

Our Stories, Our Planet: Imagining a Sustainable and Equitable Planet Through Inclusive  
Representation and Diverse Narratives

An Honors Thesis for the Department of Interdisciplinary Studies

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## **Introduction**

“You just have to reach people’s hearts. And the best way I know is to tell stories.” - Jane Goodall

*Whip-poor-weeo...*

A bird whistled his flute-like song, perched on the uppermost branches of a dead tree as the sun sets.

*Ö-ö...Ö-ö...*

His voice - melodious, clear, beautiful - with a haunting echo.

*Whip-poor-weeo. Ö-ö...*

The bird cried out once more, waiting... waiting... patiently waiting and listening for a response.

*Whip-poor-weeo. Ö-ö...Ö-ö...*

The notes rising in pitch and then descending, ending with two notes that go up by one interval, as if asking a question.

Nothing.

*Whip-poor-weeo...*

The bird called out one last time, crying his high-pitched song meant to attract his soulmate. But no one in his species was left to hear the song.

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This scene described the last video recording of the last male Kaua'i o'o (*Moho braccatus*) in the 1970s. He belonged to a species that mates for life. The last male Kaua'i o'o would be seen in 1987. During the silence between his songs, the female o'o would reply with her own song, creating a duet that leads to a lifelong bond (Psihoyos, 2015). How lonely it must have been, to be the last individual of his species, singing to an empty audience.

And now he is gone too.

One of the smallest of the Hawaiian o'os, the Kaua'i o'o was endemic to the island of Kaua'i. The species slowly declined throughout the twentieth century, from a range of anthropogenic factors, including habitat destruction, the introduction of pigs and black rats, and mosquito-borne diseases (Collar, Crosby, & Stattersfield, 1994). The disappearance of this species marked the extinction of an entire avian family, the *Mohaidae*, the first in modern times (Lovette, 2008).

Species like the Kaua'i o'os are disappearing around the world. It is both lucky and tragic to have footage of the species before they vanished forever. But many other species approach the edge of extinction, far away from the spotlight of human attention. It becomes difficult when species populations are already declining before data has been gathered. Insects such as fireflies, mammals such as the platypus, and birds such as the saltmarsh sparrow (*Ammospiza caudacutus*) are all disappearing rapidly just as we begin learning about their biology, ecological interactions, and lifeways (van Dooren, 2014). Every time an ecologist discovers a new species of frogs or salamanders, they have to wonder if the individual is the last of their kind.

Many scientists and experts have warned us that we are approaching the Sixth Mass Extinction for plants and animals. According to a United Nations report released in May 2019, a million species are at risk of extinction, mostly because of anthropogenic (i.e. human caused) factors (Leahy, 2019). Similar to the concept of "background noise," biologists also have calculated "background extinctions" - the average rate of a species going extinct - using fossil records. While species extinctions occur naturally, the calculated background rate is

approximately between 1 and 5 species per year. Now, the planet loses species between 1000 and 10,000 times the background extinction rate (Center for Biological Diversity, n.d.; World Wildlife Fund, n.d.). For certain groups of animals, the actual extinction rate is much higher.

For amphibians, the most at risk taxonomic class, the extinction rate is 25,039 times the background rate, with some estimates of over 45,000 times the background rate (McCallum, 2007). More than a third of amphibians are close to extinction. Half of all frog species could become extinct in the next 20 years (Psihoyos, 2015). Drivers of their demise include habitat loss, water and air pollution, climate change, ultraviolet light exposure, invasive species, and disease. The spread of one pathogenic fungus, *Batrachochytrium dendrobatidis* or Bd for short, was when the scientific community began to notice and become concerned about the rapid loss of biodiversity (Kolbert, 2015; Wake & Vredenburg, 2008). Bd attaches to the skins of frogs, interfering with how frogs absorb certain electrolytes critical to survival, eventually leading to what are essentially heart attacks (Kolbert, 2015).

For birds, about 14% are threatened with extinction (The International Union for Conservation of Nature, 2019). Habitat loss, invasive species, the illegal wildlife trade, and the decline in insect populations due to pesticide usage all contribute to their loss (Center for Biological Diversity, n.d.). Globally, an estimated 21% of all reptiles are vulnerable or endangered. Habitat destruction and predation by nonnative species are the main threats, but the increasing temperatures is skewing their sex ratios because many of them are temperature-

dependent sex determinant species (Center for Biological Diversity, n.d.; Psihoyos, 2015; Welch, 2018). And among mammals, the taxonomic class we humans are a part of, approximately 25% are approaching extinction, mostly as a result of diminishing habitats and illegal poaching (Center for Biological Diversity, n.d.; Psihoyos, 2015; The International Union for Conservation of Nature, 2019).

While the decline of the above taxonomic classes is relatively well-documented, for marine creatures, insects, and plants, there are very few comprehensive documentations of their populations. Currently, it is hard to make concrete claims about their conservation status. There is only a general sense that the populations are declining, but we do not have a global base population to compare with to determine the rate and how worried we should be. This is particularly disturbing because these groups of species are the bedrock for entire ecosystems. Without knowing in detail about their rate of decline and risk of extinction, it is extremely difficult to accurately predict the bottom-up consequences and the chance of global ecosystem collapse.

Around the world, fisheries are collapsing due to unsustainable and environmentally destructive methods of harvest, plastic and fertilizer pollution, eutrophication (i.e. the formation of oxygen-less dead zones due to algal blooms), climate change, and ocean acidification - just to name a few - but the most comprehensive study only surveyed less than 4 percent of all fish populations (Tanzer et al., 2015). Coastal communities depend on these fish as important

sources of income and protein. Based on what we know, it is bad. It could very well be a lot worse.

In 2019, headlines with the words “insect apocalypse” dominated multiple news cycles. In the first global scientific report on insect populations, the analysis described how more than 40% of the 1 million known insect species are declining (Sánchez-Bayo & Wyckhuys, 2019). A third of all insect species should be considered endangered according to the analysis. Another report estimated that the world has lost around 50% of insect population numbers since the 1970s (Goulson, 2019). And the rate of extinction for insects is eight times faster than that of mammals, birds, and reptiles (Carrington, 2019a). The most affected species are butterflies, bees, and other insect pollinators, which pollinate approximately three-quarters of all of our food. The main threats to their populations are habitat destruction and agrochemical pesticides (Goulson, 2019; Sánchez-Bayo & Wyckhuys, 2019). Perhaps what is even more alarming is how understudied insects are. It took until February 2019 for the first global scientific review on insect populations to be published, with a second report published in the UK in November 2019. However, many of their analyses are based on surveys conducted in Western Europe or North America, because there is very little data from anywhere else (Carrington, 2019a).

Lastly, plants. A person might be able to name a bird or mammal that recently went extinct. They would undoubtedly have a harder time naming a plant species. According to a global assessment published in the scientific journal *Nature*, 571 known plant species have been confirmed extinct since the Industrial



Revolution, although most botanists agree this number grossly underestimates the actual number of extinct plants. Based on widely accepted scientific models, the rate of extinction is suspected to be 500 times greater than their pre-industrial background extinction rate, and also 4 times higher than mammals, birds, and amphibians (Carrington, 2019b; Humphreys, Govaerts, Ficinski, Lughadha, & Vorontsova, 2019; Mongabay.com, 2019). Of the 391,000 distinct plant species documented, about 21% are threatened with extinction (Dasgupta, 2016). With plants, there are just so many unidentified species on this planet. Approximately 2000 new species of plants are discovered every year (Carrington, 2019b; Dasgupta, 2016). Dr. Maria Vorontsova, one of the scientists behind the global assessment, stated, “We suffer from plant blindness. Animals are cute, important and diverse but I am absolutely shocked how a similar level of awareness and interest is missing for plants. We take them for granted and I don’t think we should” (as cited in Carrington, 2019b).

### **Importance of Biodiversity**

So why is it important to stop these declines across all life kingdoms? There are many reasons for conserving species: some are ethically based, some are human-survival based, and some are economically based. It is unproductive to choose one reason above the other; rather, we should accept these diversities of reasons, because they are all important to conserving species.

“Think of nature as a tapestry, and each species as a thread. There is no way of knowing which threads bind the whole together. Each one that is pulled out brings the tapestry closer to unraveling” (Ford, 2017, p. 11). Species depend

on their ecosystems, but ecosystems also often depend on the species who inhabit the place. Some species, such as keystone species, might be more important from an ecosystem or human perspective, but we have only just begun to understand the complexity of species interactions.

For example, excrement from dolphins and whales plays a vital role in ocean ecosystems and even for our global climate. The nutrition from the excrement is essential for phytoplankton, the microscopic plants and animals that are the basis for ocean ecosystems and the global planet. Phytoplanktons provide food for thousands of species directly and indirectly, produce the oxygen in the air we breathe, and the particles they create even formulate massive rain clouds, supplying most of the freshwater we require as terrestrial living beings (*Our Planet*, 2019).

In a time of global climate change and ecosystem collapse, preserving plant biodiversity and population abundance is more important than ever. Trees and other plants are still the best carbon sequestering technology we have. Kelp forests are great ecosystem builders and absorb a substantial amount of carbon from the atmosphere. Mangroves protect cities from storm surges and flood damages. And lastly, plants are critical in providing medical and pharmaceutical advancement. In a scientific review, Newman and Cragg found that of all the new antitumor drugs approved by the U.S. Food and Drug Administration in the past seven decades, 49% are natural products or naturally derived, and an additional 26% imitate the “structural aspects of natural products” (2016). Even though in their analysis natural products included drugs from bacteria and animals, plants-

based and plant-inspired drugs were the majority. For example, a conifer, the Pacific Yew, “manufactures a chemical highly effective against breast, ovarian, and lung cancer; and a Magagaskan shrub, the rosy periwinkle, [creates] alkaloids that can put leukemia and Hodgkin’s lymphoma in remission,” further evidence of the dependence of human health on plant and planetary health (Chadwick, 2017, p. 23).

### **Science, By Itself, is Not Enough**

Science is wonderful. It utilizes observations, experimentations, and quantitative analyses to help us better understand the world we live in. Many studies are published about what the problems are and even what steps we as a society can take towards solving many of our environmental crises. So why aren’t we acting?

Because humans are not purely logical and rational creatures. Since science is based on logic and rationality, this foundation becomes its own limitation. If we were, the plethora of endless scientific data pointing with a flashing, neon sign at our negative impacts on the planet would be enough to convince us to act, to change, and to have a better relationship with our environment. For the past few decades, the scientific and journalism communities focused on the assumption that with enough information, humanity will naturally act to save the planet. As we currently see, that did not work.

“Of course we need good, solid information. But equally critical is how and when information is delivered” (Macy & Johnstone, 2012, p. 25). The hard sciences, by themselves, cannot solve the current environmental crises; we need

to look to other disciplines - such as sociology, economics, anthropology, and communication, just to name a few - to help navigate the realms of human culture, religion, and behavior. These disciplines are valuable resources because they are experienced with dealing with phenomena that are not always quantifiable.

After realizing this, many governments, universities, and environmental organizations began to focus more on communication, public relations, and marketing. Through trial and error, they accepted the fact that one strategy cannot be applied everywhere. Every communication strategy needs to be tailored to every audience and be flexible with its approach. Effective communication will only be successful from understanding the behavior, values, and culture of the audience, often involving input and feedback from the audience. This kind of communication is not unidirectional, but rather a positive feedback loop where the communicator and the audience work and support each other.

Now environmentalists and other related professionals are turning towards the humanities and social sciences for answers. While empirical data and information are extremely important - and the first step to any problem is identifying the problem - they alone are not enough. This is not to discredit some of the many small successes individuals, communities, and even entire governments have made in the past few years using science, but rather to point out the limitation of the perceived correlation between more information leading to more actions. The biggest element of environment *inaction* is not the lack of information, far from it. In actuality, the greatest challenge and obstacle for

environmental action is the unwillingness to learn, listen, and accept the information.

It's important to point out that even those who accept climate change and other challenging environmental realities often create their own shields of denial. I, too, while writing this thesis, faced those same challenges and had to personally overcome them. For example, I *knew* about extinction and other environmental tragedies, but I avoided learning the exact numbers and stories. I often scrolled past an article about a new study related to the loss of biodiversity, because why would I want to subject myself into learning more specific information about *another* animal going extinction, *another* community devastated by climate change, or *another* environmentalist dying to protect the planet? My brain and heart wanted to remain blissfully ignorant. Psychologically, perhaps even evolutionary, this form of self-denial makes sense. Our brains are trying to protect us from the emotional and mental stress and despair that might arise from knowing too much, so they invented subtle ways of distracting our attention and creating compelling reasons to avoid such knowledge.

So how do we address this? How do we inspire others to open up their hearts and minds to topics related to the environment? What existing technique do we already have that incorporates flexible, engaging communication methods that can be adapted by different people in different ways? Stories. They are the tools we have used to teach and learn throughout our lives. The delivery and mediums can be easily altered and changed to fit an audience. Storytelling has the ability to

bridge the science behind environmental issues to the inherent values held by different groups of people (Fernández-Llamazares & Cabeza, 2018).

### **The Importance of Stories in Conservation**

In the first part of this thesis, I will be discussing the power of storytelling. Stories have a way of engaging audience members that can be more effective than other forms of communication. They simplify complex concepts, explore humanity's greatest challenges, create connection and empathy, and inspire collective action. Generally, traditional journalism and scientific communication are mainly trying to inform the audience about events, discoveries, and concrete information. Stories, on the other hand, work more on engaging the audience, prioritizing techniques to maintain the audience's attention. They can still be great at spreading information, but perhaps stories are our best tool to share experiences.

This led me to ask the following questions that guide this research project:

- How do we tell stories, who tells the story, and whose stories are we telling?
- What are the dominant narratives in environmental storytelling?
- What are alternative and counter-narratives that can address the diversity of perspectives, voices, and experiences?

### **Diversity in Environmental Storytelling**

In the second part of my thesis, I explore the diversity of characters, storytellers, and narratives in environmental storytelling. I am interested in the identities of characters and storytellers that are represented, and also the prevalent

narratives that exist in the world. For every story, there is a beginning, middle, and end. Where the author chooses to begin and end, which information to include or omit, and who the narrative centers are influenced by their personal preferences and cultural values. Not only are the stories and narratives influenced by individual and cultural perspectives, they perpetuate the same values and personal preferences to the audience. This is why the diversity of characters, storytellers, and narratives becomes extremely important as everyone brings something different and important to the table. We all have something to learn from people with various perspectives and backgrounds. Someone affected by the disappearance of their homes from rising sea levels is going to have a very different, but equally important perspective as someone losing their livelihoods due to the lack of fish in the ocean.

Diversity of narratives matter because the frame and messaging and emotions matter. Sometimes shame or guilt are great motivating factors, for some people, but not all. Sometimes we need anger, inspiration, or hope to spur action. We are motivated by different things and react to them differently at different times. By repeating the same forms of narratives, we are just preaching to the choir, convincing people we have already convinced. Utilizing more variety of narratives will help reach audiences otherwise unreachable by the traditional tactics. We need to meet people where they are. In the crusade against species extinction and environmental catastrophe, we must embrace diversity because we are all affected by these events and stories in different ways. To properly address

these issues, we must then produce stories that include and represent the various identities and ways of viewing the world.

### **A Quick Note on My Writing Style**

A core part of this project is accessibility. With my writing (word choice, sentence structure, and selection of examples), I purposely intended to make this work digestible for audiences with no background on any of this information. To assist with the flow of this project, I will be using the words “we” and “us” frequently. Generally, “we” and “us” will be used as a substitute for humanity, humans, and society. However, I also want to emphasize how “we,” “us,” or “Man” with a capital M includes certain people (including me) more than others. Especially relating to responsibility and environmental justice, “we” will most likely refer to those of us who wield more power, those of us who live in the Global North, and those of us who have contributed relatively more to the environmental crises (see Tsing, 2015, 2016). As the late Stan Lee is famously known to say, especially through his well-loved character Spider-Man, “With great power, comes great responsibility.”

Also, to assist with the flow of the writing, I might use the words “writers” and “authors” to refer to all storytellers, and “readers” to refer to all audience members. In almost every instance when I use these words, the points I make could be applied to all other mediums of storytelling. But rather than list out every type of storyteller or audience, I hope my usage of these words will help the writing flow better and not be a source of confusion.



I chose to focus on the term “narrative” because I consider it to encompass the concepts of frames, lens, perspectives, and stories. Some people, such as environmental historian William Cronon and ecophilosopher Thom van Dooren, use the words “story” and “narrative” interchangeably. I agree with the aforementioned authors that these two words are very similar. For this project, however, I will generally use “story” to define more individual case studies and events, and use “narrative” to describe the repeated story arcs and prevalent frames at a larger scale. For example, *The Odyssey*, *Harry Potter*, and *The Lord of the Rings* are all different individual stories; however, they all follow the classic “Hero’s Journey” narrative, in which the protagonist overcomes a series of obstacles and emerges triumphant (*What makes a hero?*, 2012). That being said, the distinction between the two terms is flexible and permeable.

Similarly, instead of purely defining complex terms such as “story,” “identity,” and “narrative,” I will be describing them. These terms hold a lot of power, and mean different things to different people. Meaning is contextual, and I want words to gather meanings. These descriptions will be incomplete, constantly expanding the way we understand and relate to them. An easy way of understanding this is through thinking through the phrase “including, but not limited to...” Rather than limiting and focusing on a universal definition, I care more about what meanings the terms might evoke in the reader. For example, identities are not just skin color, gender, etc.; experiences, careers, livelihoods, and many other factors all contribute to our “identity”. Inherently, we know what a story is, but trying to define it into set labels everyone can agree on is not the

purpose of my thesis. Occasionally, knowing the commonalities between the different meanings a term encompasses, and also the distinction between different terms and their associated description is useful (see above paragraph). However, the goal of describing terms in this project is to encapsulate the multiplicities and nuances certain words invoke and include.

I focused primarily on conservation narratives rather than those that are purely climate change-focused. While these narratives are clearly important and there are obviously a lot of overlap between climate change and species extinction (e.g. threats to coral reefs include bleaching from rising ocean temperatures and ocean acidification, but also from invasive lionfish species, crown-of-thorns starfish, and sunscreen chemicals), oftentimes other-than-human species are overlooked when purely talking about climate change (e.g. overfishing, illegal poaching, and habitat destruction). There will still be some climate change examples because many of the storytelling techniques and language are very similar, and many of the issues are directly related to each other.

Through my selection of examples, I attempted to represent the diversity of species (e.g. mammals, birds, insects, fish, etc.), people (e.g. farmers, educators, activists, indigenous peoples, hunters, young students, etc.), habitats, countries, and sources (e.g. scientific articles, news outlets, fiction books, documentaries, TV shows, etc.). However, I am shaped by my own personal experiences and am partial to certain stories and animals more than others. I am just one person, an imperfect individual with my own preferences and framework developed through my life journey. Certainly, the lens I view the world through is

limited by my own privilege and positionality. Throughout this project, I will do my best to be self-critical, selecting stories from around the world and covering the diversity of creatures that occupy this planet. Nonetheless, it is an unrealistic fantasy to believe that I can cover every topic equally. This project is not supposed to be exhaustive, but rather a sample of the diversity that exists out there. Despite the limitations of this work, I hope this project will inspire more people from various backgrounds to contribute to this ongoing crusade, bringing in their own stories, experiences, and ways of viewing the world.

## **Part 1: The Importance of Stories in Conservation.**

“I’ve learned that people will forget what you said, people will forget what you did, but people will never forget how you make them feel.” - Maya Angelou.

## **What is a Story?**

What is a story? A definition of this word, at best, is ambiguous. There are so many variations of describing what a story is, all lending value to this nebulous term. The vagueness is what makes the possibility of stories so exciting. They have the ability to be flexible as a definition, incorporating and encompassing the myriad of traditions and techniques used to communicate. Perhaps the main determining factor of the definition is the storytelling animal themselves: us (Gottschall, 2012). By studying how we tell stories, we not only learn about how we spread information, but also how we communicate values and share experiences. So instead of determining what a story is, our time is better spent attending to the potential of what a story can be.

While there are certainly nuances to what constitutes a “story,” there are some common characteristics amongst the numerous definitions. Generally, it has a beginning, middle, and end. There is an audience. And there is a message or information in the words the author wants the audience to receive. Typically, a story is the telling or retelling of something. Almost every form of writing, conversation, and communication the human race produces include those characteristics. In some estimates, 65% of all human interactions constitute a form of social storytelling (e.g. gossip) (Heffernan, 2017).

Perhaps comparing “stories” to William Cronon’s definition of “chronicle” might be useful. He describes “chronicles” as a list of events or things, without a sense of connection amongst the items in the list. An example of this kind of structure might look like the following:

This happened. This happened. This happened.

I woke up. I got out of bed. I cooked breakfast.

But even by selecting what items or events are included in the list contributes to how the greater narrative is perceived. “A pure chronicle would have included every event that ever occurred... no matter how large or small” (Cronon, 1992, p. 1351). It is impossible to include every detail from the beginning of time; there needs to be a selection process, and by doing so, the author assigns value to what they consider important and unimportant. Nevertheless, to simplify the description of this term for this project, chronicles could be considered more as a list of events that may appear in sequence (although it does not have to), with no obvious connections or relative significance of events.

Alternatively, “stories” could be considered a device to form those connections and show the relative significance of events. They help us navigate the complex world by identifying meanings and values to guide how we perceive the world around us. The author selects the information that they deem is relevant or important (or at least what they think their audience would consider relevant or important), and communicates the information to an audience.

It is also important to notice the nuances between reporting and story. All forms of communication and narratives are on a spectrum between show and tell. While every story includes elements from both show and tell, reporting is closer to the “tell” side of the spectrum and a narrower definition of story is closer to the “show” side of the spectrum. Reporting includes, but is not limited to, scientific

papers, news reports, and feature writing. They can still be forms of storytelling, with many similar characteristics, but they focus primarily on the goal of informing the audience, or *telling* and describing facts and events. Stories, on the other hand, are more concerned with engaging the audience. They *show* the information and messages through word choice, plot structure, and character development. The author is concerned with how the stories connect with the audience, and how the audience connects with the messages in the stories. A popular story structure, as described by Pixar, might look like this:

Once upon a time there was \_\_\_\_\_. Every day, \_\_\_\_\_. One day, \_\_\_\_\_. Because of that, \_\_\_\_\_. Because of that, \_\_\_\_\_. Because of that, \_\_\_\_\_. Until finally, \_\_\_\_\_. And ever since then, \_\_\_\_\_.

Once upon a time there was an island in the Galapagos. Every day, animals lived on this island. One day, a marine iguana hatchling headed towards the ocean. Because of that, it needed to cross a sea of snakes. Because of that, it was chased by multiple snakes. Because of that, the iguana had multiple snakes wrapped around it. Until finally, it escaped the tangle of snakes and went up the cliffs. And ever since then, the marine iguana hatchling was safe from snakes. (Description of scene from Planet Earth II)

## **Why Storytelling?**

“Imagination is a powerful force. When we tap into our imagination, we are actively engaging in the process of creation. We create by bringing something new into our field of possibility, breathing life into it, and calling it into form.”

- Weh'na Ha'mu Kwasset (Sherri Mitchell)

Words matter. The words of Martin Luther King Jr.'s “I Have a Dream” speech resonated with millions around the world, inspiring systemic changes to how we addressed oppression. Maya Angelou’s poem, “Caged Bird”, conveyed the feelings of freedoms locked away in cages, alluding to the ongoing racism African Americans continued to face in the 20th century. The eloquence and artistic descriptions in “Silent Spring” captured the attention of the average person to focus on the consequences of industrial chemicals polluting our air, rivers, communities, and ecosystems, creating public pressure on the US government to formulate the environmental protection agency to defend our public rights to life.

But beyond just words are the stories the words construct. Words by themselves are powerful; when they are paired together, they create imaginary worlds where endless possibilities exist. Those worlds are where our greatest nightmares and greatest dreams originate and are expanded upon. Behind every action is an idea, and behind every idea are the imaginations, the possibilities, the inspirations. Stories tap into this power, invoking and molding the human potential to create, destroy, and reshape the world around us.

Stories are a core part of being human. They exist in every culture in various forms. While we might not be able to pinpoint one definition of what a story is, we inherently and collectively know what a story is because we grew up



with them. We see and listen to them everywhere. Why storytelling is so powerful is precisely because of its ability to be told in so many different ways, to convey information in endless creative ways, limited only by the collective imagination of the human race.

### **Stories from Our Childhood**

As humans, we encounter stories as children. The stories we hear, read, and see greatly influence how we perceive and learn about the world. As psychologist Pamela Rutledge succinctly puts it, “Stories have always been a primal form of communication. They are timeless links to ancient traditions, legends, archetypes, myths, and symbols. They connect us to a larger self and universal truths” (as cited in Heffernan, 2017). Through mythologies, religions, and cultural stories, we gain a better sense of the environment beyond our immediate surroundings. Stories teach us about where we are, what we are, and most importantly, who we are (Dill-Shackleford et al., 2017; Valckx, 1998).

Many of the stories we hear generally teach us some ethical or moral lesson, often using an action and consequence model to emphasize a certain value (Valckx, 1998).

Some popular examples include:

- The Grimm Fairytales were written as cautionary tales to teach children about the dangers of the world, such as wandering into dark forests and the viciousness of wolves.
- Baba Yaga, the witch who ate children in Slavic folklore, was a figure invoked to scare misbehaving children.
- The story of Saint Francis showed the importance of being kind to all lifeforms.
- The Jataka Tales about the Buddha as various animals illustrated the virtues and morals of peace and kindness.

- The Iroquois Peoples' creation myth about animals saving Sky Woman teaches about the gratitude and respect we should show to all animals.

All of the above examples show how storytelling has been used to teach about the world, but possibly even more importantly, it influences the values that guide us in life. Many of those values shape our identities and how we view the world. As children, our active imagination dominates our play time (Gottschall, 2012). We often play in an imaginary world, as pretend characters, reenacting our favorite stories or creating our own adventures. Becoming the characters in these stories allowed us to play through scenarios, challenge stereotypes, and explore different perspectives. These storied experiences are particularly important in fostering empathy and compassion (Hoogland, 1998).

“Story is so central to the lives of young children that it comes close to defining their existence” (Gottschall, 2012, p. 7). But not just for children; stories continue to affect how we relate to the world throughout our adolescence, and even when we are adults, often changing and challenging some of our core beliefs. What stories we tell about ourselves, the people around us, and the environment affect how we behave and relate to ourselves, each other, and the world. As children, as adolescents, and as adults, stories still have the power to teach us morals, values, and empathy; they still create excitement, awe, and entertainment; and they still influence our perspectives and experiences (Cherry, 2017; Cronon, 1992; Gottschall, 2012; Hoogland, 1998; Jensen, 2016; Valckx, 1998). Harnessing this joy, this craving for imagination and creativity is essential in making the world a more sustainable and equitable place.

## Engaging Through Stories

“Once upon a time, deep in a dark forest...”

Where did your mind go? Did you start imagining a forested landscape, perhaps accompanied by the smell of the trees, the shimmering moonlight peeking through the canopy, and the wind whistling through the leaves in an eerie, ominous manner?

“Once upon a time” is probably one of the most magical phrases in the English language. Hearing or reading those four simple words prepares our minds for stories in English-speaking countries. As the author Jonathan Gottschall writes in his book, *The Storytelling Animal: How Stories Make Us Human*, “Human minds yield helplessly to the suction of story. No matter how hard we concentrate, no matter how deep we dig in our heels, we just can’t resist the gravity of alternate worlds” (2012, p. 3). Simple verbal phrases like “Once Upon a Time” exist in different languages and different cultures. Additionally, there are non-verbal cues that trigger the human curiosity and admiration for stories. Perhaps it’s sitting around a campfire, the dimming of lights, or the ringing of a bell.

Stories are important because they can still engage people of all ages. A story captures our attention better than all other forms of communication (Djikic, Oatley, Zoeterman, & Peterson, 2009; Fiske, Schubert, & Seibt, 2017; Gottschall, 2012; Green & Brock, 2000; Heffernan, 2017; Pipher, 2006; Zak, 2013, 2014). It sustains our attention through tension, mystery, and what psychologists refer to as “transportation” (Green & Brock, 2000; Zak, 2013, 2014). When exposed to stories, we are transported into a different place, a different time, or a different

person. We transcend the limits of our individual perception. In addition, stories are purposefully written to engage the reader, while other forms of communication may be more focused on informing. Because of these reasons, stories prepare our minds to accept new possibilities (Djikic et al., 2009; Fiske et al., 2017; Green & Brock, 2000). They are so successful at drawing us in, it feels like our attention is taken hostage, making it a very effective tool to spread an idea or message. Environmentalists can use the potential of stories to reach broader audiences, transcending cultural, racial, and political differences (Shafak, 2010).

With news articles and scientific papers, the authors attempt to succinctly convey a topic clearly, using as few words as possible. But with stories, there is more flexibility in using diction, poetic descriptions, narrative arcs, characterizations, and emotional portrayals to encourage audiences to stay focused on the stories. They are also often more subtle with the messaging. Instead of just making statements, the author weaves the messages into the story, “[making] us care about its subjects in a way that a chronicle does not” (Cronon, 1992, p. 1374). There is more emotional investment in the subject when written as a story. They make us want to learn more.

Stories are already being used (and have always been used) in marketing, advertising, and public relations - especially by politicians, corporations, and think tanks. “A commercial rarely just *says* that a laundry detergent works well; it *shows* that it does through a story about an overworked mom, rascally kids, and a laundry room triumph” (Gottschall, 2012, p. 15). Political campaigns - the books,

advertisements, and speeches - all utilize storytelling techniques for the sole purpose of recruiting voters. The stories serve as gateways for the audience to learn about the candidates. If done skillfully, these stories become building blocks of trust between the voters and the candidates.

As storytellers, we are required to be responsible and aware of the consequences our stories can create. The documentary *Merchants of Doubt* is a great example illustrating how corporations and think tanks weaponized stories to sway public opinion. The film showed how the tobacco industry employed charismatic actors and PR specialists with no qualifications in science, policy, or whatever they were hired to discuss. These people would then spin anecdotes meant to confuse the audience or attack their opponents. This highlights the power to misuse storytelling for manipulative purposes. But rather than avoid storytelling altogether, we should acknowledge the power a story has. The powerful and oppressive will continue to engage audiences, using stories for their own selfish agendas, so we need to counteract with stories of our own. Responsible storytelling is about being aware of intention, and thinking about the impact it might have.

When used correctly and responsibly, stories relay information in a way that is memorable and moving. They have the power to bring environmental causes to life. As Mary Pipher writes in her book, *Writing to Change the World*, “stories are the most basic tool for connecting us to one another... Because stories elicit whole brain/whole body responses, they are far more likely than other kinds of writing to evoke strong emotions. People attend, remember, and are

transformed by stories, which are meaning-filled units of ideas, the verbal equivalent of mother's milk" (2006, p. 11). Almost every person can recall a story that has changed their perspectives and their lives, affecting what they do as a career and who they become as a person.

For example, *The Jungle Book*, written by Rudyard Kipling, was a collection of stories that takes place in a forest in India, featuring the "man-cub" Mowgli and the various animals who live there. *The Jungle Book* invoked the adventurous and curious side of boys, many of whom wishing to be in Mowgli's non-existent shoes. The stories inspired many of them to enter the field of conservation and explore tropical forests similar to the one in *The Jungle Book* (Hance, 2019). For people closer to my generation, Dr. Seuss's *The Lorax* may be one of the most influential stories, evidenced by the many signs at environmental demonstrations featuring quotes from *The Lorax*. Probably the most famous line from the book is, "Unless someone like you cares a whole awful lot,/ Nothing is going to get better. It's not" (Seuss, 1971). The message in this quote applies to other activist issues as well. It told us that if we wanted to make the world a better place, we would have to be the ones to manifest it.

The story of Tarzan, despite depicting a wild man living in the jungles, inspired Dr. Jane Goodall to journey to Africa, to live her dream of being with and writing about the wildlife there. As a young girl in the United Kingdom, she loved reading all of the Tarzan books while sitting in a beech tree at her family home. In her book, *Reason For Hope: A Spiritual Journey*, she wrote about the memory: "It was daydreaming about life in the forest with Tarzan that led to my

determination to go to Africa, to live with animals and write books about them” (as cited in Thompson, 2013). In an interview with *The Guardian*, she even jokes “I had read Tarzan and fallen in love, although he married the wrong Jane, the wretched man” (Abraham, 2017).

Dr. Goodall became one of the conservation scientists who taught us almost everything we know about chimpanzees (which in turn taught us about our own social behaviors and evolutionary lineage). Her groundbreaking research challenged our belief in human exceptionalism when she discovered that humans are not the only species to make and use tools. While conducting her research, she gave the chimpanzees names and described their individual personalities in the research, which was extremely unorthodox at the time. She was mocked by most of her male colleagues, even after she earned her Ph.D degree (Ottesen, 2019). Nonetheless, she persevered and continued telling stories about her chimpanzee community, eventually enlightening the Western society to reconsider the relationship between humans and animals. As a result, her story and her efforts inspired many other women to enter the traditionally male-dominated fields of ecology, conservation biology, and sociology, broadening the amount of possible career opportunities for women. She went from “dreaming a man’s dream” to manifesting her “dreams of adventure” (Abraham, 2017).

### **Diversity of Mediums**

There are various mediums and genres we use to tell stories. We approach different mediums with different mentalities. Generally, we might approach journalism for information about the world, podcasts for making traffic less

boring, and movies for entertainment. Rather than arguing for or against a particular medium of delivering environmental messages, I am arguing for the inclusion of every medium of storytelling. Additionally, each medium brings different sets of values: journalism provides investigative summaries of complex issues, scientific articles provides unbiased data from the forefront of scientific discoveries, and the fiction genre provides the artistic intersection between literature, culture, and the environment. Every person receives and interprets information differently, and it is vital to address and encompass the diversity of mediums and genres. This is the only way to reach every person on this planet, an essential task if we are to protect life on this planet before it is too late.



## **Beyond Nonfiction Storytelling**

“Fairy tales are more than true: not because they tell us that dragons exist, but because they tell us that dragons can be beaten”  
- Neil Gaiman, *Coraline*.

While everything I describe in this section applies to nonfiction stories and narratives as well, the advantages of storytelling are best exemplified through the genre of fiction. Additionally, fiction stories play a significant role in reflecting and influencing human cultures. They provide opportunities to engage people who are less inclined to non-fictional work, contributing to and expanding their perceptions.

Samuel Taylor Coleridge famously stated that experiencing a story requires the reader’s “willing suspension of disbelief” (as cited in Gottschall, 2012, pp. 3–4). New possibilities emerge and are more readily digested, accepted, when we suspend our sense of disbelief. While this may apply to the nonfiction genre, it particularly encapsulates the power of fiction. When we engage with fiction stories, we open our minds to the new possibilities they create. The storytelling golden rule, “Show, not tell,” is especially important to the world of fiction. By showing through description rather than telling through a statement, the reader is given more agency to make up their minds and reach their own conclusions.

Fiction stories give the reader a sense of control over what and how much content they wish to receive. “The writer guides the way we imagine but does not determine it” (Gottschall, 2012, p. 5). When a reader reads a story, they will not experience the exact same story as someone else, because every story is told

through implication and understood through interpretation. Each story becomes the unique interrelationship between the author and the individual reader. The writer does not dictate what the reader receives. Through the layer of interpretation, the reader's brain chooses what information passes through and what information is ignored based on their own experiences, values, and culture. The story becomes a mirror, reflecting the combination of the writer's and the reader's worldviews. In a sense, the reader is given more power, allowing them to be more comfortable, and therefore more receptive to receiving a message. Whether this agency is real or imaginary could be discussed elsewhere. The more important point from this observation is that through fiction, the reader is more likely to accept the messages, relate to the characters, and believe in the world the author imagines.

Stories help navigate the complexity of societal issues we face. George Orwell's *1984*, Ray Bradbury's *Fahrenheit 451*, and Harper Lee's *To Kill a Mockingbird* have all influenced and reshaped perceptions and American culture. Similarly, popular books such as J. K. Rowling's *Harry Potter* series included many different themes of race, justice, and speciation; the dystopian world depicted in Margaret Atwood's *The Handmaid's Tale* discussed how oppression and power deform and shape people's lives; and in *The Giver*, Lois Lowry tried to convey the interdependence of people and the planet (Lowry, n.d.; Lyubansky, 2007; Rothstein, 1986).

“Stories universally focus on the great predicaments of the human condition. Stories are about sex and love. They are about the fear of death and the

challenges of life. And they are about power: the desire to wield influence and to escape subjugation” (Gottschall, 2012, p. 55). Stories are a reflection of society. They describe our problems, our struggles, and our growth. This mirror not only reflects our values, but also expands our worldviews and actively shapes culture and society. Stories - especially fictional stories - promote personal development in the reader that break down emotional barriers and help us address challenging topics such as extinction.

Contemporary stories that exemplify this include: the *Black Mirror* TV series, *Star Trek* TV series, the genre of Solarpunk, and the episode “The New Normal” in the *Madam Secretary* TV series. While the episodes in *Black Mirror* are generally darker reflections of society, they also explore the societal consequences of hypothetical technological advancements. The show illustrated the dangers of uninhibited technological growth without ethical considerations.

*Star Trek* also introduced the world to many amazing technologies that only existed in the human imagination before appearing on screen. Many of the gadgets in our daily lives today, such as portable cell phones, were heavily influenced by the small, handheld communication devices seen on the show. Additionally, the show increased people’s interest in space technologies and theoretical physics, inspiring many of them to enter the field.

Solarpunk, a subgenre in fantasy and science-fiction (sci-fi) officially recognized in 2014, aspires to tap into the same imagination potential of *Star Trek*. This subgenre tells environmentally-centered stories that mostly take place in an optimistic future. Through portrayals of societies powered by renewable

energy, the authors of Solarpunk hope to change current climate and environmental policies.

Lastly, “The New Normal” episode in the fifth season of *Madam Secretary* revealed the stark reality of rising sea level. Without unnecessary dramatic flair, the episode portrayed an island nation built on a coral atoll swallowed up the ocean, forcing the entire culture to relocate. As a result, the show’s United States government passed a climate change resolution that bears a striking resemblance to “The Green New Deal” resolution proposed in 2019. The scenario depicted in this episode of *Madam Secretary* could happen within the next decade, as predicted by the United Nations. Since climate change occurs at a gradual pace (in some cases) and operates at a global scale, the impacts may be hard to observe or imagine. This honest and emotional episode makes the fast-approaching future more tangible and real.

### **Simulation Theory and Mirror Neurons**

Stories let us enter a new reality while physically staying where we are. Interestingly, “fiction may temporarily free us from our troubles, but it does so by ensnaring us in new sets of troubles - in imaginary worlds of struggle and stress and mortal woe” (Gottschall, 2012, p. 49). The most captivating stories are stories with conflict, difficulties, and resolution. We hold a deep love for stories of heroes overcoming obstacles and confronting monsters. By creating an atmosphere of tension, the storyteller is creating the context for why the audience should care. What obstacles is the protagonist facing? What are the character’s biggest hopes, dreams, and fears? This obsession with a problem structure

“suggests that the human mind was shaped *for* story, so that it could be shaped *by* story” (Gottschall, 2012, p. 56).

According to evolutionary psychologists, stories help us practice key skills of human social life (Djikic et al., 2009; Fiske et al., 2017; Gottschall, 2012; Green & Brock, 2000; Mar & Oatley, 2008; Mar, Oatley, Hirsh, dela Paz, & Peterson, 2006; Valckx, 1998). Similar to a simulation, a story provides us a bridge to experience different experiences vicariously without any of the costs or risks involved (Mar & Oatley, 2008). It gives us the ability and safety to mentally train and emotionally practice for the challenges of life, “without the potentially staggering costs of having to gain this experience firsthand” (Gottschall, 2012, p. 28). With the help of stories, we are more prepared and accepting of various scenarios. The advancement of virtual reality (VR) technology is utilizing this simulation power for soldiers to train for battles, doctors to practice medical procedures, and the average citizen to witness the beauty and tragedy of the natural world (Jordan, 2018).

“Knowing that fiction is fiction doesn’t stop the emotional brain from processing it as real” (Gottschall, 2012, p. 62). Physically, our hearts race and our bodies tense during intense fight sequences, we shed tears when a character dies, and we feel warm and fuzzy when the words “I love you” are uttered. This phenomenon is supported by mirror neuron research done by psychologists. Reading or listening to a story are not passive acts; our brains are actively engaged with the events and characters. Our brain neurons react the same way to what happens to a character in the story as if it was happening to us (Amanat,

2014; Gottschall, 2012; Green & Brock, 2000; Zak, 2013, 2014). Physiologically, our hormone levels can also change with the story we are consuming. For example, our adrenaline levels may increase during heart-racing moments and our oxytocin levels may increase during heart-warming scenes (Gottschall, 2012; Zak, 2013, 2014).

Because of mirror neurons, we also imitate the characters we see and read about (Djikic et al., 2009; Green & Brock, 2000; Jaffe, 2019). So when we see more characters live environmentally-conscious lives, there is a greater chance for us to do the same. “A remembered story can serve as a mnemonic anchor for the gradual integration of a story’s lessons in the teller’s and/or the listener’s later behaviour” (Gersie, Nanson, Schieffelin, Collison, & Cree, 2014, p. 17). While behavioral changes may not immediately occur after reading a story, the told story can still act as a mnemonic device, making it easier to recall and remember something brought up in the story. The more engaging and more repeated a story is, the more likely we are going to be influenced by it.

Ultimately, the greatest potential of stories, and of technologies like VR which allow us to briefly occupy a different existence, is the creation of connection and empathy. When we read - and are transported into a story - our brain produces more oxytocin (Zak, 2013, 2014). This hormone is naturally synthesized when we spend time with a close romantic partner, when a mother breastfeeds a baby, or when communities bond over a meal (Fiske et al., 2017; Seibt et al., 2017; Zickfeld et al., 2018). Oxytocin is also commonly referred to as the “love molecule,” motivating cooperation, kindness, and generosity.

Additionally, when it is synthesized by our brains, we become more trusting and open to assisting others. A study even showed that we are more likely to donate after watching engaging stories because our oxytocin levels are higher than before we consumed the story (Zak, 2014).

Stories can transport us to different worlds but they can also transform us into different people. We become these characters, allowing us to freely feel love, hope, hate, fear, and all other emotions through different lenses. Even though we may not exactly replicate the feelings and experiences of the characters we are exposed to, stories enhance our willingness to understand and help others. They have the potential to serve as one of the greatest mechanisms for us to connect, understand, and empathize. “With connection comes responsibility” (Pipher, 2006, p. 6). By listening to a story with an open mind and genuine interest, we are already taking the first steps towards truly caring. And the more we care, the more likely we will be to act.

## **Part 2: Diversity in Environmental Storytelling**

“We were not meant to be homogeneous. Diversity and distinction are essential for a healthy system. It takes the unique sound of every instrument to make a symphony, and a body requires every organ in order to fully function. It is our diversity, not our singularity, that allows us to grow.”

- Weh'na Ha'mu Kwasset (Sherri Mitchell)



## **Engaging Everyone**

In this current time of environmental crises, climate change, and mass extinctions, the ultimate question we must ask ourselves is how do we view this world and all the life on it? Is there just one answer and one correct way of moving forward? Obviously not.

Perhaps one of the reasons environmentalists have generally failed in motivating society to address environmental issues is because they failed to genuinely attend to the nuances, intricacies, and diversity of ways people relate to each other, to the species on this planet, and the environment around us. We know from social science literature how critical it is for people to see, hear, and read stories that include and depict people like themselves, and stories that are relatable. Lack of representation in environmental stories may be a significant reason that their messages have not had the impact and wide-ranging appeal that many of their creators had envisioned.

At least in Western discourses surrounding the environment, there are certain people and stories that are told more often than others. While there are stories out there with diverse representation and perspectives, they are often ignored for more traditional, “mainstream” stories that follow the same status quo structure. We need different stories. We need stories that illustrate the myriads of ways we live in this world. And we need to highlight the diverse stories that already exist. In this current time and age when we need to engage everyone, we need to critically examine who is represented, who is representing them, how they are represented, and what narratives and frames are being utilized.

Diversity isn't just important; it is critical to human survival and the survival of this planet. Diversity leads to resilience. To be diverse is to be resilient. At the genetic level, many species, including us humans, are attracted to mates with immune systems genetically different from our own (Wedekind & Furi, 1997). Similarly, food security is heavily influenced by crop diversity because they are more resilient towards diseases. At the ecosystem level, the diversity of biological interactions helps the ecosystem bounce back faster from disasters such as floods, storms, and fires. In the military, so many new technologies imitate the abilities of animals. Historically, countries who shared knowledge and traded resources did better than isolationist countries. Culturally, we seek out other people with different experiences to learn from. We are naturally curious how others live and view the world. In a time when we are uncertain how the world is changing and how fast it is changing, we need cultural diversity along with biological diversity to guide and prepare us.

While it is beneficial for us to learn from living beings different than us, it is also important to feel seen and represented. We, along with every living being on this planet, matter. And the stories must be representative and inclusive to show to the world, and to ourselves, that we matter. If the goal is to engage as many people as we can, we also need to tell the stories that resonate with different people. We must remember the invisible, the marginalized, and the erased in our stories. Telling and retelling their stories already shows that we care, that they matter, and that they are not alone. We all want to feel heard, seen, and perceived in meaningful ways that do not reduce our identities, our experiences, or our

lifeways. Seeing our identities - however we perceive them - represented is crucial to our well-being as well as the future of the planet.

## **Representation of the Environmentalist**

Take a minute and think of a typical environmentalist, whether in articles you consumed, books you read, or movies you saw.

Who do you picture in your mind's eye?

Perhaps you are imagining a Steve Irwin figure. David Attenborough or Leonardo DiCaprio. Maybe even Tarzan.

Only in recent years, would our perception of the “average environmentalist” include Jane Goodall, Winona Laduke, Vandana Shiva, Erin Brokovich, David Suzuki, Berta Cáceres, Lois Gibbs, Wangari Maathai, Greta Thunberg, Xiuhtezcatl Martinez, Ellen Degeneres, Lupita Nyong'o, and Yao Ming, just to name a few. It is time for us to expand on who we consider environmentalists to include all of us. Or perhaps to integrate environmentalist values as an essential part of being human.

However, the typical stories we tell are a narrow representation of people and the environment. Hollywood as a whole has only barely begun to critically address authentic representation and inclusivity, beyond just tokenization. And these are for films of all genres, not just environmentally-centered stories (of which there are not many).

There are so many people and communities affected by species extinction, the already-changed environment, and social injustice. Environmental damage has always harmed certain people more than others, but their stories are not being told. We cannot talk about climate change and environmental issues without considering the populations, the communities, the people who are most impacted.

This environmental movement needs to be the environmental justice movement. Those frontline communities include, but are not limited to, Pacific Islanders fleeing their soon-to-be submerged homes; indigenous peoples whose lands are still being taken away and often considered an “unfortunate sacrifice” by the dominant, parasitic society; the people of color in the United States who are still recovering from Hurricane Katrina, Hurricane Irma, and Hurricane Harvey, just to name a few of the most recent storms that destroyed homes and decimated communities; the native peoples of the Amazon rainforest being slaughtered by miners and loggers while protecting their home and culture; and the non-white rangers of the Global South who give their lives protecting preserves and endangered species from illegal poachers, Western trophy hunters, and the animal black market.

But are their stories being told?

### **Genuine Representation and Inclusivity**

Diversity means so many different things to different people. When considering authentic inclusive representation of diversity, it is useful to examine the differences between labels and identities. Labels work to uniformly define, reduce, and place our experiences into boxes. They cannot encapsulate the entirety of our experiences. As Sana Amanat discusses in her TED Talk, “The Importance of Diversity in the Comic Book Universe,” “How can everything that I am be encompassed into a label? Now, some of these labels we choose for ourselves, others we're born into and others are assigned for us. But regardless, all

of them come with preconceived notions - assumptions and expectations - of what they mean” (2014).

By just incorporating various labels (e.g. “this movie is *so* diverse because there’s an Asian and a black man on the poster of the movie”) without giving the characters well-developed storylines is just tokenization. Minorities, especially People of Color (POC), constantly see this play out in American films, where the minority characters are given very few speaking parts and no depth to their characters. What’s even worse are the stories that perpetuate stereotypes associated with those labels. Language becomes “weaponized when it is used to objectify, depersonalize, dehumanize, to create an ‘other’” (Pipher, 2006, p. 4). Labels are the opposite of understanding. Instead, it actively works to erase the nuances, variations, and diversity of who we are.

Identities, on the other hand, encompass the myriad of perspectives on this planet. Unlike labels, identities are lifeways, experiences, cultures, ways of knowing, and ways of being. Labels focus on the “is” while identities work on incorporating, including, and expanding what and how we understand ourselves and each other. Identity is an including force, not an excluding force. When we attempt to apply labels to complex, intersectional identities, we are not trying to understand, but rather to reduce lifeways. By purely focusing on just the labels, in storytelling or in any other field, we tokenize their identities rather than creating an atmosphere of inclusivity. Instead of seeing the complex lifeways that formulate identities, we reduce their experiences to labels.

Thinking through the lens of identities, we already attend to the ways different identities relate to one another. We are inherently already one step closer in seeing the intersections of experiences. The term “intersectionality,” developed through critical race theory, means inclusion work (Crenshaw, 2016). It acknowledges the various ways identities combine, overlap, and intersect. For example, a partial snapshot of my intersectional identity would include my perspectives as a second-generation immigrant, a person on the LGBTQ+ spectrum, a cis-gender man, a Taiwanese American, amongst my many other identities. All of these experiences have changed my perspectives and how I relate to the world.

It is important to note that I am not a scholar in social justice theory. My description of labels, identities, and diversity are based on my own life experiences and limited exposure to race, gender, and justice theory. There are many others more qualified to expand and elaborate on these terms. However, just recognizing and understanding that identities hold importance is a starting point for being genuinely representative and inclusive.

Our identities influence how solutions arise and how problems are addressed. In a time when environmental issues are so numerous and have various sources, we need to encompass the diversity of perspectives, values, and identities to determine the various methods required to heal our dying planet. So, what might we include as a part of our identities? How we perceive our own identities and how others perceive them shape our lives, perspectives, and experiences. However, identities are more than just our skin color, class, gender, sexuality,

etc.; they go beyond those labels and include important aspects such as professions, values, personalities, cultures, and even the environment.

For example, in the United States, being a hunter or fisherman is oftentimes an important part of someone's identity. In modern environmental discourse, we rarely include them in our image of an environmentalist, either because of the lack of exposure or because some of us morally oppose the practice. However, hunters and fishermen are some of the largest groups of contributors to conservation. According to the Association of Fish and Wildlife Agencies, about 59% of the collective annual budget for state wildlife agencies, or \$3.3 billion USD, comes from hunters and fishermen (2017). These funds are derived from license sales, federal taxes on ammunition, and other excess taxes on equipment. The money generated from these activities are critical for protecting endangered species, removing invasive species, and restoring ecosystems. In addition to this large sum of money, they donate another \$440 million USD to conservation organizations, according to the Rocky Mountain Elk Foundation (2017). Because hunters and fishermen understand the intricate web of species interactions and wish to continue their traditions, they happily contribute to conservation organizations to protect not just game species, but all of wildlife.

Stories about hunters and fishermen and other groups could expand our perspectives of who we imagine as environmentalists. The environmentalist identity is not singular; rather, it is extremely diverse, encompassing the multitude of attitudes and experiences. How would our perceptions change when we tell stories that include people like ourselves as potential environmentalists?



## **Diversity of Characters**

One reason why it is so important to tell stories with diverse characters is because they give us the ability to imagine ourselves as those characters. We all have someone (even if they are a fictional character) who inspires us, someone we aspire to become. Research into mirror neurons shows that we will often imitate the actions and decisions of the characters we are exposed to (Green & Brock, 2000; Mar & Oatley, 2008). So if we do not see or hear about people like ourselves doing environmental work, we are less likely to act. Specifically, with regards to the diminishing natural world, it is vital that we are able to imagine ourselves taking steps to address environmental issues. Because a lot of environmental issues are abstract or occur at a global scale, we are unable to visualize how they affect us locally. This perception of abstractness does not always reflect the world today, considering how beekeepers are seeing the rapid decline in honeybee populations, farmers are facing harsher droughts and severe storms due to climate change, and more and more people are dying from heatstroke to global warming. However, it is often difficult to fully form a personal connection without the characters and imaginary framework to help establish those connections. So we need stories about us, people like us, and people not like us.

## **Acceptance, Inclusion, and Belonging**

What does it mean to be truly seen, to feel truly accepted, to feel a sense of belonging?

We all want to be our true authentic self, and be accepted for being who we are. We hate being treated based on baseless assumptions, prejudices, and stereotypes. We hate when an outsider reduces our complex identities to labels, which often in turn are used to attack our identities.

Seeing ourselves - our identities in the stories we read, the podcasts we listen to, and the movies we watch - validates our rights to exist. We are even sometimes excited when a story takes place in our home city, or when a character shares the same name. Through these loose commonalities, we already formulate a connection to the story. Not only do we want to see ourselves in stories, we often actively seek out characters like us. Most of us are going through this world not knowing what the heck we are doing with our lives. At some point, the trials and errors of life can make us all feel alone, isolated, and lonely. By knowing that someone else out there feels similar to how we feel, even if it is a fictional character in a fictional universe, we feel less alone.

Marvel's X-Men may be one of the best examples of showcasing how popular stories made acceptance of identities the center of storied-world. The franchise paralleled the racial oppression happening in the United States, illustrating the destructive powers of fear and hate that marginalized groups faced every day. As long time X-Men writer Chris Claremont stated, "The X-Men are hated, feared, and despised collectively by humanity for no other reason than that they are mutants. So what we have..., intended or not, is a book that is about racism, bigotry, and prejudice" (as cited in Lyubansky, 2011). The franchise made the uncomfortable dialogue of oppression a part of our everyday discussion.

While the X-Men stories became a stepping stone towards meaningful discourse on inclusion and respect, that was not the most amazing feat of the franchise. The X-Mansion, popularly depicted as a cool, technologically-advanced institute for training fantastical mutant powers, was truly more of a home and community for mutants, misfits, and outcasts to fully be themselves. It was a place for mutants (and for the readers) to embrace who they are. A brown-skinned woman with white hair and amazing weather-controlling abilities; a man who can shoot red lasers from his eyes who requires glasses to control his power; and a shy girl with a Southern accent who hurts anyone she touches; they all struggled with accepting their identities. For Sana Amanat, Marvel Comics's Director of Content and Character Development, "these people were [this] little girl's safe place. These people she understood because they, too, were different...she felt a little less alone because they had fulfilled a need to see herself in the world outside" (Amanat, 2014). Not only did the X-Men teach her, and us, that it was okay to be different, they also showed us that our differences are something to be celebrated.

Inspired by these stories, Sana co-created Marvel's first Muslim female superhero to headline her own comic book series. She wanted the character, Kamala Khan/Ms. Marvel, to transcend the stereotypes of Muslim girls that haunted her childhood. Sana describes Kamala Khan as a girl who is "constantly negotiating, renegotiating who she is and all of the rules that come with it. Where does she belong? She has no idea. She's still figuring out that journey to her authentic self. But all she knows is that she does not want to be limited by the

labels imposed upon her. So really, Kamala Khan's story is everyone's" (Amanat, 2014). As with the X-Men, Kamala Khan/Ms. Marvel, and most other superhero stories, the search for the authentic self is something every reader can identify with.

Both anecdotal evidence and results from numerous polls, surveys, and experiments suggest that audiences respond to stories they deem authentic. We want to read, hear, or watch a character experience our own feelings. We want the author, the characters, the words to describe what we might be going through. Reading, hearing, or watching those stories helps us feel like we are not alone in this world. They help us feel like someone out there knows us, sees us for who we are, truly and honestly. In our darkest moments, finding a story featuring words or characters that capture our human experience provides comfort, community, and a sense of belonging.

Perhaps this phenomenon is the truest for environmentalists and conservationists. While true for all of us, environmentalists and conservationists especially are facing mentally and emotionally challenging times. Environmentalists, especially those of the younger generations, are fearful of what the world will look like in the next few decades with food shortages, rampant diseases, flooded cities, raging storms, and devastating wildfires. Conservationists, including ecologists, are seeing species after species enter the realm of extinction.

We environmentalists and conservationists are particularly in love with this world. Witnessing the catastrophic destruction that is already occurring, while

knowing that it will only get worse if we continue living the way we do, pains us. “Sorrow is really a manifestation of extreme love at the thought of loss” (Macy & Johnstone, 2012, p. 107). Left unprocessed, that depression, that agony, creates trauma. We need an outlet to share our grief, to express the sadness we feel with the world. We require stories about us - our pain, our joy, our love for the world - conveyed to the rest of the world, so more people will take notice.

Equally important, however, is for us to see these stories shared around the world. When other environmentalists and non-environmentalists (however the term is self-described) read and write these stories, they let us know that we are not alone in this fight. Environmentalists, and people in general, may seek these stories as permission to feel the way they feel. They seek stories to realize that they are not alone in grieving the environmental and ecological destruction of Mother Earth and her children. To see that there are ecologists facing the same battles, the same grief, the same hopelessness. To learn of people who have emerged from that depression. To see communities rally together in response to these tragedies and make a difference locally. These stories are encouraging and empowering. We feel more connected, inspiring us to continue such important work. Stories like these can show that our mission is truly shared by people around the world.

Emotions are already complicated, but the human experiences of grief, happiness, and love are particularly complex. There are so many ways of expressing grief, happiness, and love in this world. I want to focus on the latter because love is a powerful emotion that we all seek, desire, and require. Love is

magical. Perhaps one of the best examples that demonstrate this is *The New York Times*'s "Modern Love" column, podcast, and mini-TV series. Now in its 15th year, the collection of essays depicts deeply personal stories about love, in all of its various forms.

"Modern Love" is so successful precisely because of how diverse and inclusive it is. The collection of personal stories portrays the different types of love - familial, platonic, romantic, and even self-love - we give and receive. Not only that, they also include the various ways we love and are loved. Reading these stories, we learn about love through not only successful romantic fairytale-endings, but also through the struggles, the failures, and the loss of love. Seeing the diversity of human experiences lets us feel less strange for feeling certain things. While there might not be a story that fully encapsulates how we feel and experience these emotions, knowing that there is not one "right way" of expressing love raises the possibility that "our" love is normal and natural. The diverse presentation of expressing love and being loved shows something truly profound: no matter how we express love or who we express love to, we all deserve love, no matter who we are. By including so many different stories of love in its collection, "Modern Love" declares that love is for all of us, giving us the power to be exactly who we are, and who we are destined to be.

Sharing and seeing these stories is an important part of creating community, both at the local and the global scale. When we are unable to express ourselves the way we wish, we often feel trapped by those same feelings. To share them with someone releases those suppressed emotions we are evolutionarily

designed to feel. In one psychological study, students were exposed to distressing images. The study found that the group of students who acknowledged and articulated their emotions had measurably calmer brains than students who did not express their emotions (Pipher, 2013). Being able to express ourselves the way we want to is relieving, relaxing, and freeing. When we open up and share our stories, stories about us and people like us, we may find others who share our feelings as well. There is less shame for feeling the way we do when we see others going through similar situations. As the Indigenous storyteller Weh'na Ha'mu Kwasset (Sherri Mitchell) writes, "A sense of connection and belonging are essential to healthy development. They build resilience, well-being, and cohesiveness" (2018, p. 180). Our grief, despondence, and loneliness diminish when we feel a part of a community, when others help carry that burden alongside us. We inherently feel better knowing we are not alone in figuring things out.

Beyond just stories of ecologists and environmentalists, these "healing stories give people hope, teach them empathy, and encourage action. They feature different kinds of protagonists, and they need not be superheroes. Firefighters, missionaries, teachers, doctors, biologists, actors, and parents do kind and brave things every day" (Pipher, 2006, p. 12). While these stories of loss, of grief, even of anger are necessary to share with the world, stories of conservation success are also needed. We need more stories that show the compassion of people helping others. To feel inspired. To feel hope. To feel like us, as individuals, taking responsibility for our actions may actually contribute to the greater good. We want to feel like we matter.

As important as it is to see characters like ourselves in stories, it is equally as essential to find characters who are different. When a story features diverse characters - in personality, mentality, and values - that is when we can learn the most empathy. Indeed, our empathy expands when we relate to others across our differences. We are not limited to form bonds based on what we have in common; we have the ability to develop respect, understanding, and appreciation for the distinctions that make us extraordinary. “We’re going to have to learn how to listen, have hard conversations, look for joy, share pain and be more curious than defensive, all while seeking moments of togetherness” (Brown, 2017). People of Color and people on the LGBTQ+ spectrum exemplify developing connections with others. Only in the recent decade have there been well-developed characters from these communities featured in our stories. Despite this lack of representation, members of these communities were still able to relate to characters who differed from them in significant respects.

To continue to broaden and strengthen our sense of empathy, we have the obligation to celebrate our differences along with our similarities. The TV series *Sense8* may be one of the best examples that embodies this mission. Created by Lana and Lilli Wachowski and J. Michael Straczynski, the story revolves around eight individuals who are mentally and emotionally linked. The show was praised especially for portraying characters from different races, sexual orientations, and gender identities. While coming from different backgrounds and living very different lives, they were still able to bond and fully accept each of their identities. While the main characters did possess the advantage of having a psychic link, the



story still showed how they could love and respect the other characters around them without their powers. When she pitched the show to Netflix, Lana Wachowski said, “I wanted to tell a different story about difference. I wanted to tell a story in which difference was not something that set us apart from each other. It was actually fundamentally the thing that united us. Because difference is the one thing that we all have in common” (Wachowski, 2017). *Sense8* was ultimately a story about connection, empathy, and acceptance. Through its diversity of characters and depiction of love, it teaches everyone the true meaning behind *Amor Vincit Omnia* -- love conquers all.

## **Diversity of Storytellers**

Recall all the prominent “nature writers” of post-renaissance history, spanning the Age of Exploration, Industrial Revolution, and the Age of Enlightenment. What do they have in common? Are there many famous women, Person of Color (POC), or minority authors widely known? This question is not to assert that the only value of non-white male writing is to be recognized by the privileged, but rather to point out the often invisible actors that are ignored in favor of white, male environmentalists. Especially in the United States, writers and philosophers such as Henry David Thoreau, John Muir, Ralph Waldo Emerson, Theodore Roosevelt, and Aldo Leopold have all greatly shaped our perspectives of the environment. While many of these white, male environmentalists contribute to our understanding of our relationship with the natural world, many other equally as important perspectives are missing.

Stories are inherently simplifications. They will all ultimately include and exclude certain events, certain people, and certain values. In journalism, this might be referred to as the insider/outsider perspectives. In Anthropology, this is referred to as emic or etic. Even determining where a story begins changes the narrative trajectory. Stories help us find meaning and reflect on how stories relate to us, and we to stories. Repeating the same types of stories become narratives, and those narratives have the power to reshape our imagination with consequential “real world” impacts.

Since the sources of the environmental crises we face come from various places, we should also seek out solutions to these issues from various sources. To

achieve comprehensive narratives that encompass the diversity of experiences and values, we also need a diversity of voices to tell those stories. We have so much to learn from their insights and experiences. By sticking to a monoculture of narratives, we limit our potential to improve our relationships with the environment. “Writers help readers construct larger, more expansive frames of reference so that more of the world can be more accurately perceived” (Pipher, 2006, p. 7). But beyond just writers, the diversity of directors, producers, editors, and people at every step of the story process is also important.

We wish to see what we feel and what we experience in the characters, but we also wish to see how we feel and how we experience the world in the writing. What the character notices and what the author describes in a story are perspectives and values an outsider may not innately possess. Beyond just the who, what, and how, we also crave for the why. Why do we feel and experience the world in the way that we do? Sometimes the answers to the why can only come from people within our community, someone who has a better understanding of our identities, our experiences through those identities, and our feelings from those experiences.

How stories are told, who tells them, when they're told, how many stories are told - all are influenced by power structures. In this context, “power is the ability not just to tell the story of another person, but to make it the definitive story of that person” (Adichie, 2009). Dominant societies with more power, such as the United States, greatly influences the narratives of people and the environment. Since so many stories come from powerful people in the United

States, those stories are repeated more often, spreading and reaching many places outside the United States. When alternative stories are not there to present a different perspective, the repeated story becomes the defining story. “The single story creates stereotypes, and the problem with stereotypes is not that they are untrue, but that they are incomplete. They make one story become the only story” (Adichie, 2009)

Representation and diversity in the characters we see and hear about matters. But the power of the storyteller to construct realities is so great that it is also extremely important to attend to the representation and diversity of storytellers. When someone outside our identities uses the power to determine how our identities are perceived, by us and by others, “we become a splintered version of the person we are destined to be. When we are told by others, constantly and incessantly, who we are, when we allow others to define ourselves - whether it's the media, our parents, our friends - we begin to accept a standard of self that is not of our own choosing” (Amanat, 2014). We attempt to live by the standards and expectations set by these singular narratives. Especially as impressionable children, without alternative narratives, how are we able to know that we can be something other than what we are constantly told and shown to be?

When we let a single story define the world we live in, we limit ourselves to the diversity of wisdom that resides on this planet. We need diverse storytellers telling diverse stories to help us break us out of the mold singular narratives have constructed. We require their help to envision alternative destinies, possibilities, and potential for our identities. People around the world have such beautiful

relationships with the planet, in how they appreciate life, how they celebrate community, and how they work in partnership with nature. It is well past the time to highlight these diverse ways of living.

Some of the most important voices on environmental issues are the people most affected by them. Climate disasters, pollution, and mass extinctions affect some people more than others. For example, people living near coasts and on island nations are more aware of the threat rising sea level poses. Their first-hand accounts could feel more truthful and genuine, creating more opportunities for empathy because they are able to articulate their experiences more accurately than a second-hand storyteller. For them, the climate disaster is not something that will occur in the far future; it is already happening and wrecking their communities.

## **Diversity of Narratives: Trauma, Hope, and Transcendence**

“Hope is the ability to see how things can get better. The vision of what ‘better’ would look like inspires all good work” - Carl Safina

Beyond just individual stories and the results they generate, overarching narratives are also important in shaping our perceptions and values. Narrative, which encompasses themes and frames, can invoke different powerful emotions inside each of us. Many environmental narratives invoke shame, guilt, or fear to motivate citizens to take action. But that strategy only works on portions of the population. We all respond to emotionally-charged information in varying ways, sometimes taking proactive actions to address them, but possibly more often than not, willfully ignoring them or actively resisting the message.

By only presenting more factual evidence in response to people in denial, we fail to engage the deeper reasons for why they are unable to accept this information. Traditional science communication focuses on engaging the intellectual side of the audience, often ignoring the emotional side of human communication. When environmentalists attempt to create emotionally persuasive stories, they often utilize the emotions of guilt, shame, and fear to make an impact. Sometimes that is the push we need to change our lifestyles. However, repeating the same narratives over and over only reaches audience members who have already been reached. To fully engage everyone, we require different sets of narratives to communicate the urgency for environmental action.

Novelist Chimamanda Ngozi Adichie’s “The Danger of a Single Story” applies to narratives as well. From news stories to Hollywood movies, current narratives about climate change and the environment overwhelmingly invoke fear

and hopelessness. News articles are inherently event based, focusing on stories that are marketable or “newsworthy.” To make environmental stories capture our attention, news headlines are almost always depicting something negative occurring: another historical flood from a Category 5 hurricane; another wildfire burning down thousands of homes; another species approaching extinction; another oil spill polluting our rivers and oceans.

Climate change and environmental narratives are slowly getting incorporated in major Hollywood blockbusters, most recently “Interstellar,” “Avengers: Infinity War,” and “Aquaman.” However, these movies generate the same narratives where the environmental crises are not meaningfully addressed. “They imagine postapocalyptic futures or dystopias where ecological collapse is inevitable, environmentalists are criminals, and eco-mindedness is the driving force of villains” (Buckley, 2019). In these types of narratives, humans have ruined the planet and are facing the consequences of their actions. The movie “Interstellar,” for example, portrayed a future where humans escape the unlivable planet and colonize another one. But they are never asked to actually transform their behaviors as a response to the anthropogenic environmental harms. Almost none of these stories depict a scenario where society evolves and adapts, learning from their past mistakes and erroneous ways.

Because “it is hard to find financing for movies that risk being real downers and challenge audiences to change their ways,” directors and writers avoid including environmental elements outside the doom-and-gloom and apocalyptic narratives. Instead of addressing the roots of environmental issues,

villains like Thanos and King Orm are used as scapegoats, targets for the collective human power to defeat. David Leslie Johnson-McGoldrick, one of the writers for “Aquaman,” said he used ocean pollution and mass extinction as motivations for King Orm to make the character more relatable and more developed (Buckley, 2019). While some audience members may feel sympathetic to his declaration of war on humans, most feel relief when King Orm is defeated and the movie ends. We are protected from meaningfully examining these very real issues, opting to stay in emotionally familiar territory. These stories and narratives perpetuate a defeatist take on how society can change in the face of environmental crises.

These doom-and-gloom and apocalyptic narratives perpetuate our cumulative sense of hopelessness. We feel constantly overwhelmed by the flood of information. When we have had a rough day, the last thing we want to do is to see more negative news or stories. We either become desensitized and numb to negative information about the world, or we actively avoid them altogether to protect our mental and emotional health. We are caught in this double bind where “we are in a crisis that is too scary to confront and too important to ignore” (Pipher, 2013, p. 35). In a sense, we become traumatized. Psychologist, activist, and author Mary Pipher describes trauma as “the psychological experience of stress when our inner and outer resources are not sufficient to handle what we are facing” (2013, p. 19) When we are constantly bombarded by so many negative narratives, we emotionally and psychologically shut down.



“For some of us, trauma manifests as sorrow, and we find ourselves struggling every day to be happy and hopeful. For others, trauma sparks anger and irritability, and we find ourselves needing to apologize for our short tempers. Still others simply feel powerless and helpless” (Pipher, 2013, p. 20). Denial, another manifestation evolutionarily designed to help protect ourselves from mental and emotional trauma, can take root and do everything in its power to maintain its hold. People in denial protect themselves by latching on to any information that preserves their state of blissful ignorance, even in the face of overwhelming evidence that supports the opposite of the information. This could most easily be seen with how much climate change denial occurs in the United States even when 97% of climate scientists around the world stated that climate change is real, and that they are 99.9999% certain it is anthropogenic. People in denial create excuses, become defensive, attack scientists and activists (sometimes physically), even subscribing to absurd conspiracies that are provable lies. Their brains and hearts are incapable of accepting information about how we are hurting this planet, at least at that moment in their lives. If they actually confront the reality in which we are living unsustainably, then they would have to accept the responsibility and role in perpetuating harm to this world. They would need to honestly see the pain, devastation, and anguish they have directly or indirectly caused, and critically reevaluate their life choices and life history.

Our brain is evolutionarily designed to protect itself. If we become incapacitated by all of these tragedies, we cannot deal with the immediate needs in our lives, such as making dinner, staying hydrated, and sleeping for a healthy

amount of time. So, to keep us functioning, as a defense mechanism, our brains distract and steer our attention away from the environment, instead of letting us process the information honestly and openly.

“[Knowing] that the planet is dying and [thinking] that we are not organizing ourselves to prevent that” can also create trauma (Pipher, 2013, p. 20). Most of us can only perceive the world and our actions as individuals. We cannot fully see the collective effect coalesce from our individual actions most of the time. We feel like no matter what we do, there is no way to prevent the impending climate disasters and environmental tragedies. We often hear, “I am just one individual. So why bother?” With phenomena such as climate change, even if we do everything in our power to reverse our carbon emissions, this planet will still take centuries to fully recover and restore itself. We might be thinking, “my actions don’t matter” which can easily lead to “I don’t matter.” This defeatist narrative becomes a self-fulfilling prophecy in which we think we have less power than we actually do. Once we reach this point in our thinking, we also think about just giving up, and some people succumb to this point of view. “What looks like apathy or indifference is often pain and confusion...[These people] are not apathetic, but rather in psychological shutdown” (Pipher, 2013, p. 46). If we are even partially paying attention to the current state of the world, anxiety and possibly trauma exist inside us. It is how we acknowledge, address, and transform these feelings that truly matters.

According to psychologists, people benefit from certain amounts of anxiety to propel them to change (Pipher, 2013). However, people also need a

mixture of other emotions to inspire and mobilize them. Too much anxiety could overshadow the positive changes that are already occurring, discouraging people from continuing their efforts. “Information must be carefully paired with people’s emotional ability to absorb and process it. We must not only be able to acknowledge and talk about a problem, but we must also be able to conceptualize it in ways that allow people to act upon it as human beings” (Pipher, 2013, p. 26). Stories and narratives that invoke other emotions are necessary to counterbalance all the anxiety and trauma from information about suffering planet. They help provide guidance, inspiration, and also context to the problems we face. Through them, we can acknowledge that people take action when motivated by other driving forces such as hope, duty, and love for the planet.

Along with information about species extinctions, climate disasters, and pollution spills, we also need hope to show that our actions matter. We want stories and narratives that follow the arc of the hero, in which our decisions and actions, despite all the obstacles and struggles, lead to a better future.

Collectively, we crave success stories that support this narrative of triumph. What if we heard about the community in Indonesia who started protecting manta rays for ecotourism instead of hunting them for their fins? What if we recalled how sea otter populations bounced back from the edge of extinction after a ban was instituted? What if we remembered how a few decades ago, countries around the world worked together to rapidly replace the chemicals that were destroying our ozone layer? Wouldn’t stories like these give us more hope for the future?

Problems with our world might grab our attention more readily. But there are many more problem solvers in the world; their presence is just more subtle.

Joanna Macy discussed the concept of “active hope.” She argues that active hope is a type of hope that differs greatly from hopefulness. Instead of waiting for hope to arrive, or for hopefulness, by consciously taking some actions, we naturally feel more hope. It is “something we *do* rather than *have*” (Macy & Johnstone, 2012, p. 2) This creates a positive feedback loop where with more hope, the more powerful we feel, and the more we act, which then generates even more hope.

This perspective is extremely empowering because active hope “doesn’t require optimism; we can even employ it when we feel hopeless” (Cunningham, 2015, p. 90). We gain back our sense of control, our sense of agency. We create our own self-fulfilling prophecy as agents of change, playing a role in actively bringing about a world we wish to live in.

Beyond just hope though, narratives of struggle, resistance, and joy are also important. Not every story has ended. Most stories are still ongoing. People, communities, and the environment in many places are actively resisting against the future of a dying planet. Inclusive narratives about these places would cover the environmental injustices that are occurring, but they would also incorporate how they are thriving despite these tragedies in their lives. They are still able to see the beauty in the world. They are still caring and finding love for this world. They are still *living!*

## ***Our Planet: A Case Study***

The BBC and Netflix produced mini-documentary nature series, *Our Planet*, intricately crafts a kind of narrative that combines optimism and sorrow. Unlike the *Planet Earth* and *Blue Planet* series that were released before this show, *Our Planet* forces viewers to see the devastation we humans have brought about. As Ed Yong described it in *The Atlantic*, “the awe is tinged with guilt, the wonder with concern, the entertainment with discomfort” (2019). Every time we are introduced to a beautiful creature, it is followed by David Attenborough’s grandfatherly, silky voice narrating how humans are threatening that species. *Planet Earth II* received criticism for just showing a “pristine” world. Partially correcting this problematic narrative, *Blue Planet II* mentioned anthropogenic threats in the last five minutes of each episode. But in *Our Planet*, the consequences of our actions are clearly weaved and shown throughout every episode, forcing us to acknowledge our inaction and complicity in the destruction of the planet. This amazing nature series provided the much-needed context with the beautiful footage.

In every episode of *Our Planet*, we see behind the scenes footage of the episode. We witness the camera crew’s dedication in producing this show, their patience for waiting months to capture the perfect shot, and their grief when they filmed the gruesome walrus scene that featured dozens of walruses plummeting off of high cliffs. However, the show goes even beyond that. Every episode still had plenty of joy and beauty within it, but it was not purely innocent anymore. The series presented the context we needed to care, to truly see how much we are

affecting the world. The juxtaposition of beauty and destruction and then beauty again shows that there is still time to protect these species and these ecosystems. “The message is clear. It’s bad. It’s urgent. It’s our fault. We can still fix it. *Our Planet* is a eulogy, a confession, a slap on the wrist, a call to arms” (Yong, 2019).

Some conservation success stories are scattered throughout the series to show a few species bouncing back, but the most hope-filled message was at the end of the last episode. In the last ten minutes of the series, we are shown the ruins of Chernobyl. It has been over three decades since the nuclear accident. We see abandoned apartments, broken windows, and crumbling schools. But while Chernobyl was empty of humans, it was not empty of life. Within a decade of the nuclear disaster, trees and shrubs germinated in the ghost city. Then small critters such as birds and lizards came back. Even large herbivores such as the endangered Przewalski’s horse and top predators such as wolves returned to this once-heavily populated city. The site of one of the worst man-made disasters in human history became a haven for wildlife to re-create thriving communities.

The best aspect of this scene was the depiction of resilience and adaptation of the natural world. Optimism and hope still existed because the series showed the potential for change. Perhaps we do not have to totally abandon our cities like we did in Chernobyl for the planet to recover; we just need to figure out how to live as a part of the ecosystem. Furthermore, the hope we felt from watching was not naive or blind, but honest and appropriately contextualized. *Our Planet* was ultimately a series of stories illustrating the power of active and honest hope.

## **Imagining a Sustainable and Equitable Planet**

“Look a little longer, look beneath the surface, delve deeper, and you’ll realize you know about the problems only because other people care. The people who care could use your help” - Carl Safina.

So how can we reframe narratives about our diminishing natural world?

How can we continue seeing the opportunities, hope, and joy in the face of so much doom-and-gloom? Picture the most ugly animal you can think of. Now describe that animal as if it was the most beautiful creature in the world. Has your perception changed? Is the most ugly animal you can think of a little less ugly?

Similarly, we can reframe our obstacles as opportunities, a strategy heavily utilized in mental health counseling. For every devastation, every tragedy, identify the one potential that exists. It does not necessarily have to be positive, but rather the potential to be positive... one day. For example, instead of considering the diminishing habitats and intact ecosystems as the *last* remaining places of nature, what if we started viewing them as the *first* places of nature. This paradigm expansion is not to erase or ignore the ugliness in the world, but to be able to still see the beauty alongside the ugliness. It is the ability to continue finding meaning, purpose, and hope.

Tragedy and despair are opportunities for us to wake up from our trance of denial. By honestly facing and fully accepting that these environmental crises are currently happening and will only become worse in the future if we do nothing, we can finally begin our journey to heal. “We can see the world more clearly and open to new possibilities. We can deepen our own sense of meaning and increase

our compassion and connection to others. And we can find new joy in the ordinary. Often in retrospect, our worst moment becomes part of a process that leads to our best moments” (Pipher, 2013, pp. 75–76). Our stories often feature this narrative of redemption and triumph. Only when we reach the bottom of the well, do we look up and see the opportunities above us. Only when we are in complete darkness can we see the sparks of hope.

In his book, *Flight Ways: Life and Loss at the Edge of Extinction*, ecophilosopher Thom van Dooren told stories about birds threatened by extinction. But he wanted to tell stories that also highlighted the lifeways and relationships to “give them some vitality, presence, perhaps ‘thickness’ on the page and in the minds and lives of readers.” (van Dooren, 2014, p. 8). By paying attention to the diverse lives of these species, we cannot help but be drawn into a sense of wonder. By learning more, we care more, establishing new relationships and connections to these animals. These kinds of narratives, pairing life and loss, evoke our sense of responsibility and accountability towards our lifeworld. Through these extinction stories, “we have seen that what is at stake here are ways of life: ways of being others, of mourning, of relating to a place, of rearing young, of making one’s home in the world” (van Dooren, 2014, p. 146). This way, every loss is not just an obscure and abstract Latin binomial name entering a historical archive, but a more tangible collective loss from our shared world.

Stories and narratives like these provide the context necessary to answer the question, “Why bother?” They create connections that lead to a sense of responsibility. And effective ones will compel us to ask possibly the most



important question in the face of these environmental crises - “How can I help?”

“The question isn’t, ‘I’m just one person; what can I do?’ Everyone who has ever lived has been one person. The question is, what can you do? And who can you do it with? Who do you need? Who needs your help? Where will you start?”

(Safina, 2015, p. xiv). We can all take steps in our local areas to help the surrounding environment. To our local ecosystems, local extinctions matter just as much as global biodiversity loss. Not everything we individually do has to be at the global scale. Every day, we have the potential of making the world a better place. In this current period where we are finally witnessing the consequences of our unsustainable histories, the most helpful thing we can do is to start - and to continue.

## **Epilogue**

“The truth is we simply don’t know what time it is. We cannot see our place in the homo sapiens timeline. Maybe we are in the last generation. Or maybe we are in the first generation of a great turning toward wholeness and vibrancy” - Mary Pipher

## **Limitations**

This project is only a starting place. There is much more that can be done, and much more that needs to be done with this kind of work. With my limited resources, time, and perspectives, I was only able to include certain stories and certain examples into this project. Additionally, the stories and examples are restricted to the mediums of books and film, when there are podcasts (“The Moth”; “The Overstory”), plays (“Moby-Dick The Musical”), spoken word (“Dear Future Generations: Sorry”; “Rise: From One Island To Another”), music (Newen Afrobeat; “Stand Up / Stand N Rock #NoDAPL”), photographs (The Photo Ark), and many other modes of storytelling that I was unable to incorporate. However, I hope these samples of stories and examples showcase the diversity that already exists in our communities, indicating the abundance of wisdom from which we can learn from.

While I touched on frontline communities and the importance of listening to their voices, I was unable to delve into their experiences as deeply as I wished. The majority of frontline communities are minorities, People of Color, and Indigenous Peoples. They disproportionately face the consequences of environmental injustice and are already living in the reality of an environmentally-changed world. Not only is it important to listen to their stories about environmental crises that are currently occurring, but also to learn from their experiences dealing and confronting these new realities. Perhaps if we opened our ears, our minds, and our hearts, we may be able to alter our unsustainable relationship with the planet before it is too late.

However, it is important to note how many communities around the world are already maintaining a healthy relationship with their local environment and ecosystems. Through their traditional stories and cultural wisdom, Indigenous Peoples understand the importance of stewardship, of giving back more than they take. They know that nature works in cyclical ways, and how we treat the planet will circle back to us eventually. Their values, cultures, and spiritualities revolve around the natural world, making them some of the best teachers and guides we have.

Indigenous Peoples manage and live on over a quarter of the planet's land surfaces. These locations contain some of the most intact ecosystems and the last wild places. According to The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), Indigenous Peoples are more effective and more efficient environmental stewards than any other group of people at curbing deforestation and biodiversity loss (Mongabay.com, 2018). While the ecosystems – and their homes – are still threatened, they are degrading at a much lower rate than non-Indigenous lands. The study contributes to a growing body of research that emphasizes the importance of indigenous wisdom and local knowledge, an important component towards recognizing their rights and land claims. Empowering Indigenous Peoples in their efforts to protect the environment, their hopes, and their human rights will be key to conserving our planet.

## **Onward and Upwards**

I started this project over two years ago when I created my own Interdisciplinary Studies major, Conservation Through Multimedia Storytelling. When I began this research, I only abstractly knew why this project mattered. Throughout the past two years of coursework and life experiences, I learned about the importance of representation in media, how framing issues in different ways leads to different reactions, and the diversity of perspectives that is already out there, but mostly ignored.

During this process, I wanted to harden my heart against all the horrifying information I was learning. I almost gave in to my grief, depression, and sense of hopelessness. But I took comfort in the fact that there are so many people out there fighting the good fight. I was inspired by the variety and diversity of perspectives, cultures, stories, communities, and people striving for a better planet, not just for future generations, but also for us, in the present. They are utilizing the power of active hope to manifest the world they want to live in.

I greatly struggled with this research, feeling slightly overwhelmed by the responsibility of showcasing all these perspectives in a meaningful and respectful way. As an outsider to most of these communities, I was very self-critical about representing people's stories authentically. It was not until I started thoroughly engaging with this work before I realized that my mission with this project was not to make it exhaustive, but rather to present a sample of the diversity of stories, of mediums, of characters, of storytellers, and of narratives. As I enter the world as a new Tufts University graduate, I will continue incorporating the things I

learned into the stories I tell. One day, this project will be transformed into a book I hope to publish and share with the world. Additionally, this work will also continue in my fictional pieces.

This project is far from perfect. And it was never meant to be or will ever be perfect. There is always more to be done in inclusion and equity work. And while this project is concluded, I will continue telling more different and diverse stories that connect everyone, striving for a better and brighter future. But I cannot do this alone. So I hope this project inspires you, to tell your own stories and to tell stories of other people and places. Collectively, we possess the ability and potential to create a more sustainable and equitable planet. Because together, anything is possible.

Meliora - Ever Better

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