movement, but also for the PPC to gather donations (Dietz et al. 1994).

Images of the sea turtle are juxtaposed with those of massive amounts of trash polluting a beach. When scrolling through this page, the trash is the first image the public will see when clicking on the page, then right below is an image of a sea turtle stating “SKIP THE STRAW.” The donation button is available next to both of these images, where the PPC is hoping for donations based on these images. The donation button takes the public to the bottom of the page, which would be reached even if the button was not clicked. An example of these images can be seen below (Ducarme 2012).

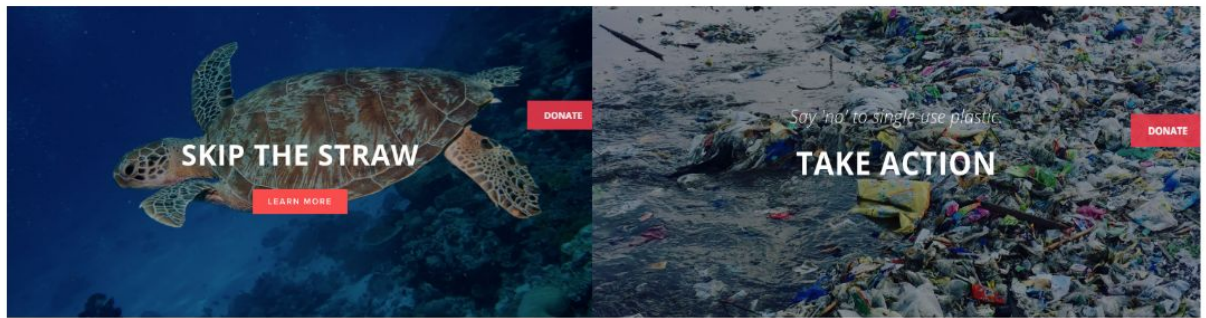


Figure 23: Use of the sea turtle and plastic pollution to persuade donations on the PPC’s take action section of their website.

The Plastic Pollution Coalition has a strong social media presence using Facebook (@PlasticPollution), Twitter (@PlasticPollutes), Instagram (@plasticpollutes), and YouTube to promote awareness about the anti-plastic straw movement. The PPC has 253,203 likes on Facebook, 39.9K followers on Twitter, 78.2K followers on Instagram and 2,337 subscribers on YouTube. When analyzing PPC’s Instagram page I found from 2016 to 2018 the PPC posted the same photo three times on May 23, World Sea Turtle Day. This photo features a statistic about sea turtles stating, “Over half the world’s sea turtles have eaten plastic” (@plasticpollutes, 2018). Starting in 2016, this post had 247 likes and 6 comments. In 2017, this post had 710 likes and 19 comments. In 2018, this post had 1,691 likes and 35 comments. I found that there was an 85% increase in likes towards this post. This signifies that the Plastic Pollution Coalition has had a steady increase in followers since the release of Figgenger’s YouTube video.

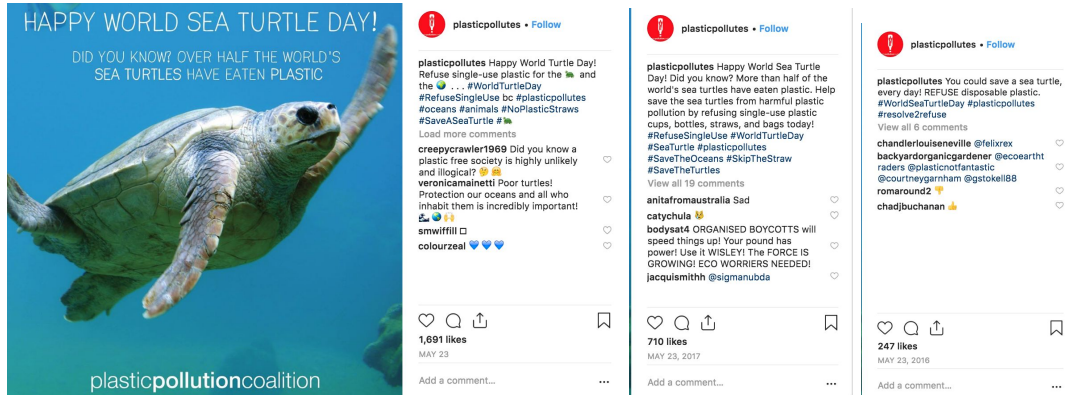


Figure 24: PPC’s Instagram (@PlasticPollutes) World Sea Turtle Day posts on May 23 from 2016 to 2018.

The Plastic Pollution Coalition was one of the first NGOs to respond to Figgenger’s YouTube video and the anti-plastic straw movement. On August 20, 2015 the PPC’s Instagram posted a screenshot of Figgenger’s YouTube video 10 days after her video was released. This screenshot is graphic with blood dripping from the turtle’s nose and a human hand on top of the turtle’s head supporting the turtle as it is in pain. This post brought the visual aspect of the plastic straw problem to the surface within this NGO using the sea turtle. With just 45 likes, this post was the first one that the NGO posted about sea turtles. Three months later, on November 11, 2015, the Plastic Pollution Coalition posted an article in response to Figgenger’s video in the Ocean news section. This article titled, *The Turtle That Became the Anti-Plastic Straw Poster Child*, listed that 6 million people around the world had viewed Figgenger’s video (Cuda and Glazner 2015). The PPC continues to use the sea turtle to promote their NGO while also supporting the anti-plastic straw movement.

pollution problem. The Plastic Pollution Coalition lists the Last Plastic Straw as a project of theirs the NGO is a member of the coalition.



Figure 26: The sea turtle being used as an icon to save sea turtles from plastic straws. Source: Plastic Pollution Coalition 2018.

The Last Plastic Straw fosters collective engagement around the anti-plastic straw movement through four levels of action. The first level is on an individual level, where the pledge is taken to stop using plastic straws and say “no” when offered. Level 1 also encourages the public to seek alternatives to plastic straws such as metal or bamboo straws. Level 2 encourages individuals and businesses to reach out to local eateries in the neighborhood to ask straws to be served upon request. The Last Plastic Straw provides informational cards that can be given out, expressing the need for the anti-plastic straw movement. Level 3 then promotes the public to push local eateries to stop using plastic straws and to use paper, glass, or stainless steel straws as options. This is where the Last Plastic Straw introduces business specific pledges that can be signed. Level 4 encourages community engagement, where the public is brought together to watch the film STRAWS, that provides audiences with a clear understanding about the

problems of plastic pollution, empowering individuals to become a part of the solution (STRAWS, n.d.).



Figure 27: The sea turtle as a marketing tool for the Last Plastic Straw (2018).

The Last Plastic Straw provides a map of participating businesses that have signed the pledge against plastic straws. This interactive map is user friendly and lists all of the businesses and years they stopped serving plastic straws. This provides communities information about which businesses are involved in their area, and what they can do to stop using plastic straws. Some dates on this map are prior to 2015, indicating that there has been a need for plastic straw alternatives before the release of Figgenger’s video.

In December 2017, the Last Plastic Straw started a campaign to ask In-N-Out, an American fast food chain to stop using plastic straws functioning with the hashtag, #SwitchTheStraw on social media. Through this campaign as of December 17, 2018, 282 individuals have pledged their support to ask Lynsi Snyder, President and Owner of In-N-Out Burger to switch to compostable straws.

Section Conclusion

Each of these NGOs have unique ways of promoting the sea turtle in the anti-plastic straw movement while raising awareness and providing solutions for the anti-plastic straw movement using the sea turtle in various ways, from Instagram posts to petitions. The Plastic Pollution Coalition has a vast support network that works together with the Last Plastic Straw to increase support for the anti-plastic straw movement.

These companies will continue to use the sea turtle within their marketing strategies to interest the public in joining the movement while also educating about the harmful health effects of plastics. Both NGOs and green marketing companies use the sea turtle as a symbol to promote the anti-plastic straw movement.

CONCLUSION

The sea turtle is used as a flagship species for the anti-plastics movement, as other charismatic megafauna have been prominent in other conservation movements. The sea turtle is distinctive because it is used for a larger anti-pollution message, not just plastic straws, as the sea turtle is also an umbrella species, representing more than just its ecosystem protection. The sea turtle is used to challenge consumption practices, similar to the role of the elephant and the ivory ban.

Mellors (2015) argues, the concern that the attraction of the sea turtle may bring a negativity to the anti-plastic straw movement. Individuals and businesses who are joining this global movement may not be joining with the desire to reduce plastic pollution, this may just be for financial or social gain. As Ramage and Bean (1998) would argue, the anti-plastic straw movement may appeal to the public's sense of identity and self, causing some members of the public to go in a direction that is advantageous which may be harmful. As the market for alternative plastic straws builds, the sea turtle continues to develop into a flagship species, despite the lack of studies conducted as Western (1987) would support. There is a need for more studies on single-species characteristic megafauna in cases of animals as symbols in campaigns and educational programs. As the sea turtle continues to be used as a symbol, there may be an increase of research and studies.

With the pressure from the public for corporations to join the shift towards the anti-plastic straw movement, this has pressured governments to pass legislation on banning single-use plastics. This push happened 3 years after Figgenger's video, but this was the catalyst for changing the public to be aware of the plastics problem. There is now a growing market for

alternative plastic straws and as large scale companies such as Starbucks provide a public shift towards the anti-plastic straw movement, other companies will do the same, only increasing the market for alternative plastic straws.

The anti-plastic straw movement has continued to progress since 2015 and momentum is increasing as individuals and businesses join the shift towards the ban of single-use plastics. The plastic straw is just the first step to understanding the scope of the plastics problem, as Figgenger's YouTube video gave a symbol for the public to empathize with. Images are used to appeal to people's emotions in order to persuade them to act (Ramage and Bean 1998). The sea turtle is used by individuals and businesses to advance their goals of both making or generating profits while promoting the anti-plastic straw movement. In 2015 and 2016, NGOs like the Plastic Pollution Coalition were the first to respond to Figgenger's video, raising awareness and starting anti-plastic straw campaigns. In 2017, green marketing companies started to offer alternatives to plastic straws, as they marketed their product with the sea turtle to promote the anti-plastic straw movement. In 2018, the anti-plastic straw movement pushed changes in legislation, for example mandatory bans on single-use plastics, indicating a global movement.

Green marketing companies are successful in using the sea turtle to generate revenue for their product and support for alternative plastic straws and the anti-plastic straw movement. This is shown through an increase in support on each company's Instagram page. From 2015 to 2018, the number of likes and comments increased tremendously. Most green marketing companies that provide alternative plastic straws are still in the beginning stages of selling their product. For example, Aardvark Straw has a 10 to 12 week shipping period due to the high demand for their

product, as they cannot keep up with supply and demand. FinalStraw launched their idea in 2017 this past November 2018, gotten their first batch of straws out to the public.

NGOs use the sea turtle as a symbol to build momentum around the anti-plastic straw movement by raising awareness for the health and environmental problems posed by plastics to empower the public to become part of this global shift. As Barney et al. 2010 would agree, education is used, such as credible statistics and programs using the sea turtle to increase attention on the anti-plastic straw movement. The Plastic Pollution Coalition has a large network of support around the world and it only continues to grow as aspects of the sea turtle are used to both bring in donations but also attract members of the public who want to make a change against plastic pollution.

The key difference between green marketing companies and NGOs stems from the use of finances. As Dietz et al. 1994 would argue, the sea turtle is used as a symbol for financial gain. In the case of the green marketing companies, this is for their own revenue from their products, but with NGOs this is for fundraising and donations. Green marketing companies promote their product by using the sea turtle, while NGOs build momentum around the plastic straw to raise awareness on the health and environmental problems posed by plastics. Agreeing with Ducarme (2012) both the NGOs and green marketing companies focus on the socio-economic concept of the sea turtle while simultaneously promoting the anti-plastic straw movement.

The harmful impact of plastic straws on the environment is undeniable after Figgner's YouTube video. Social media has been a huge driver in the anti-plastic straw movement, as it tracks a shift in supporters, while also sharing information visually, which is proven to have been successful in marketing techniques for both green marketing companies and NGOs analyzed

throughout this paper. The anti-plastic straw movement will only continue to increase in support. With the development of viable options for alternative single-use plastics, the anti-plastic straw movement will continue to create a larger conversation about single-use plastics in the world.

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