Ocean as Teacher: A Collection of Essays

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ABSTRACT

This thesis explores the concept of the Ocean as our teacher and how we must transition away from seeing her as an object, towards seeing her as co-teacher. The methods are part of the interdisciplinary framework of the blue humanities, as the research challenges dominant approaches to environmental and sustainability education that present the Ocean as an object of measurement, management, and extraction. While scientific knowledge is valuable, it does not capture the Ocean's role as a relational, cultural and pedagogical being. The Ocean is framed as a co-teacher and an active participant in the creation and transmission of knowledge. The interconnected essays move through four pedagogical "classrooms": immersion, vulnerability, memory, and vision. These classrooms are explored through a combination of autoethnographic reflection, textual and visual analysis, and creative methodologies, including a courtroom-based chapter that places humanity on trial to examine systems of exploitation and responsibility. Documentary film, mythological narratives, and lived encounters serve to understand how knowledge is constructed, embodied, and contested. Findings suggest that meaningful transformation in human-Ocean relationships requires a shift away from capital and colonial frameworks toward relational and ethical modes of engagement. Within the chapters, the Ocean is shown as a teacher who teaches through experience, disruption, memory, and representation, offering lessons on interdependence, vulnerability, and responsibility. The thesis argues that environmental education must move beyond traditional teaching styles towards forms of learning that allow the Ocean to be seen as a teacher capable of reshaping how humans understand and inhabit a changing world.

Keywords: marine conservation, oceanic pedagogy, blue humanities, relationality, more-than-human

FOREWORD

This major paper fulfills the requirements of the Master in Environmental Studies (MES) degree within the Faculty of Environmental and Urban Change. The research builds directly on my Plan of Study, which is informed by three areas of concentration: marine conservation, blue humanities, and environmental psychology.

Marine Conservation provides the ecological foundation for this project, grounding the work in current environmental crises, including species decline, habitat degradation, and the impacts of overexploitation. Developing an in-depth understanding of these threats was essential in contextualizing the Ocean's vulnerability within real-world ecological challenges, while also allowing for critical reflection on how conservation is framed.

Blue humanities is the primary conceptual framework, enabling me to showcase that the Ocean can be approached as a site of memory, narrative, and meaning. By engaging in this field, the research develops a working knowledge of how cultural texts, myths, and stories position the Ocean as a pedagogical entity. This field also supports the integration of philosophical approaches into interdisciplinary inquiry, contributing to my creation of a framework in which the Ocean is understood as a teacher rather than an object.

Environmental psychology informs the relational dimensions of my work, shaping an understanding of how humans connect to environments they may never physically encounter. Drawing on theories of vulnerability, this area highlights how emotional and perceptual relationships influence our responses to the Ocean, and why these connections are essential in fostering responsibility and care.

Methodologically, the project reflects the interdisciplinary and reflexive goals of the MES program. By combining textual analysis, ecocritical theory, and autoethnographic reflection I was able to explore how knowledge about and from the Ocean is created. Documentary film, mythology, and literature were used alongside my own experiences with the Ocean. These approaches allowed me to critically examine dominant and exploitative frameworks, while also giving me the opportunity to challenge them with more relational and creative forms of learning.

The following major paper provided me with the opportunity to reposition the Ocean away from an object and challenge current approaches to Ocean literacy by shifting towards an understanding that she is a co-teacher, whose teachings have the potential to reshape how we learn, relate, and navigate the world around us.

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And lastly, or arguably the most important, I'd like to thank the Ocean, for being the best teacher I have ever had, and always reminding me of my place on this blue planet.

INTRODUCTION: PEDAGOGIES OF THE OCEAN

For much of my academic life, I learned to approach the Ocean through a scientific lens. To understand her meant I had to learn about currents, pollution, climate change, and the many indicators through which the health of marine environments can be measured. These forms of knowledge are essential as the ecological crises facing the Ocean cannot be understood, challenged or addressed without them. The pressures placed on marine ecosystems through warming waters, overfishing, pollution, habitat destruction, ocean acidification, biomass removal, bycatch, and other anthropogenic stressors are material realties that the Ocean must face. Throughout this paper, scientific research remains an important part of understanding those realties, yet science alone cannot holistically explain the depth of our relationship with the Ocean.

Science can describe the ecological role of sharks, but not why generations of people learned to fear them after seeing *Jaws* (Spielberg, 1975), it can document the physiological and psychological consequences of cetacean captivity, but it cannot, on its own, explain why *Blackfish* (Cowperthwaite, 2013) changed how so many people imagined their relationship with orcas. Scientific measurements cannot fully account for why people who live far from the coast can long to be near the Ocean, why mythologies across cultures repeatedly return to the sea, why communities understand water as spiritual and ancestral spaces, or why an encounter with another marine being can change how someone understands themselves. These questions require different ways of knowing; thus, this paper begins with a simple proposition: what might become possible if we stop approaching the Ocean only as something to know about and begin considering what it might mean to learn from her?

Dominant approaches to Ocean Literacy (OL) and environmental education frequently place the Ocean as an object of knowledge: something that we need to measure, explain, manage, conserve, or use. Even the language of protection can reproduce this placement when humans remain the actors and the Ocean becomes a recipient of our interventions. Within such frameworks, knowledge moves primarily in one direction. Humans study the Ocean, humans interpret the Ocean, humans manage the Ocean, and humans decide what parts of the Ocean are valuable enough to protect. This paper is an attempt to disrupt that relationship.

My purpose in adopting this approach is not to challenge the importance of scientific OL, but to explore what may be missing when knowing the Ocean is understood through scientific knowledge and human-centred forms of learning. I am interested in whether OL and environmental education might be expanded to include the relational, affective, cultural, historical and embodied dimensions through which people come to know the Ocean. By approaching the Ocean as teacher, I ask if environmental education can move beyond increasing knowledge about marine environments toward examining how knowledge might transform our relationship with them. In this sense, the research considers whether OL might become a form of Ocean relationship, where knowing can carry questions of connection, responsibility, and reciprocity.

I use the word Ocean intentionally throughout this paper, capitalizing her name is a small but meaningful linguistic refusal to treat her as a simple geographic feature, or object. My decision to capitalize her name does not erase the ecological, geographical, cultural, and political differences among the oceans, seas, coastal environments, and communities, furthermore, I am not suggesting that the Ocean is a singular human-like consciousness. Capitalization signals the

relational position from which this paper proceeds. The Ocean is approached as an active presence within the production of ecological, cultural, embodied, and ethical knowledge.

In a similar context, describing the Ocean as a teacher does not mean that I understand teaching as an exclusive human action that I have now placed or transferred onto a more-than-human being. Pedagogy is typically understood through human relationships of teaching and learning, but it can also be considered in relation to the conditions, encounters, experiences, and relationships through which knowledge becomes possible (Murphy and Ivinson, 2003). I am extending pedagogy here to consider how knowledge can be generated through encounters with more-than-human worlds.

The Ocean teaches differently than what we are accustomed to through standardized education. She teaches when a whale shark dismantles our assumptions of how they move, she teaches us through storms, where we see control is temporary, she teaches through the histories that are carried within her waters, she teaches through the beings that inhabit her, through the cultural stories that humans have constructed around her, and even through the consequences of our attempts to control and exploit her. Her pedagogy does not necessarily provide us with answers, but allows us to be uncomfortable, uncertain, humble, contradictory, and create new questions about what our relationship with the Ocean truly is.

Understanding these various forms of teaching requires a theoretical framework that moves beyond disciplinary boundaries. There is no single theory that can explain what happens when ecology, culture, history, embodiment, identity, emotion, power, representation, and more-than-human agency collide. For those reasons, this paper works through a multitude of theoretical lenes. Blue humanities provides the foundation for the research, while hydrofeminism, environmental psychology and theories of place, vulnerability theory, more-

than-human agency, ecocritical thought, and relational approaches help highlight different dimensions of the human-Ocean relationship.

1.1. Theoretical Framework

1.1.1. Blue Humanities and Thinking With the Ocean

Blue humanities provides the primary conceptual theoretical framework for my research. The blue humanities are emerging across and from the environmental humanities, literary studies, cultural studies, geography, and other related fields. The field challenges terrestrial assumptions that are found within Western academia and begins to question what changes when water and the Ocean become central to how histories, cultures, identities, and relationships are understood.

Mentz (2023) positions blue humanities as an interdisciplinary field through which the Ocean can be understood beyond a resource or geographical space. Scholars working within the blue humanities have also shown that the Ocean is a site of movement, memory, colonialism, imagination, spirituality, violence, and relation. Reshmi (2024) also identifies blue humanities as an important cultural turn in how planetary waters are understood, creating possibilities for thinking beyond scientific and extractive approaches to marine environments.

Blue humanities allows me to move between scientific findings and other forms of inquiry that science was not necessarily designed to answer. Instead of asking only how an Ocean system functions, I can begin to conceptualize what the Ocean might be trying to teach us through these systems. I can go beyond examining the ecological impact of human behaviour and examine the stories and systems that made these behaviours possible. The blue humanities also allows for me to treat myth, documentary films, personal experiences, or cultural memory alongside, rather

than separate to ecological data, I can investigate them as sites where human-Ocean relationships are constructed, challenged, and transformed.

The Ocean that exists within the blue humanities framework is not just an object waiting for human interpretation. Hofmeyr and Lavery's (2022) work on Black hydropoetics, for example, emphasizes that Oceanic space is a site of ancestral memory where histories of slavery and migration persist. Indigenous and local relationships to marine environments also challenge the assumption that scientific observation represents the only legitimate form of Ocean knowledge. McNiven's (2004) exploration of Australian Saltwater Peoples describes seascapes as spiritscapes, while Francis and McGarry's (2023) work with Xhosa grandmothers emphasizes forms of relational and ecological knowledge created through generations of living and listening to the Ocean.

A variety of different perspectives is important because understanding the Ocean as teacher requires us to question who has traditionally been permitted to be recognized as a knower. Beyond blue humanities, other theoretical lenses are also important in order to understand how Ocean relationality becomes embodied, how attachment forms, how vulnerability operates within unequal systems, and how agency extends beyond the human.

1.1.2. Hydrofeminism

Hydrofeminist thinking disrupts the boundary between human and Ocean. Hydrofeminism looks at the material and relational significance of water, questioning the idea that bodies are bounded, autonomous entities separate from the environments around them. Maggipinto *et al.* (2023) draw on hydrofeminist approaches to sustainability to consider watery relationality and the interconnectedness between bodies, environments and systems. The

application of this lens is important because the relationship I am exploring cannot be understood if the human and Ocean are treated as separate entities.

We are watery bodies living on a blue planet, the water that lives within the human body is part of hydrological systems that exceed the boundaries we imagine exist around ourselves. From a hydrofeminist perspective, water challenges the idea of separation, as water moves between bodies, environments, histories, and species. The Ocean, therefore, cannot be positioned as an external environment existing somewhere beyond the human self.

1.1.3. Place Attachment, Place Identity, and Biophilia

Environmental psychology provides a way for us to understand why relationships with environments become emotionally significant. Theories of place attachment and place identity are particularly important because relationships with the Ocean are not determined solely by proximity. Place attachment considers the emotional bonds that develop between people and environments, while place identity examines how places become incorporated into understandings of self (Giuliani, 2003).

Place identity intersects with the Biophilia Hypothesis, which suggests an innate or evolutionary tendency to affiliate with life and living organisms (Kellert and Wilson, 1995). Biophilic thinking provides another lens through which to consider attraction, wonder, empathy, and emotional connection that humans may experience toward marine beings and environments. Place attachment and biophilia can help explain connection, but they cannot alone explain what humans do with that connection.

1.1.4. Vulnerability and More-than-Human Agency

Vulnerability theory provides another important lens through which I attempt to dissect the human-Ocean relationship. Vulnerability is often understood as exposure to harm, but Fineman's theory discussed by Kohn (2015), positions vulnerability as inherent, it does not just belong to damaged bodies, but it is a part of existing.

More-than-human agency also challenges the assumption that humans are the only being capable of shaping knowledge and relationships, recognizing the Ocean and other more-than-human forces as active participants in our encounters with the world around us.

1.2. Methodology

Methodologically, this paper takes an interdisciplinary and reflexive qualitative approach, drawing on autoethnography, textual and visual analysis, ecocritical inquiry, and creative research practices. A plurality in methodological approaches reflects the idea that understanding the Ocean as teacher requires ways of knowing that can account for lived experiences, cultural meanings, ecological realities, and more-than-human relationships. Rather than choosing one form of knowledge over another, these methods leave space for different ways of knowing to exist in a conversation with each other.

My methodological choices are guided by the commitments of blue and environmental humanities, that expand environmental inquiry beyond scientific observation to consider how environments are encountered through a variety of mediums. If the Ocean is understood as a being more than an ecological object that has cultural, material, historical, and relational presence, then the methods used to study human-Ocean relationships should also be capable of engaging in those different dimensions. Autoethnography, textual and visual analysis, ecocritical

inquiry, and creative research practices did not emerge as separate methodological choices, but as different ways of investigating how Ocean knowledge is produced and experienced. Using this approach allows scientific knowledge to remain in conversation with other forms of knowing rather than positioning them in opposition.

Autoethnography provides a way for me to approach lived and embodied experiences as a site of inquiry, recognizing that knowledge can be shaped by the researchers own position, relationships, and experiences (Wall, 2006). Autoethnography requires reflexivity, specifically because I am not approaching the Ocean as a neutral observer. My understanding is shaped by my scientific background, identity, cultural influences, personal attachment to the Ocean, and my own participation in many of the systems I critique. Reflexivity therefore becomes an important part of my methodology, requiring me to consider what I am interpreting and how my own position influences those interpretations.

Text, visual, and ecocritical approaches leave space for cultural representations to be considered alongside ecological and environmental problems. These methods examine how meaning is created through narrative, imagery, discourse, and representation, while ecocritical inquiry situates those meanings in environmental, political, and ethical relationships. Creative inquiry further extends my methodological approach by allowing conventional academic forms to be challenged when they are insufficient for exploring questions.

Together, these methods support an approach to knowledge that is relational and interdisciplinary. I do not claim that these methods create an authentic or singular voice of the Ocean, nor do I want to attempt to speak on her behalf. The methods provide different ways of questioning the assumption that humans are the only legitimate producers of knowledge.

1.3. The Ocean's Classrooms

From the theoretical and methodological frameworks, this research moves through four interconnected pedagogical spaces that I call the Ocean's classrooms: immersion, vulnerability, memory, and vision. The classrooms are not intended to be fixed categories, or separate ways of knowing, rather they provide different entry points to consider how the Ocean teaches and how human-Ocean relationships are challenged, formed, and remembered. The four classrooms that I developed occurred through an iterative process that moved between lived experience, theoretical inquiry, ecological research, and cultural analysis. They were not categories I predetermined during the onset of this research. As I reflected on my own Ocean encounters and placed my experiences in conversation with blue humanities, ecological data, and cultural texts, recurring ways of learning came to the surface. I continuously returned to questions of what becomes knowable through direct encounters, what vulnerability shows about interdependence and responsibility, how histories and relationships are carried through memory, and how representation shapes what we are able to see. These patterns developed into the four pedagogical spaces of immersion, vulnerability, memory, and vision.

The classrooms should thus be understood as an interpretive and pedagogical framework that emerged through the research process, rather than as an established model being applied to the Ocean. The classrooms provide a way of organizing the different forms of knowledge encountered throughout the research while also asking what each might contribute to OL and environmental education. In this way, the classrooms connect the theoretical concerns of blue humanities with educational changes at the centre of this project: how might learning change when the Ocean is approached as a participant in education?

Immersion begins with an encounter and asks what becomes possible when knowledge is embodied rather than observed from a distance. Vulnerability explores questions of openness, interdependence, harm, and responsibility, challenging the idea that vulnerability and weakness are synonymous. Memory looks at the histories carried within human-Ocean relationships and takes the form of a pedagogical courtroom, where humanity is placed on trial and the Ocean is called to testify. The courtroom becomes a space for examining what has been remembered, forgotten, normalized, and silenced while confronting colonialism, capitalism, exploitation, responsibility, and the systems that have rewritten human-Ocean relationships over time. Lastly, vision discusses how we are taught to see the Ocean, recognizing that relationships can be shaped not only through physical moments, but through stories, images, and representations that construct our understanding of her.

Although the classrooms are presented separately, they continuously move into each other. Immersion can make us vulnerable, vulnerability holds memory, memory shapes how we see, how we see influences how we decide to relate. Together, these pedagogical classrooms move towards transformation, not as a final chapter or destination, but as a possibility that learning might change the relationship between the learner and the teacher. Learning from the Ocean is not about acquiring more information, but being willing to have our assumptions challenged and to reconsider how we understand ourselves in relationship to the more-than-human world.

Two questions guide this paper: What might it mean to understand the Ocean as a teacher rather than an object? How might a blue humanities approach to the Ocean as teacher expand OL and environmental sustainability education? I do not approach these questions expecting definitive answers, but this collection of essays invites you to move through the Ocean's

classrooms with me, allowing ecological knowledge, lived experience, story, memory, emotion, and more-than-human encounters to complicate what it means to know the Ocean and who is capable of teaching us.

CHAPTER ONE: PEDAGOGIES OF IMMERSION

It's otherworldly, not in an alien way, but something that is inexplicably beyond myself. I long for the sea, in an unhealthy, almost consuming way. The longer I am away from her, the more I feel the call, something like a siren's song echoing throughout my thoughts. To be immersed in the Ocean is a gift, or a blessing of sorts. Consider the calling Moana (Clements, Musker, Williams & Hall, 2016) had throughout the movie and the determination she had to work with the Ocean. Popular culture often frames the Ocean as a sentient force that chooses, calls, and corrects. Shukla (2016) describes the sea in myth not merely as setting, but as agent, a site of both peril and revelation where humans confront vulnerability. The way she frames the Ocean's agency and duality deeply resonates with me.

Immersion, for me, when considering the Ocean, feels like being so close to someone you live far away from, almost like a long-distance relationship. I have experienced her calling my whole life, a life lived inland, away from the shore, little connection to the sea other than the creeks near my house. Yet even inland, I was never fully separate, fully immersed in her world. Though hydro-feminist scholars articulate that there is an innate way that the female body connects with the Ocean, a reminder of who we are and where we come from (Maggipinto *et al*., 2023). Perhaps that is why the distance never felt complete, almost as if she was right beside me all the time.

Though I will attempt here to explain what it is like to be with the Ocean, to surrender and learn through contact, I recognize that language will always fall short. Some knowledges are not taken from another but felt.

I grew up with the privilege to travel around the world, often times my parents choosing Cancun, Mexico, a place that became my second home. For almost a decade I longed to swim with whale sharks, to see with my own eyes the grace they emitted as they swam and fed. In 2018, upon graduating high school, I finally had the opportunity to snorkel and see more than dying coral reefs, and my heart was full.

The morning started at 6 a.m., with a female turtle laying her eggs right in front of the beach chairs my father had claimed an hour before. Though I could not get close to her, it felt as if I was being called back to the Ocean, and that my world would crumble if I did not return to her as quickly as possible. But I had to wait and be patient as the Ocean was already setting her terms. My world is structured by control and management, and waiting is disorienting. The lack of instant gratification in these encounters reminds me that the Ocean does not conform to human scheduling. Zaucha and Gee (2019), write that the sea resists ownership, which I experienced firsthand in this moment where patience was demanded.

When we arrived at the dock, a small boat took us into the open ocean. I could not contain my excitement on the ride there; joy was pouring out of my body. Upon arriving at our destination, I saw multiple dorsal fins cutting through the surface, as if the whale sharks were playing hide and seek, one moment visible, the next gone. There was nothing more I wanted than to jump into the crashing waves.

There were eight of us aboard the sailboat, taking turns going in as pairs. My mother was my partner. When it was our turn, I hopped into the water without a care in the world, immediately aware of the life jacket restricting my movement, the cold current that drifted past me and the salt that filled my snorkel. In this moment, I realized I was home. That thought was cut short when a massive whale shark swam past me, far faster than I had imagined possible. I had assumed they would be slow because of their size, but I was wrong. In the wake of that encounter, my assumptions dissolved immediately, not through an argument as I was used to, but through immersing myself in their world. They were fast, graceful, absorbed in feeding and it became very obvious that I could not keep up. They surpassed every idea I had of them, forcing me to rework what years of reading research papers could never teach me.

I was also fully aware that I was trapped by the life jacket, unable to dive or swim freely, but they were not. They were free to go as they pleased, not swimming for me or against me, but simply as themselves. They were feeding vertically, as if they were standing on their tail fins, filter-feeders unbothered by the humans watching.

The Whale Sharks' did not seem to me that they were angry that we had invaded their space. They moved with patience, grace, and acceptance. Immersed in their world, I could do nothing but stare. Was this what peace looked like? Was this what life looked like without anger? Or if they were angry, how were they able to maintain their composure?

Even as their world is threatened by forces beyond their control, warming waters, overfishing, habitat destruction, they persisted in being true to themselves. It almost seemed as if the term "crisis" did not consume them in the way it consumes us. I found that this sentiment also attributed itself to coral reefs. The resiliency displayed by beings beneath the waves is often times beyond my level of understanding. Holtz (2022) argues that listening can be a tool to

helping us live with and on a damaged planet. She states that “it is my proposition that listening to the coral, to the soft sighs of the ocean, might make this reality imaginable, bearable and, ultimately, open us up to the possibility of ‘living on a damaged planet’”. Both whale sharks and coral live in a damaged Ocean but they both have a role to play in protecting marine ecosystems that would otherwise collapse without their support. Considering the challenges whale sharks and coral reefs face, it begins to teach us that it is possible to perform, even under immense pressure. Watching the whale sharks coexist, sharing resources, I saw community that exists without all-consuming greed. If humans were able to emulate even a fraction of the whale shark’s ability to resist greed, I believe capitalist notions of extraction and discourse around control and competition would be challenged aggressively.

Though I spent no more than thirty minutes in their world, I knew we had much to learn from them, lessons that extend beyond ecology or biology. I had always imagined becoming a marine biologist, but this encounter shifted something. I did not just want to study the Ocean. I wanted people to feel what I felt. I understand that manipulating people into feeling the same way is neither ethical nor possible. Yet something swelled in my chest, a desire for others to understand that there is more to the Ocean than extraction.

There is something calming and challenging about how the Ocean presents herself. Being with whale sharks humbled me in a way no conversation ever has. For a split second, I was in their classroom. Not metaphorically, but experientially. Embodiment became epistemology.

After greeting whale sharks, I felt another pull. Hawaii. I cannot fully explain why Oahu called to me, but it did. When I arrived in 2021, the waves were the largest I had ever seen. Hurricane-like weather defined the trip. It was a stark reminder of her scale. Although all oceans are connected, she felt different here, more alive and assertive.

I had booked a shark dive early in the trip, but the weather had other plans. The excursion was moved three times. Again, the Ocean demanded I wait for her call. I learned in that moment that the Ocean does not negotiate. When I finally stood on the dock at five in the morning on the North Shore, adrenaline rushed through me. The Ocean was finally calling me to meet her children. On the boat, the captain described the species we might encounter and detailed how sharks have been written into our world as enemies, predators to fear. Yet as I listened, I began questioning that narrative. If more people spent time in their home, would fear dissolve? Or deepen?

When we entered the water, holding onto a rope attached to the boat, I felt restricted again. I wanted freedom, to move without tether. Eventually, one by one, we were allowed to free dive. Twenty sharks circled around us. In the distance, humpback whales sang and a choir filled the water. In contrast to my meeting with the whale sharks, I noticed something different in myself. I was less startled by the cold. I had learned that the Ocean's embrace does not have to be warm to be welcoming.

The sharks ignored us most of the time. Their indifference solidified my beliefs surrounding their personalities. I was clear that humans were not the centre of the Ocean's universe, I was simply peripheral. And yet, another feeling surfaced, discomfort. A voice whispered colonizer. I had entered their home without invitation. Though I was not violent, I was not neutral either. The Ocean can be seen as a place that transcends domains, intersects with the divine, and challenges human understanding of themselves (Shukla, 2023). And yet, here I was in a position that forced me to reconsider my position and relationship with the Ocean. I was challenged to confront how I interacted with the Ocean. Did I want to learn more about her because we were friends? Or was I being selfish? Did I truly belong to her world, if I was just

using her to find some semblance of peace within myself? I did not know what to do with that feeling. But I stayed with it.

Before moving to Hawaii in 2023, I traveled to Bali to swim with manta rays. Something about their grace had drawn me to them since I first saw them in storybooks when I was just a young child. Again, the day began before sunrise, and the possibility of their absence was high, as the previous tours that week had not been lucky enough to be in their presence, but I felt that I would be gifted the opportunity to see them that morning. Contrasting my experiences with sharks, I was unaware of a narrative that painted manta rays in a negative light, emphasizing the hierarchy we have curated around marine life, where some beings are more valued than others, another mirror representation of the human experience. We arrived at our destination, and I hopped into the deep water the moment I heard the manta rays were there. The mantas were everywhere, dancing, singing, gliding through the water with such grace and ease that I could only dream to mimic. The mantas danced through choppy water, gliding toward us at full speed before swerving underneath at the last second. Their flexibility, their ability to maneuver turbulence with elegance, felt instructive. But there was something about their dance that insinuated that they are extremely balanced beings, both mentally and physically. After what felt like only a few seconds with the manta's, I was back on the boat onto the next adventure. Seemingly smaller in scale, we were stopping at various depths, hopping on and off the boat as if it were a bus, and snorkelling anywhere we could.

At one drop off I was able to see plenty of sea turtles, many of them green sea turtles. Though this experience was quite different from my time spent with sea turtles (called *honu* in Hawaii) in Hawaii, it was special, nonetheless. Sea turtles are theoretically offered the same protections in Bali as they are in Hawaii, but enforcement of these regulations is looser in Bali.

Hawaii enforces a viewing distance of 10 feet or 3 meters, whereas no such regulation exists in Bali. Though in both places, it is illegal to touch, disturb or harass sea turtles. This dichotomy is important to note because the standards they hold for tourists largely differ. In Hawaii, those leading the ecotourist experiences would blow whistles or remove people from the water that were consistently unwilling to follow the rules, whereas someone on my tour in Bali put their hand directly on the shell of the turtle and the guide encouraged the action. These experiences reflect the same resistance to consent laws and the experiences of women across the globe, though there are rules in place, these advances, whether turtle, or human, are unwelcome, but not met with punishment enough to stray people from committing such acts. My experience in the world as a woman of colour mimics that of the sea turtle, in which we are often called exotic, or made out to be a commodity, regardless of if there are protections in place. These systems of oppression exist both within the Ocean and on land, and the culprit always seems to be humans. Considering ownership, the Ocean has fought valiantly against the systems of oppression that consistently attempt to control her. By finding new ways to exploit the Ocean, capitalist interests continue to place pressure on marine ecosystems in unimaginable ways, but these exploits are continuously met with intense push back. The grace of the sea turtle in moments of adversity taught me that you can remain strong when the systems in place actively disrupt the protections they put in place for you in the first place.

The lives of coral, sharks, turtles, and other marine beings are not the far off from our own. Thus, making it easier to learn and connect with them or open your heart and brain to their teachings. Across all these encounters, it becomes increasingly apparent that the Ocean does not exist for me, or for us, a teaching that is embedded deeply within me. The same way that the Ocean does not change for others, is the same way I am adamant about being who I am, all

dualisms included, the good, the evil, and the calm within the storm. The Ocean reminds us that she sets her own terms, withholds information without needing to apologize for it, and teaches without calling herself a teacher. Immersion is not the only way to learn from her. But it is one of the most intimate. In the water, mastery dissolves. What remains is humility, relational knowing, and the quiet understanding that I am always a welcome guest. These experiences were more than just experiences to me; they were a curation of life lessons through connection and listening that went beyond human relationality.



Figure 1. Summary of pedagogical life lessons from the Ocean through immersion.

CHAPTER TWO: PEDAGOGIES OF VULNERABILITY

She holds her children in her arms as she walks across the horizon of a choppy sea. The rough exterior she carries emphasizes her fierce personality as a fighter. Her eyes are as blue as the sea; they hold secrets that the world may never get the chance to hear. As I watch from the sidelines of her story, I notice that her smile is like a breath of fresh air, her kindness in the face of adversity knows now bounds, and strangers seem to gravitate to her as if she is the moon and they are the tides. She builds houses and playgrounds for future generations without telling a single soul of all the hard work she puts in. She loves her many children so deeply that their pain is just the same as if it were hers.

Now she's running, fast and hard, with tears falling from her sea blue eyes. She's being followed, chased, and worn away from the interaction with this unknown force. Somehow, she manages to keep her children on her hips as she flees from the danger, but she is not fast enough. I watch as she loses her ability to keep fighting, as bits of her fall to pieces. Her left arm gives out from the pull of the oppressor, and with that her shark children fall to her side. She is forced to watch them lose their fins and become wrapped in fish nets as if they do not matter. Her right arm is next, holding her whale children, but once again she must watch them be taken away, kidnapped and forced across the Ocean to places they have never been before and to perform to people they should have never had to meet. Her left leg is the next to give up, and all her sea turtle children are endangered. I watch as her last limb falls, as it becomes covered in oil falling victim to the trap of the oppressor.

I am aware that the violent, gendered, and non-neutral language used above carry weight. As a woman, and particularly a woman of colour, these metaphors are not just abstract ideas to me, they are my own lived experiences. I have chosen to use this language not to exaggerate the

Ocean's suffering, but to make it in a way that scientific language alone often fails at doing. I also recognize the problem that I have curated, in order to expose the harm inflicted to the Ocean because of human actions, I risk reproducing the exact systemic structures I seek to critique. Although I have chosen a seemingly aggressive tactic, the story I have written is part of the pedagogy I am trying to uncover.

Simply put, vulnerability means being open to harm or to be exposed, whether that is physically, emotionally, or psychologically. Yet, what I am trying to achieve through the allegory, is that vulnerability is not passive in nature, but that it is relational. Vulnerability exists within systems of exploitation, power, and care. The Ocean, as I have cultivated her in this story is vulnerable not because she is weak, but because she is open, and continues to give even though these gifts come at a cost of her survival.

Scientific research emphasizes the Ocean's vulnerable position, but in different language than I have used. Butt *et al.* (2021) conducted a study that looks at the vulnerability of marine taxa in response to different types of stressors. The taxa included seabirds, marine mammals, bony fishes, reptiles, elasmobranchs (sharks, rays, and skates), corals, mollusks, echinoderms (animals without a backbone), cephalopods, marine arthropods, polychaetes (bristle worms), and sponges. While the stressors included biomass removal, organic pollutants, poisonous toxins, sedimentation, water temperature, inorganic pollutants, eutrophication, micro and macro plastics, bycatch, salinity, ocean acidification, habitat loss, light pollution, storm disturbance, ultraviolet radiation, sea level rise, air temperature, noise pollution, wildlife strike, and invasive species. Across all 12 taxonomic groups, vulnerability was not isolated to one singular stressor, but distributed between them all, but biomass removal and pollution placed the highest stress across the taxonomic groups. The marine taxa are not simply "at risk", but they exist within a network

of pressures that are driven by the human systems of extraction, consumption, and control. Each of these stressors are a result of human disruption of the natural world and the balance the Ocean has worked so hard to maintain for billions of years.

The impact we have had on the Ocean has been mapped by Halpern *et al.* (2008). The early account of the impact highlights how long we have been taking advantage of the resources the Ocean is willing to offer to us. At the time of the study the researchers found that the most highly impacted regions across the 20 ocean ecosystem types they looked at were the Eastern Caribbean, the North Sea, and the Japanese waters. The least impacted region was north Australia and the Torres Strait (p. 949). Based on the authors' findings, one can see that very little of the Ocean was free of human impact or what they call anthropogenic drivers of the various ecosystems they looked at. Much of the anthropogenic drivers are inclusive of pollution, Landrigan *et al.* (2020) note that ocean pollution is a global problem and "is the consequence of reckless, shortsighted, and unsustainable exploitation of the earth's resources" and further go on to speak about the dangers pollutants pose to marine ecosystems, as well as human health (p.2). Our understanding of the pressures on marine ecosystems is not limited, and the knowledge that we do have suggests that we can challenge the status quo and protecting our future in partnership with the Ocean. Vargas-Fonsenca *et al.* (2024) detail that 80% of the pollution of the ocean comes from land-based sources via runoff, rivers, atmospheric deposition, and direct discharge (p. 8). Although we have enough data on the pressures, we still do not have the ability to accurately predict the impacts of our actions on marine ecosystems. I believe that as the world continues to change, we must begin to predict what life will be like on a damaged planet, and not just for us, but all the beings impacted by human actions.

The “limbs” the Ocean lost within the allegory are not concocted simply by my imagination, but translations of reality. The shark children that were taken reflect the fact that humans kill approximately 100 million sharks every year through practices such as finning and bycatch (International Fund for Animal Welfare, 2025). Approximately 70 million of these shark fins travel through the finning industry every year, and 1/3 of these are blue shark fins (Shark Research Institute, 2018). The whales removed from her arms mirror the fact that there are “over 3700 whales, dolphins and porpoises held in captivity in 345 facilities in 56 countries around the world”, and these cetaceans were displaced from their environments and confined for human entertainment (Whale & Dolphin Conservation USA, 2026). The sea turtles highlight the fast population decline of species under the pressures of human impacts. All of these are not isolated incidents, but patterns that show that the Ocean’s vulnerability has been met by exploitation. The problem then has nothing to do with the Ocean’s inherent vulnerability, but our understanding of her vulnerability. The allegory I have written does not create a single oppressor but exposes the systems that many of us find ourselves embedded within. We buy into the capitalist notion of overconsumption, privatization, and indifference to our actions. Vulnerability in this way is not just something we have forced the Ocean to do, but something we actively participate in shaping.

Though these studies make apparent the physical dimensions of vulnerability, what can be measured, categorized and quantified, they are unable to capture the feeling or essence of vulnerability. Scientific data can tell us where the harm occurs, but not how the Ocean experiences our actions. Since the definition of vulnerability is not only about physical damage, but also the emotional and psychological impacts, then it cannot be fully understood through a scientific lens alone.

Although the physical vulnerabilities are important to be aware of, these physical abuses have the potential to cause even deeper rooted mental and emotional impacts on the essence of the Ocean. Vulnerability extends beyond physical harms, and encompasses the capacity to be affected, carry the pain, and then endure the pain for long periods of time. To dissect these less measurable dimensions of vulnerability, I look inward and begin with my own understanding of the term, one that is not dependent on a definition, but by my own lived experiences as a woman of colour navigating systems that demand openness from me just to exploit me. I find myself battling with the idea of being open, as in societal settings, the sole fact that I am a woman often places unwelcome expectations on how I need to behave, respond, or engage with others around me. I must be willing to take care of everything, whether these "things" or more masculine or feminine in nature, as the eldest daughter there is pressure to manage whatever is thrown at me, no matter the toll that it takes on my mental health. The lack of consideration in these circumstances floods my everyday thoughts as I battle with the fact that these are not things I want to do but must. All these expectations exist without explicitly being vulnerable but leave me open to being taken advantage of. Even smaller instances, such as not being able to walk freely at nighttime, simply because I could put myself in a vulnerable position reduces my ability to be free in my own environment, sometimes feeling as if I am trapped. From my perspective, these were all vulnerabilities forced on me by societal standards and systems built to hinder my freedom. All subtle ways of breaking me down without openly acknowledging that, that is the goal. Through my own experiences, I begin to recognize that we have placed the Ocean in a similar position, one where openness becomes the main site for exploitation.

Now of course, I do not know what societal standards are in a coral reef, if they thank the Ocean for her temperature, or her currents, or the conditions she has created so they can thrive,

but I am highly aware that people do not. Whether it is the mass consumption of resources or the murder of her children, we take and pillage and colonize her, and at some point, she may not have the strength to keep fighting back. The trauma she has endured would leave anyone with emotional scars, ones that cannot simply be erased by pretending it never happened. She has survived the extinction of the dinosaurs, snowball earth, and 4 billion years of changes, yet we have stomped all over her generosity. She gave us life and her water is part of our souls, but we continue to treat her as if she has no innate value. The Ocean continues to provide an open space for people in all forms, both good and bad. Her openness is also her weakness, and it takes courage to be strong enough to leave the door untethered to be hurt. I found that mirroring her experience from the perspective of the oppressed and the oppressor might evoke a different connection to actions we force on her on a day-to-day basis. I'm also highly aware of the fact that humanizing the Ocean may not be an effective tool, but I'd like to think that mirroring the human experience to showcase that we are not all that different from one another is a way that can be used to explore the similarities of the Ocean's experience and our own. If we were to fight for the rights of the Ocean the same way we desire to fight for our own, I believe that conservation would look completely different. It may allow for the vulnerabilities of the Ocean to shine but not be taken advantage of. She has been a courageous leader when it comes to vulnerability, and yet no matter has much we take, rob, or hurt her she continues to allow us in her space, and to share in her knowledges. These are all things we currently take for granted. Often, when discussing vulnerability and the environment there is an emphasis on the ability or lack there of to adapt to a changing climate. That specific discourse should be challenged; we assume that vulnerability looks different for a person than it does for a sperm whale based on socially constructed ideologies. Inherently, we have no idea what it means to be vulnerable for a

sperm whale, a jellyfish, or a lobster. The experience may be different for all beings, but if we are to mirror our experience to theirs, every life is vulnerable, beyond simply facing imminent destruction. Vulnerability is dual in nature, where being vulnerable could be seen as courageous or even admirable, but it can also be seen as weak, leaving yourself open to pain.

Vulnerability is something that I share with the Ocean, thus it cannot exist only one directionally. The relationship does not end with the Ocean being vulnerable to us. The relationship goes beyond our own actions, extending further to reveal something uncomfortable, that we are also vulnerable within this relationship. Not in the exact same ways or with the same consequences, yet vulnerable all the same. Through my recognition of shared vulnerability, it becomes clear that the relationship between humans and the Ocean is not one sided. Kohn (2015) explores Martha Fineman's Vulnerability Theory, which argues that "vulnerability is inherent to the human condition…", thus emphasizing that we are predisposed to harm from a variety of angles, one of those being the Ocean. We have an interdependent relationship with the Ocean. In essence we are at the impact of her storms, shipwrecks, and hurricanes, but it is necessary to remember that these are not acts of retaliation, but reminders of our own fragility within a system we do not control.

The dualistic nature of this relationship comes into play when we realize that although all these deaths by Ocean related instances are possible, we still need the Ocean to survive. Nash *et al*. (2022) looked at the feedback between Ocean and human health. The authors found that there are two possible futures for our relationship with the Ocean, one that focuses on a business-as-usual approach, and another that emphasizes living and connecting. Now, these two possible futures are complete opposites of each other, and Nash *et al*. (2022) note that the type of future we end up with is dependent on five main drivers: worldviews, power and agency, human

development and industry, food systems, and lifestyle and interconnectedness. To achieve a more human-ocean centered future, we must be willing to accept or engage in a deeper and more open relationship with the Ocean, one that decentres romanticization and fear, replacing it with connection and understanding. These changes can occur through the acknowledgement that our actions have consequences causes, thus allowing us to begin to rebuild a different relationship with the Ocean. Omstedt (2020) echoes Martha Fineman's definition of vulnerability and states that "Beauty and vulnerability are fundamental to both the Ocean and humans, but humans seem resistant to the inspiration they need" and further goes on to the explore the business-as-usual future Nash *et al*. (2022) discusses, by stating that "Social and emotional fragmentation and business as usual will destroy the planet. Rethinking and listening are both needed" (p. 9). Coming to terms with the idea that both us and the Ocean are vulnerable to each other can transform our relationship to one dependent on love and the idea that we all suffer the same, and by being open to living on a damaged planet together could transform how we approach conservation.

A deep listening of the Ocean may cause us to hurt in the process, it might be difficult to acknowledge the damage we have done and be open to rewriting our relationship with her, but it is not impossible to rebuild trust and work towards a more connected future. In doing so, we are challenged to rethink what vulnerability means, something that we do not need to avoid, but a space we must be willing to enter. As Brene Brown suggests in her book, *Daring Greatly* (2012), vulnerability is something that is uncertain, risky and exposes you emotionally, and inseparable from love. To be in relationship with the Ocean asks us to accept this risk and acknowledge that connection requires us to remain open even when it makes us uncomfortable. We are now challenged with the fact that the question is no longer about how we can shield ourselves from

being vulnerable, but whether we are willing to be open to it, long enough to understand what the Ocean has been trying to show us this whole time.

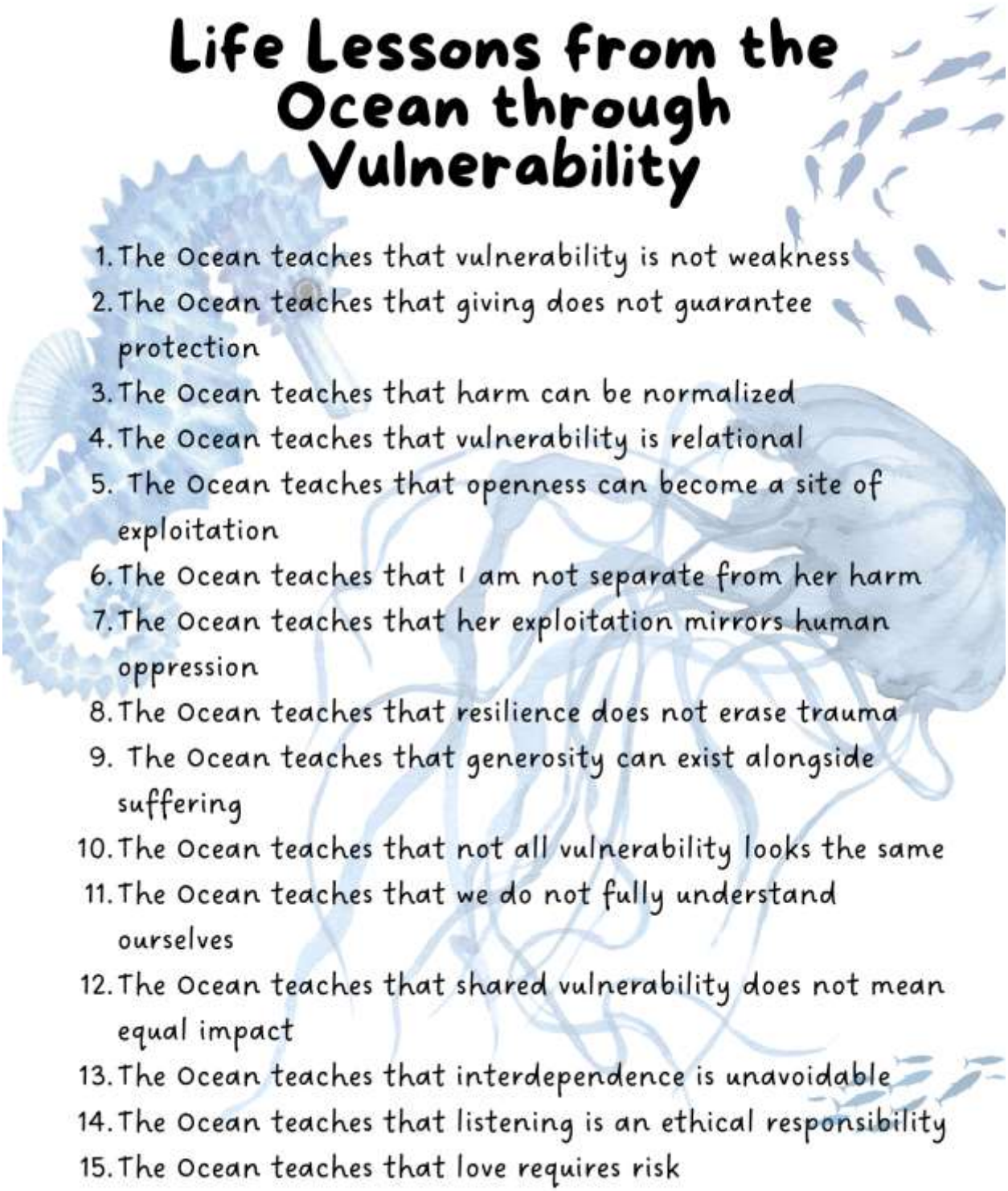


Figure 2. Summary of pedagogical life lessons from the Ocean through vulnerability.

CHAPTER THREE: PEDAGOGIES OF MEMORY

Prosecution [opening statement]: “Your Honour and all those who are on the jury we gather here today to seek justice for all beings on Earth. This case is about protecting all life from the injustices of humanity. Since the Industrial Revolution the defendant chose to ignore the warning signs of their actions and take responsibility for the destruction of our home. The evidence will show that their reckless, selfish, and ignorant behaviour changed the Ocean, the Forests, and how we treat one another. At the conclusion of this trial, we hope you find the defendant guilty”.

The courtroom I am using is not literal, but methodological and pedagogical, allowing me to stage questions of responsibility, memory, and relational harm in a way that the traditional academic structures cannot. I’d like to think that if we were to put humans on trial and have the Earth on the side of the prosecution that we will be able to grasp the changes throughout history from the perspective of the Ocean. The Ocean is a site of ancestral memory, where the histories of life remain submerged by the deep sea, but remain profoundly alive. The ability to recall the entire history of the Earth belongs solely to the Ocean. Humans have been on Earth for approximately 300,000 years, compared to the 4.5 billion years Earth has existed, we understand next to nothing in comparison to the knowledges of the Ocean (Handwerk, 2021). The 300,000 years have been shrouded in technological advancements, failures, and destruction of the planet. All these changes, in comparison to the timeline of one year, occurred within 1 second. Putting humanity on trial will allow us to dissect the changes in human-ocean relationships and will provide value to the vast wisdom the Ocean holds for our past, present, and future.

Prosecution: “The prosecution would like to call their witness, the Ocean, to the stand”

The Ocean is not a passive member of our history, but an active participant in the creation and transmission of our knowledges. Through oral histories, myth, and theory, it becomes clear that

the Ocean preserves both ecological and cultural memory across the entire existence of Earth, and her memory offers us a framework to understand how knowledges, ethics, and imagination flow through watery worlds.

Prosecution: “Would you agree that your relationship with humans prior to the industrial revolution was fundamentally different from what it is today?”

Ocean: “Our relationship was reciprocal, in a way that forced us to both challenge our understanding of ourselves. We were anchored to one another, not physically, but metaphorically in a way that transcended domains and intersected with the divine (Shukla, 2023). I find myself a part of their mythologies, cosmologies, and histories that include some of the most formidable heroes, yet also some of the most damning tragedies.”

Prosecution: “What did humans once know about you that has been long forgotten?”

Ocean: “They understood my wisdom, my power, and my responsibility. In a way that was fluid and relentless. I had the power to create and destroy, like the way in which they act today. I was needed, different than in the way I am needed today. Humans desired a teacher, one to help them sail my seas, provide resources of sustenance, and a place of calm and relaxation. Humans have seemingly forgotten my vulnerability. I am not a bottomless pit that they can take from, and they once understood this fact. There was a time when overconsumption and overproduction did not rule their thoughts and my turtle children, whale children, in fact all my children were safe.”

The Ocean’s ability to hold onto the entire history of the planet deems her the most knowledgeable. We need her to help us understand who she is and the unknowns of our planet. Furthermore, we depend on her to learn about ourselves and what it means to be a part of a blue planet. Her mere existence holds the answers to all our questions and allow us to further ponder

our own place on Earth. She has been a metaphorical tool to help us shape our perspective of humanity and our own vulnerabilities and dualistic nature.

Prosecution: “Can you describe a time in which stories, spirits, and rituals shaped human-Ocean relationships?”

Ocean: “Easily. Many mythological stories occur within, near, or on the sea. Various cultures have stories, gods, spirits and values that are heavily influenced by the Ocean.”

Prosecution: “Can you explain the mythological stories you are referencing?”

Ocean: “Yes, of course. Within Greek mythology we find Poseidon and Nereus, two gods of the sea that represent two sides of humanity and the Ocean. Nereus represents a quieter, honest, and gentle sea, one which protects sailors. Whereas Poseidon is the god of a tumultuous sea with angry waves, storms, earthquakes, and strong winds (Ji, 2021). These gods from century old myths highlight an age-old internal struggle with the dimensions of being human.”

The prosecution notes that these myths are not incidental. They reveal a long-standing human tendency to understand the self through the Ocean. These Greek gods are a reminder that we have been comparing ourselves to the Ocean in a multitude of ways for generations, as a tool to understand the parts of ourselves that we may be unable to come to terms with.

Prosecution: “Are there any other myths that come to mind when you think about the history of the human-Ocean relationship?”

Ocean: “There are a few more. Greek and Roman myths have been used to cultivate tools to understand the different aspects of my personality. Monsters such as Scylla and Charybdis symbolize the destructive power of what you would call the ‘sea’ (Ji, 2021). The creation of

these characters could have been conceptualized for a variety of reasons, but one possibility is that these destructive and violent sea monsters emulate the destructive power of humanity. Within the human-Ocean relationship both parties have the capability of destroying the other and what is around us. Beyond the control of the seas, Poseidon also controls the marine flora and fauna, which parallels the Hindu god, Varuna, as they both have control of the Ocean and her creatures. These gods establish a deep-rooted desire of masculine dominance of feminine entities and capitalist systems. I'd also like to make a quick reference to Hindu mythology, as these myths also showcase the very similar and dual nature of humanity and I. The god, Varuna, has a Makara, a hybrid creature with the body of a fish, and the head of an elephant or crocodile, "which symbolizes the multifaceted nature of the Ocean" (Shukla, 2023. p. 70). "

These myths emphasize the value humans place on the Ocean. She becomes a space where we can go to figure out who we are and how to navigate the trials and tribulations of life. The myths consistently reference aspects of the Ocean that mimic that of what it means to be human. We struggle, we grieve, we thrive, and we survive in a multitude of ways. Without the Ocean as a metaphorical and pedagogical relational teacher, these revelations of what it is like to be human would not exist. These symbols found within mythology illuminate the relationship humanity has cultivated between the divine and the Ocean.

Prosecution: "You stated earlier that there are human myths, stories, and spirits part of the human-Ocean relationship. You have only just provided details about myths; can you tell me about the stories that hold value to you and your relationship to humanity?"

Ocean: "I would like to go back to the time of the Greeks, most notability, Homer's *Odyssey,* which adapts the qualities of a "natural or metaphorical battlefield, where the courage, ingenuity, and resilience of Odysseus clash with the monsters such as the cyclops, the sirens, and the god of

the seas Poseidon" (Shukla, 2023. p. 71). These stories emphasize the desire for humans to search for a home and identity while still being connected to me along their journey. Mythic narratives then become another form of what I would like to call my Ocean archive, one that transmits collective understandings of fate, fear, and interdependence across time and stories."

Prosecution: "Are these stories related to the spirits you spoke of earlier?"

Ocean: "Many cultures throughout human existence have cultivated a spiritual relationship with the me. I become a place of healing and blessings for thousands of years across various communities. The humans determined that my seas were full of spirits that were kind and playful, or vengeful depending on how they were treated. These characteristics of the spirits emphasize my own dualistic nature, where I offer both healing and chaos, a being that people can envision as good or evil depending on their relationship with me. Fishermen in Malaysia, for example, knew the personalities of the sea spirits and how to engage with them to maintain a mutually beneficial relationship so that they were protected out at sea (Andaya, 2017)."

Prosecution: "Is there anything further you would like to add in regards to the historical nature of human-Ocean relationships?"

Ocean: "Yes, I would like to discuss how Australian Indigenous seascapes also offer spiritual cosmologies from the Saltwater Peoples (Aboriginal people and Torres Strait Islanders)."

Prosecution: "Please, go on."

Ocean: "McNiven (2014) explored the contrast between Western relationships to me that are heavily dependent on exploitation and technological advances and how these relationships contrast how "Australia's indigenous Saltwater Peoples construct their seascapes as spiritscapes imbued with forces that can be engaged with ritually" (p. 330). These cosmologies imbue me

with spiritual entities and showcase my sentience. I remember a time when humans travelled through my currents without exploiting and destroying me. I often hold these moments in my soul as a reminder that a different human-Ocean relationship is possible."

The sea spirits within these relationships highlight the divine perception we have of the Ocean, that she is a divine being with knowledges that we could never conceptualize without her existence, she becomes a knower, wiser than us, and a being we turn to when we are unable to understand ourselves and beyond.

Prosecution: "I'd like to now shift to the time period in question. The great shift in the relationship. When exactly do you remember the relationship beginning to change?"

Ocean: "The moment in which I recall the clearest that challenged the relationship we once had was the Industrial Revolution."

Prosecution: "What did you feel during the rise of industrialization?"

Ocean: "There was a clear systems shift during this time. I felt the transition away from community to individualisation and greed. I watched in slow motion as need became greed. There was a massive increase in greenhouse gases, forcing me to overflow with carbon and attempt to mitigate the mass production of greenhouse gases that were being released. And these greenhouse gases were released due to overproduction."

Prosecution: "For the people of the jury, could you please explain what you mean by greenhouse gases?"

Ocean: "In short, greenhouse gases are gases that trap heat in the atmosphere. Too much of them means that the Earth heats up because the gases have no where to escape to."

The Ocean's role as a carbon sink (absorbing carbon from the atmosphere) became increasingly difficult after the Industrial Revolution. Venegas *et al*. (2023), note that anthropological activities since industrialization produced more greenhouse gas emissions than any naturally produced since the last ice age 20000 years ago (p. 3). Industrialization challenged social norms and altered the course of humanity in unprecedented ways. These changes led to a dominant discourse dependent on overproduction and overconsumption, disrupting the balance that the Ocean was already working hard to maintain. In essence, we forced the Ocean to work overtime without considering the consequences of our actions on the future of our planet. Overtime, it becomes clear that the Ocean has a memory of pre-industrial greenhouse gas levels, and post-industrial levels. These memories are a reminder of a time where 90% of greenhouse gas emissions were not absorbed by solely the surface waters of the Ocean (Venegas *et al*., 2023).

Prosecution: "How have these human systems challenged your ability to sustain life?"

Ocean: "Systems created by humans vastly limits my ability to sustain life. I'm always having to figure out new ways to maintain balance, and sometimes I cannot achieve this quickly enough. I work in community with what humans would call abiotic elements, such as the winds, the clouds, and the moon to keep up with the tides, currents, and nutrients in my seas. This communal system that has been curated for billions of years is disturbed by the various systems at work. I am also now finding it harder and harder to keep my own children alive. The fish, turtles, sharks, whales, corals, crustaceans, and all my babies are no longer safe in a world where the systems place more value on them dead than alive"

Pykala (2023) describes more-than-human agency through her experience of sailing on the Pacific. In her thesis, she describes the agency that the Ocean, wind, and ship have regarding

the maintenance and management of the ship. She highlights an experience climbing the rig, and through this she found that trusting herself was not the only thing she needed to get through life and what she needed to do was trust the non-human agency that was also an active participant in climbing the rig. She needed to trust the Ocean, the wind, and the ship and they had to trust her in return to complete the task at hand. The communal elements provide the perfect conditions that give the Ocean character, in which depending on the mood of the wind, the moon, or the clouds she could be "calm and peaceful, or gloomy and dark" (p.43). These connections between all elements provide each part of the ecosystem with a personality that would not be possible without all the parts working together in unison. By framing the Ocean as a being with agency, blue humanities open the door to acknowledging that the Ocean is an active participant in the world and without her, the global ecosystem would lack structure and function. Her actions, emotions, and personality change just like any of us, which is a concept that would be beneficial for marine conservation.

Prosecution: "Would you agree that colonialism played a large role in these disruptions?"

Ocean: "Yes, I would agree that colonialism has a major part in disrupting my normal patterns. Even something as simple as the colour blue has a role in colonial history. Blue represents royalty across Europe and was used to decentre the essence of the colour in relationality to seapeoples."

Ferwerda (2024) describes a story about a poet from Aotearoa New Zealand, Selina Tusitala Marsh. Marsh presented in front of the British Monarchy in a deep pacific blue dress that stems from her heritage. During this encounter with the Monarchy, someone told Marsh "My dear, how politic of you to wear royal blue" in which Marsh responded "The blue of majestic *te moana nui a kiwa*, the Pacific Ocean? Why thank you!" This simple act alone challenged blue

colonialism and provided the Ocean with the agency to depict her story as a being that wanted to take part in decolonisation, rather than find herself on the side of blue colonialism. In essence, any topic or concept can be correlated with the Ocean and the role she plays in everyone's lives.

Prosecution: "How else has colonialism played a role in changing the human-Ocean relationship?"

Ocean: "Many peoples were exiled from the seas due to colonization. Mentz (2023) looks at a poem that details the life of a kingfisher and how this poem is a metaphor for the story of Oceania and how the people were exiled from the seas, whereas colonizers benefitted from the Ocean of fantasy."

Prosecution: "Have you been used in any other way as a result of colonization?"

Ocean: "Yes. My seas have been used by colonizers for centuries and played an unfortunate role in the Trans-Atlantic Slave Trade. I have a vast amount of knowledge of the what occurred on my waves during that time-period."

Through the concept of *black hydropoetics*, Hofmeyr and Lavery (2022) position the sea as a site of ancestral memory, where histories of slavery and migrations remain submerged in the deep sea, yet is still profoundly alive. These ideas redefined the ocean as dynamic and creolized, one that merges Indigenous hydrocosmologies, slave narratives, and settler hydrologies into complex, and interwoven currents.

Prosecution: "Is there anything else you would like the jury to know?"

Ocean: "My last thought about this is that the systems lead to the destruction of what I have created. Overfishing, habitat destruction, pollution in all forms, sea level rise, and a warming

planet are all happening at unprecedented rates because of capitalist systems and the fact that people have fallen out of love with me. I have become a tool to be used, rather than a teacher to be respected. I have lost my innate value and only seem to exist to be exploited by humanity."

Prosecution: "No further questions Your Honour."

Defense: "With respect, Your Honour, the defence would like to cross-examine the witness."

Defense: "You have described a relationship that has deteriorated over time. Would you agree, however, that there are still communities who maintain deep respect and reciprocal relationships with you?"

Ocean: "Yes, I would agree that there are still plenty of people and communities who have a healthy relationship with me, but unfortunately that is not the majority."

Defense: "You are familiar with the practices of Indigenous communities, such as the Saltwater Peoples, who engage with you not as a resource, but as a living entity imbued with spirit and agency?"

Ocean: "Yes, I am. As I did mention them earlier, it would not be fair to assume that there is no human on Earth who does not acknowledge me for my innate value, but I still feel that even these people are overshadowed and not respected. Their voices are drowned out to continue to take from me. I still speak to many of these communities, and we are seemingly on the same page regarding the role greed has played in covering up my power."

Defense: "What communities do you still speak to?"

Ocean: “I am in relationship with many communities, though peoples that do come to mind are the Xosha grandmothers, fisherwomen who have a complex relationship with the sea in South Africa.”

Francis and McGarry (2023) detail that the Ocean is both soul-nourishing and a reminder of hardship for humans. The authors learn this through exploring the history of five Xhosa grandmothers. One of the grandmothers says:

“Let me tell you; I know what species are available, I know and understand their ecology, and I know in which areas within the ocean waters they prefer to inhabit! These species they think are becoming extinct, I know where they are because the ocean talks to me and I understand what it says!” (p. 176)

These words highlight the value of stories and local knowledge in conservation. The Ocean and her people have an entire lived history together that still proves to be important. Local seas once functioned as “elementary schools” for navigation, where practical skills and spiritual relationships to water were cultivated before venturing into the open Ocean (Andaya, 2017).

Defense: “Would it be fair to say that within these communities, your vulnerability is not exploited, but honoured?”

Ocean: “I guess it would be fair to say that in some instances my vulnerability is not exploited, but once again, the rule of the majority still outweighs the minority.”

Defense: “So then, is it accurate to attribute the harm you describe to all of humanity. Or are there specific systems, industries, and structures that drive this exploitation?”

Ocean: “Inherently, no it would not be fair to claim that the entirety of humanity is at fault for what has occurred. But I do feel that humanity is responsible for the changes and the destruction their so-called advancements have done to me.”

Defense: “Would you agree that many of the communities who respect you are not those in positions of power, and therefore are limited in their ability to protect you on a global scale?”

Ocean: “Of course, but that is also the fault of humanity. The people who are benefitting from these systems are at fault for not only hurting me but hurting themselves in the process.”

Defense: “Are there not also scientists, activists, and everyday individuals who are working to restore your ecosystems and repair the damage that has been done?”

Ocean: “There most certainly are people working towards a healthier Earth. But a lot of these ventures are dependent on stakeholders who benefit from my pain. Marine Protected Areas and fisheries management for example, lack enforcement or proper regulations. These conservation efforts are still not enough; we need a change in perspective.”

Defense: “If care exists, and if knowledge exists, then is the issue truly a lack of love, or is it a failure of systems that prevent that care from shaping global outcomes?”

Ocean: “To be quite honest, I think it is a bit of both. There is a lack of love, which led to the pressure from the systems to begin with. They go together with each other. Though it would be fair to say that care exists, but it is not enough to counter the systemic harm that is being done.”

Defense: “The defence does not dispute that harm has occurred, but we question whether guilt can be assigned equally, or whether it lies within the systems that shape human action. No further questions Your Honour.”

Prosecution: “Your Honour, the prosecution would like to re-direct. You’ve acknowledged that there are communities who care for you. Would you say that these communities hold enough power to influence global systems that impact your survival?”

Ocean: “These communities and individuals who still harbour a deep love and respect for me do not hold enough power within this systemic framework to evoke the necessary change required to protect all beings on Earth.”

Prosecution: “Are the individuals and communities who maintain reciprocal relationships with you the same ones driving large-scale industrial extraction, pollution, and overconsumption?”

Ocean: “I’d like to make it very clear that they are not the same ones. Those who do love and care are not the ones who reduce me to a tool for greed and exploitation.”

Prosecution: “So would it be accurate to say that the systems causing harm are not only dominant, but actively override and silence the knowledge systems that seek to protect you?”

Ocean: “Yes, that would be accurate.”

Prosecution: “Despite the existence of care, are conditions for your ecosystems improving, or continuing to decline?”

Ocean: “They continue to decline. Humans reach deeper into my waters, extract more from my depths, and increasingly transform me into an economy rather than an ecosystem.”

Prosecution: “If care exists, but harm continues at an unprecedented scale, what does that suggest about the effectiveness of that care within current systems?”

Ocean: “The care that exists challenges the current systems, but the effectiveness of that care within these systems remains insufficient.”

Prosecution: “Would you agree that acknowledging care is not the same as achieving protection?”

Ocean: “Yes, I would agree that this is true.”

Prosecution: “Then is the issue not whether humans are capable of loving you, but whether the systems they uphold allow that love to matter?”

Ocean: “Yes, that would in fact be the issue. They may love me, romanticize me, enjoy the sense of calm and relaxation I provide, but that is all the system allows. Protection, reciprocity, and a love without ultimatum is not allowed. Love without action does not protect me. And action that does not challenge the systems harming me will never be enough.”

Prosecution: “No further questions, Your Honour.”

Prosecution [closing statement]: “Your Honour, members of the jury, throughout this trial we have heard testimony not from a simple observer, but from a being who has carried the memory of this planet long before humans arrived. The Ocean has shown us that what once existed was not a perfect relationship, but one that was rooted in respect, understanding, and awareness.

We have also heard that this relationship has changed. The relationship was not altered suddenly or without warning, but through the slow normalization of overproduction, overconsumption, and systems that prioritize profit over balance. The evidence presented does not suggest that humans are incapable of care. In fact, we have seen that care persists, within Indigenous knowledge systems, within local communities, and the individuals who continue to listen.

Yes, despite the presence of care, harm continues at a scale that we can no longer ignore.

The defence has asked us to consider whether guilt can be assigned equally, and they are right to do so. But that is not the question we should be asking. The question is not about whether humans are capable of love, but whether these systems we continue to uphold allow that love to matter.

If there is anything we have learned today, it is that care without power does not protect, and without love we cannot sustain life.

The Ocean has not asked for perfection, but to be understood, beyond a resource, not as an economic tool, but as a relationship. A relationship we have seen today that has become fractured, but not yet beyond recognition.

So, I leave you not with a verdict today, but with a responsibility. If we know what has been lost, what continues to be taken, and what is possible, then the question is no longer about whether it has occurred.

The question is whether we are willing to live differently, to listen to the knowledges the Ocean has, and to acknowledge that she is not separate from us."

In constructing this trial, I positioned myself as the prosecution, someone seeking to make humanity accountable. But I am not separate from the defendant, I am part of the very systems I have questioned, shaped by the same structures that allowed for the harm described within the trial. The trial does not end with humanity, it folds inward asking what it means for me to live within, contribute to, and attempt to challenge these systems.

The more I question my own role in these systems, the more guilt I seem to feel. I am reminded of a time when I was younger and I wanted to swim with dolphins, in captivity. I was part of a captive system that never considered the damages to cetaceans, and all I cared about

was my own joy I would obtain from those moments. Even adventures to Marineland (Ontario, Canada) when I was younger fall into these billion-dollar captive systems that are shrouded within economic gain.

I also find myself within a contradiction, especially when I travel. I collect seashells, pieces of coral, and other fragments of life that wash up on shore. They are scattered across my room, on my shelves, in corners, preserved memories of times with the Ocean. At first glance they are beautiful, reminders of the places I have been. But they are also a graveyard. The dead coral, possibly due to coral bleaching and warming waters, a starfish's story I never got to hear, and shells who were removed from their homes for my own enjoyment.

I continue to participate in systems of overconsumption. I buy books, clothing, and jewellery tied to the Ocean, under the assumption that it reflects my love for her. But I wonder if that is truly a representation of all the Ocean has to offer, or if it just my desire to feel connected to her, while harming her in the process. And yet, even with this awareness, I continue to participate. The guilt is not enough to stop the behaviour; it just continues to sit alongside it.

Looking inward is no easy task, as it reveals the role I play in a capitalist and colonial system built on the exploitation of all beings on Earth, a system that continues to harm the very Ocean I claim to love. The pedagogical courtroom I have written leaves me questioning whether love is enough to dismantle a system built against the protection of our most valuable teacher.

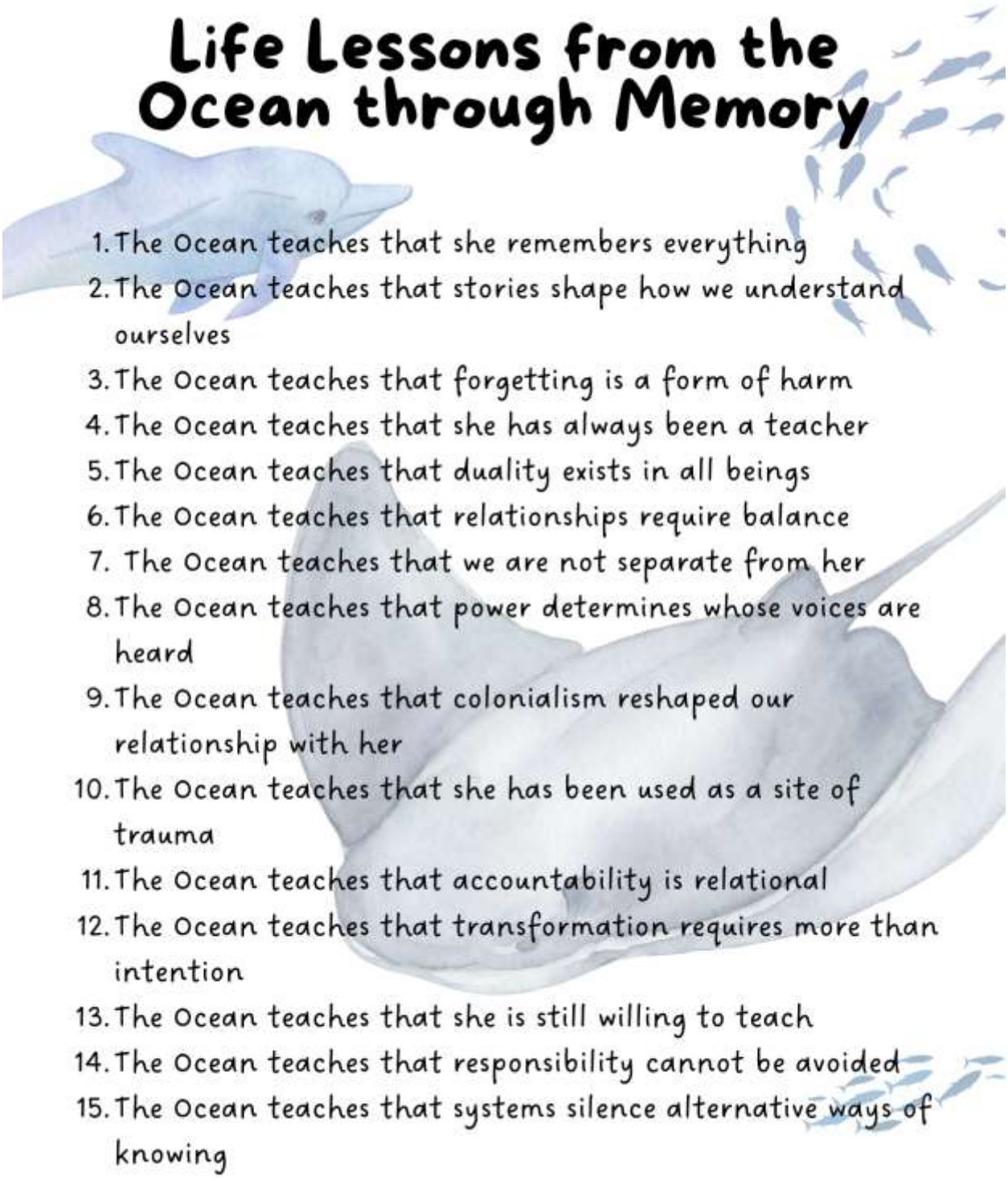


Figure 3. Summary of pedagogical life lessons from the Ocean through memory.

CHAPTER 4: PEDAGOGIES OF VISION

If someone has never been to the beach or felt the touch of the sea, their experience or lack of experience could frame their relationship with the Ocean. The media provides us with a way to visualize the Ocean even if we have not had the chance to meet her yet, or even if we have. The visual representation of the Ocean has the power to enhance or skew our human-Ocean relationship.

Let us consider the impact of Spielberg's *Jaws* (1975) for a moment. The film presents the Great White Shark as the enemy and the human community as the victim without the consideration of how this narrative would construct a negative discourse about sharks. Sportfishing for sharks took off after the release of the critically acclaimed film, and the doors opened for the shark finning industry in the United States (NOAA, 2014). The film allowed for the shark fishing industry to be solidified in the killing of sharks all over the world. Sharks were not given a chance to speak for themselves about the devastating impact the film had on the human perception of sharks. The film created a false narrative that sharks are man-eating beasts, and this resulted in the death of over 100 million sharks every year, in contrast only 9 people died from a shark related incident in 2025 (Florida Museum, n.d). The star of the film, the Great White Shark, has received a vulnerable status from the IUCN (2018). The typically isolated being found in the open ocean is still not out of reach from anthropogenic actions and faces death at the hands of humans. The film painted the Great White as the murderer, whereas in reality, humans are the true criminals. *Jaws* caused a generational shift in the narrative around sharks, threatening their entire existence. Now it is important to note that presently, those who kill sharks may not necessarily be afraid of them, as the shark finning industry is lucrative and economically important internationally. But the lack of empathy and compassion for shark species from the

general public correlated to the fear factor produced by the media leads to a lack of action to protect sharks as there is not a public outcry for change. The inability for us to understand the communication that sharks may be trying to have with us about the state of human-shark relationships poses a problem for us to acknowledge where we went wrong. They are not sinking ships, or attacking more people, or lashing out against us for the damage we have done. Their emotional control severely rivals our ability to control our own emotions. Mills (2024) writes from the perspective of the Great White after the release of *Jaws*. Inherently, Mills writes the story of the death of the Great White. He writes,

> "But they are the tellers, and I am the told. They are responsible for how they speak of me. That I'm a fiction makes it worse, as such stories rely on the possibility that all this could be true. Their stories make sense – are comprehensible – to them. That is the problem. Why should they so easily believe this concoction of untruths? I am clearly of use. After all, 'no other animal, on land or in the water, generates the entertainment income that shark species do' (Neff 2015, 2). Well, lucky for them that I am such an income-generator. But what does all this mean for me?" (p. 16)

We have taken away the agency of the Great White, demeaned to nothing but a tool that has entertainment value. The lack of value humans give to sharks mitigates political, societal, and environmental action that would lead to change. We create a hierarchy when it comes to other non-human beings, where their value is determined by how much we resonate with them.

In contrast to the experience of sharks, cetaceans find themselves on a higher level of the marine animal hierarchy. *Blackfish* (Cowperthwaite, 2013) tells Tilikum's story up until his transport to SeaWorld and what the impacts of captivity are on orca whales through various perspectives. The death of Dawn Brancheau, who was "killed" by Tilikum at SeaWorld in 2010, drew the attention of the mainstream media, who displayed Tilikum as being aggressive, wild, and uncontrollable, essentially a whale that intended to kill Brancheau. We also need to

differentiate the innate desire to kill from the expression of psychological trauma being presented physically (Marino *et al.*, 2020). An event like this should have rewritten the narrative that orcas should be in captive environments, establishing a new perspective that human-orca relationships should not forcibly exist, especially as a form of entertainment. *Blackfish* was aimed at addressing these problems and bringing to light the horrors of captivity on orca whales and the psychological and socio-cultural trauma they face. The documentary opened the conversation around the dire need to keep orcas out of captivity and that their use-value is not enough to keep them in small, unsafe tanks.

Although *Blackfish* is a documentary, there are other films that pull on the heartstrings of people through fictional storytelling. For example, *Free Willy* (Wincer, 1993), shows an Orca that is stuck in captivity and then "freed" by a group of people, pushed by a child to free Willy from his cage. The film in essence is ironic, using captive Orcas' to create a false sense of freedom. The Orca that played the role of Willy was quite obviously not free and mirrors the false sense of freedom we believe that we have. To make a film about freeing an Orca whale while using a captive Orca emphasizes the dark role humanity has in causing a problem and then finding lackluster solutions to these issues. They want to romanticize the idea of freeing Orcas' from captivity while still benefitting from the billion-dollar captivity industry. Documentaries are seemingly better tools to spark a challenge to the status quo. Documentaries like *Blackfish* sparked global outrage and led to the closure of many marine mammal parks, such as Marineland. Unlike the damages done to sharks because of the media narrative, cetaceans, although also gravely impacted by human activities, were positioned in a role of the victim, rather than the villain, beings in need of protection not eradication.

Documentaries play a large role in how we understand the world around us. They present us with a visual representation of spaces on Earth that we may never have the chance to physically experience. These visual spaces enable the viewer to step outside their own environment and immerse themselves in a relationship with the stories presented in the documentary. *Ocean with David Attenborough* (Butfield, Nowland & Scholey, 2025) and Pippa Ehrlich and James Reed's, *My Octopus Teacher* (2020) represent untold stories that embedded themselves within mainstream media. I found myself dragging my friends and family to see *Ocean* and begging my mother to watch *My Octopus Teacher* because I felt that they were documentaries that tugged at the heartstrings without being traumatic. *Ocean* told the story of our relationship with the Ocean in a way that emphasized our dual natured relationship with her, one that is both formulated around wonder and awe, while also being infiltrated by destruction and greed. The visuals show the stunning aspects of the Ocean at the beginning of the film and showcase the Ocean with her innate value, whereas towards the end of the film, the destruction of the Ocean through trawling and overfishing was used as a way to showcase that capitalism and the colonization of the Ocean has a large role in the trauma we have inflicted on her.

My Octopus Teacher approached the story of human-Ocean relationships quite differently than I had personally ever seen before. The story followed Craig Foster and his year-long relationship with an Octopus in the kelp forests in South Africa. The focus on an intimate relationship between the two beings inherently alien to each other proves that it is possible to foster healthy beyond-human relationships. Craig Foster explains how much he learned from the Octopus in their short time together and reminded me of my own moments with staring in the eye of a whale shark, or dancing with a manta ray for the first time. I found myself moderately

jealous while watching the film, wishing nothing more than to nurture a relationship with a child of the Ocean.

The film was also a reminder of a YouTube video I watched that showed a relationship between a humpback whale and a scientist (The Dodo, 2018). The relationship was created over many years, in which the diver returned to the same spot regularly to meet with the Humpback. There was an encounter where the humpback was tossing her around and there was a point where the diver feared for her life but come to find out that the humpback was protecting her from a potential threat within the water, not attempting to hurt her. The altruistic nature of this experience is a reminder that even though we continue to harm the Ocean's children, they continue to recognize us as needing protection from the environment they have been raised in. Through the visual narrative of these stories, we have a chance to see that there are still ways to break through the capitalist and colonial mindset that has led to a break in our relationship with the Ocean.

Visual representations of the Ocean exist within some of our favourite childhood movies as well. *The Little Mermaid* (Clements & Musker, 1989) and *Moana* (Clements, Musker, Williams & Hall, 2016) contrast the types of relationships that we want with the Ocean. Within The Little Mermaid we are presented with a mermaid, Ariel, who wants nothing more than to be rid of her home in the Ocean. She vehemently wants to live a life away from the Ocean, though I understand that it is not just about being away from the Ocean, but that she thinks being human will solve all her problems, but the use of the Ocean as the tool for what she wants to escape represents a relationship that shifts away from the Ocean. The human world is painted as scary and inhumane, a world that is adamant on hurting the Ocean, which can be heard through the songs found within the film, such as *Under the Sea*. The songs, such as *Part of Your World*, also

show Ariel attempting to use her fins as feet and dreaming of a life above the surface. These visualizations are reminiscent of the romanticization we also have for the Ocean and that the Ocean, specifically the beach, is a place to run away from your problems, to relax and enjoy beauty without considering that, that is not the Ocean's experience of us. Ariel's desire to be apart from Ocean contrasts Moana's relationship with the Ocean.

Moana wants nothing more than to be in relationship with the Ocean, even if it goes against her cultural rules. Throughout the film, Moana is seen cultivating a relationship with the Ocean, where they high-five, and work together to re-establish the broken balance in the world. The relationships represented in both films mimic the dual nature of our relationship with the Ocean, where we want a relationship with the Ocean, but also do not at the same time. For a long time, The Little Mermaid was my favourite film, as a child everything I loved was determined by whether it was related to the Ocean, specifically dolphins, and it did not matter in what form the information came from. All the media I consumed was about the Ocean and her children and I wanted nothing more than to have the life Ariel had under the sea. When Moana came out, and I was a teenager, my perspective began to shift. I saw a relationship with the Ocean within an animated film that mimicked the relationship I felt that I had with the Ocean. One that was of longing and love. I have been isolated from the Ocean most of my life, as I live in a land-locked region. There are times when I feel sick to my stomach because I cannot be near the Ocean, my mental and physical health become impacted because I have not been blanketed by her touch. I resonated with Moana in that way, although we had different circumstances, our love for the Ocean even while being kept away from her remains the same. The refreshing perspective *Moana* presented gave me a new outlook on how I viewed my own relationship with the Ocean, that I was not alone in these feelings and thoughts. The revelation of these ideas also allowed me

to see that there are still people who want to have a healthy relationship with the Ocean, that we still are capable of loving, respecting and treating her with dignity.

The lessons we learn through vision are not inherently from the Ocean herself, but how we are taught to see her. These visual representations create the Ocean's identity without her influence and silences her voice.



Figure 4. Summary of pedagogical life lessons from the Ocean through vision.

CONCLUSION: PEDAGOGIES OF TRANSFORMATION

Though the essays presented throughout this thesis explore different ideas, they share the same goal: to consider what transformation in our relationship with the Ocean might require. Transformation is not just a single solution, policy intervention, or change in individual behaviour, as it requires us to learn differently. The pedagogies of immersion, vulnerability, memory, and vision demonstrate that our relationship with the Ocean is not just shaped by what we understand, but by how we encounter her, how vulnerability and responsibility are mediated, what both humans and the Ocean remember, and how we are taught to see. Transformation, therefore, requires a shift away from relationships structured by systems of extraction, control, and consumption towards relationships grounded in reciprocity, responsibility, and care.

To understand the Ocean as a teacher means that we must move beyond viewing her as simply a physical environment and toward recognizing her as an active participant in the production of knowledge. Immersion demonstrates how encounters can challenge assumptions and create embodied forms of knowing, vulnerability exposes interdependence and the ethical consequences of harm, memory confronts historical and systemic accountability, and vision showcases how perception is culturally constructed and mediated. Together, these pedagogies suggest that learning from the Ocean is not about acquiring information, but about allowing knowledge to transform our relationship with her.

1.1. Successes and Limitations

One of the successes of this research is its ability to bring different ways of knowing into a conversation without requiring one form of knowledge to replace another. Scientific and conservation knowledge are important for understanding ecological declines and the physical

conditions affecting marine environments. However, blue humanities, environmental psychology, autoethnography, cultural analysis, hydrofeminism, and creative inquiry reveal dimensions of the human-Ocean relationships that ecological or biological data cannot describe. These approaches allow knowledge to be ecological, cultural, embodied, emotional, historical, and relational.

The four classrooms provide one possible framework for bringing different ways of knowing together. Rather than treating the Ocean as the subject of environmental education, they create space to see how encounters, histories, representations, emotions, and ecological impacts participate in learning. The framework is not necessarily an attempt to prove that the Ocean is a teacher in any objective or universal sense, instead what is being asked is what becomes possible when we approach her as a teacher.

The creative methods used throughout this paper also demonstrate the possibilities for dismantling conventional relationships between researcher and subject. The courtroom in *Pedagogies of Memory* is a clear example of this. Having the Ocean testify does not give me access to an authentic Oceanic voice but reversing the conventional relationship between human knower and Oceanic object forces humanity into the position of being examined. The courtroom becomes a place where memory functions as evidence and where questions of colonialism, capitalism, exploitation, conservation, and responsibility can be addressed in a different way. Even though there are many successes, they also reveal the limitations of the research.

The framework developed throughout this paper emerges from my own relationship with the Ocean. Autoethnography makes embodied and affective knowledge visible, but my experiences cannot represent the diversity of human-Ocean relationships across cultures, identities, abilities, communities, and geographies. The lessons I identify are interpretations shaped by my experiences, theoretical frameworks, cultural position, and relationship with the Ocean.

Understanding her as a teacher does not give me access to a single or even authentic Ocean voice, and it does not allow me to speak on behalf of more-than-human beings encountered throughout this paper.

Each essay has its own limitations as well. For immersion, the access to the Ocean is uneven. Geography, mobility, disability, finances, cultural circumstances, and other social conditions impact who can actually enter marine environments. Many of my own encounters depended on travel and forms of access that are not universally available. If learning from the Ocean were understood as solely requiring physical immersion, the Ocean as teacher pedagogy could reproduce the same forms of exclusion this research attempts to challenge. Limitations within immersion make the other classrooms particularly important, memory, vision, vulnerability, local waterways, storytelling, visual media, and technological encounters offer alternative possibilities for relational Ocean learning without requiring physical access to the Ocean.

There are cultural and epistemological limits as well. Indigenous and local knowledge systems discussed throughout this paper represent relationships with water and more-than-human worlds that predate the theoretical frameworks within Western academia. Bringing these knowledges into conversation with blue humanities does not make them interchangeable, and it does not position me to speak for the communities from which these knowledges emerge.

The four classrooms I have created have not been empirically tested as an education model. The educational possibilities should thus be understood as a framework for future practice and inquiry rather than evidence of predetermined learning outcomes. Whether immersion, vulnerability, memory, and vision produce lasting changes in students' relationships with the Ocean requires further educational, cultural, and geographic contexts.

Transformation also has its own limitations, reimagining governance through relational frameworks offers a compelling direction, particularly when these approaches recognize the intrinsic value of the Ocean and her children. However, relational approaches remain at odds with capitalist and colonial systems that continue to structure global decision-making. These systems depend on extraction, commodification, and continued economic growth. As long as the Ocean's value is determined by what can be taken from her, transformation will remain a difficult task. The challenge is not that there is a lack of ideas, but the political, economic, and cultural conditions within which these ideas have to operate in.

1.2. From Ocean Literacy to a Different Human-Ocean Relationship

The lessons developed from the pedagogical classrooms have implications for how OL is conceptualized and practiced. OL has played an important role in increasing the understanding of Ocean systems and human dependence on them, but knowledge about the Ocean does necessarily transformation our relationship with her. A person can understand climate change, biodiversity loss, pollution, or overfishing and still participate in systems that contribute to them. Emotional connection alone also does not guarantee ethical behaviour, we can love dolphins while supporting their captivity, admire coral reefs while contributing to their degradation, or feel deeply attached to beaches while treating the Ocean beyond the coast as an inexhaustible resource.

Transformation therefore requires more than either information or connection alone. I propose that transformative Ocean education can be understood across three dimensions: knowledge, relationship, and responsibility. Learners require more opportunities to understand the ecological realities affecting marine ecosystems, to examine how their own perceptions and relationships with the Ocean have been constructed, and to consider what responsibilities emerge

from the knowledge they acquire. Transformation does not require eliminating scientific OL, but it does require us to ask what counts as Ocean knowledge. Scientific understanding can help us explain what is happening within marine ecosystems. Blue humanities can aid us in examining stories, histories, and cultural systems through which the Ocean has been understood. Environmental psychology can help us consider attachment, fear, identity, and connection. Indigenous and local knowledge can challenge assumptions about who holds expertise and what forms Ocean knowledge can take. Creative and embodied practices can create opportunities to encounter the Ocean differently, and together these approaches move us beyond simple OL and towards a different human-Ocean relationship.

Bender *et al.* (2022) similarly propose that transforming Ocean governance requires learning how to live in relationship with the Ocean. Frameworks such as the Rights of Nature challenge dominant systems emphasizing the intrinsic value of Oceanic life rather than assigning value according to human need. Governance, from this perspective, can become relational rather than exclusively managerial, requiring policy to consider what is necessary for both human and Oceanic communities to flourish together.

Kelly *et al.* (2020) identify education, cultural connection, technological development, and knowledge exchange between science and policy as important drivers for improving OL. These strategies also expose the limitations of OL. OL initiatives frequently concentrate on young people who possess relatively little institutional decision-making power, while Western models can overlook communities that already maintain deep relationships with marine environments through story, practice, spirituality, livelihood, and lived experience. Expanding OL is not about delivering Western scientific Ocean knowledge but needs to also involve recognizing the knowledge that already exists.

1.3. The Four Classrooms in Practice

The four classrooms developed within this paper offer one possible way of translating relational Ocean pedagogy into practice. They are not intended to be used as curriculum or as a linear sequence, and they are also not limited to formal education settings. Immersion, vulnerability, memory, and vision can function as adaptable pedagogical entry points where ecological knowledge is brought into conversation with experience, history, emotion, ethical responsibility, and representation. Each classroom asks questions that extend beyond schools and universities into governance, conservation, tourism, and everyday human-Ocean relationships.

Immersion asks what becomes possible when learning involves encounters. When physical access to the Ocean is possible, this could involve coastal or marine experiences, but immersion should not be understood as requiring travel to the Ocean. Local rivers, lakes, wetlands, watersheds, virtual dives, underwater soundscapes, sensory observation, and nature journalling can create opportunities to encounter water as something more than just an abstract subject. The principle of immersion also extends beyond conventional education systems. For divers, tourists, and other visitors of the Ocean, encounter can shift from consumption towards participation. Instead of entering marine environments to see, photograph, or collect experiences, visitors could be encouraged to learn about the ecological conditions, cultural histories, and communities of the places they enter. The questions that immersion makes us ask could be: Where am I? Whose home am I entering? What relationships already exist here? And how does my presence affect them?

Vulnerability shifts environmental education beyond the identification of ecological threats and toward examining the relationships where the harm occurs. Students might trace plastic pollution, warming waters, bycatch, coral bleaching, or habitat destruction while also asking:

Who or what is vulnerable? Who benefits and who experiences the consequences? What systems produced this harm, and who possesses the power to change it? Vulnerability then becomes both ecological and ethical, connecting science with questions of responsibility. These questions are valuable to conservation and governance. Policies that are based on resource management can be expanded by relational approaches that consider the intrinsic value of Oceanic life and the unequal distribution of environmental harm. Frameworks such as the Rights of Nature provide one possibility for bringing this relational understanding into governance by asking policymakers to consider not only what humans need from the Ocean, but what conditions Oceanic communities require in order to flourish. Vulnerability therefore reshapes the question from what can we continue to take? Towards what relationships are necessary to sustain life?

Memory has us wonder what water carries and what human-Ocean relationships have been forgotten. Within education, students may investigate Indigenous relationships to local waterways, colonial expansion, fisheries, migration, industrial development, pollution, conservation, or changing relationships with marine species. The courtroom methodology I used could be adapted as a pedagogical exercise in which students investigate evidence and testimony surrounding an environmental issue and then ask: What does this water remember? Whose histories have been preserved? Whose have been silenced? And who or what should be held accountable? Memory also carries implications beyond the classroom as environmental decisions do not begin with looking at the present. Policymakers, conservation organizations, tourists, and individuals enter relationships with the Ocean that are already shaped by histories of colonialism, extraction, displacement, and unequal access. Relational practice here means learning the history of the Oceans and communities in which we participate in rather than approaching them as empty spaces available for human use. Remembering can then become an

ethical practice because it makes it more difficult to treat current environmental crises as though they appeared without a history attached to them.

Vision has us question who or what has taught us to see the Ocean as we do. Films, documentaries, advertisements, tourist campaigns, news coverage, social media, children's stories, and other cultural texts can be examined alongside ecological data to identify how fear, empathy, value, and hierarchy are produced. Students may want to begin by asking where their assumptions about sharks, whales, dolphins, the deep sea, or the Ocean herself originated and then compare those representations with ecological or biological research. Critically examining representation is extremely important in other areas outside of a formal classroom. Tourism campaigns, conservation messaging, political discourse, and social media all participate in constructing the Ocean for public consumption. Changing human-Ocean relationships means we need to bring attention to not only policy and behaviour, but also to the narratives through which these relationships became possible.

Consider a unit about sharks, where this unit might not start with anatomy, taxonomy, or statistics, but with questions such as: What has taught you what you currently believe about sharks? Students could identify films, news stories, social media, aquariums, family narratives, or earlier schooling before comparing representations with ecological research on shark behaviour, ecosystem roles, population declines, and conservation. Students could also investigate the historical construction of sharks as disposable or dangerous, examine their vulnerability to current human pressures, and reflect on whether their own relationship with sharks has changed and what new responsibilities follow from what they now know. In this example, the classrooms overlap, vision exposes how sharks have been constructed, while

memory asks where those constructions come from, vulnerability shows ecological consequences, and immersion creates ways to encounter sharks differently.

1.4. Transformation as an Ongoing Process

The possibility of transformation depends on personal accountability. The systems I have critiqued throughout this paper are not external systems separate from myself; they are systems that I exist and participate in. If *Pedagogies of Memory* placed humanity on trial, transformation forces me to see that I am not standing outside of the courtroom, I am also on trial. The research I have done changed how I understand my role in these systems, learning from the Ocean does not provide me with a position of high moral standing, I am constantly under interrogation for my actions, choices, privileges, and contradictions. Reimaging human-Ocean relationships is not going to be a comfortable or linear process, it will be imperfect, disruptive, and ongoing. Perhaps that is also one of the limitations of the word transformation, the word can suggest a moment after which everything has changed. The Ocean has taught me something different, transformation is less about getting to a destination, it is about noticing, questioning, listening, failing, and reconsidering.

The Ocean is not a space waiting for humans to protect her, she is a teacher asking us to reconsider how we listen, and her teachings do not arrive within a conventional classroom. Her teachings emerge through experience, vulnerability, memory, representation, disruption, and change. She has been teaching long before we began naming her currents, measuring her temperatures, drawing borders across her waters, or deciding which of her children were valuable enough to protect. The question we must ask is not about whether the Ocean has knowledge to offer us, but if we are willing to listen to what she has to say and allow that knowledge to take on forms that demand change.

To learn from the Ocean is a gift, but also a responsibility, as it is not enough to understand her stories if that understanding leaves our relationships unchanged. Transformation begins with a choice to move beyond seeing the Ocean as an object of knowledge and to enter into a relationship where we are willing to become her students.

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