Mi'kmaq Traditional Knowledge and the Ecosystem Dilemma

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Mi'kmaq Traditional Knowledge and the Ecosystem Dilemma

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ABSTRACT

The moral rights of nature, and especially the rights of ecosystems, have been difficult to establish within the conceptual boundaries of traditional moral theories. Underlying assumptions of interests and individuality, as well as complications with adequately defining ecosystems, have culminated into what I call the *ecosystem dilemma*. In this thesis, I argue that these ontological and ethical problems can be resolved by employing Indigenous traditional knowledge (TK), represented by Mi'kmaq concepts such as *netukulimk.* By expanding our ways of thinking about the world and our place within it, we can break the ecosystem dilemma. Utilizing the Mi'kmaq's holistic approach to the environment supports the case for the moral concern of ecosystems. Yet, no single point of view should dominate the discussion – the 'map of moral concern' aims to collect different concepts that are to be used in *coadjuvancy* to resolve moral dilemmas. Cooperation can be achieved by combining values (traditional Western thinking) and employing *two-eyed seeing* (Mi'kmaq TK). My thesis tries to showcase the value of immersing oneself fully in a different way of thinking to resolve well-documented problems – essentially this is an argument for radical openmindedness to ultimately strengthen the concept of moral rights of nature.

1) Introduction

This thesis focuses on the rights of nature, specifically, I will engage with the question of moral considerability of ecosystems. This field has been heavily debated, as many classical ethical concepts (e.g. harm) struggle to establish nature's rights (Brennan & Lo, 2021). In light of environmental degradation and climate change, nature's rights are essential to justify taking better care of the environment. Ecosystems play a crucial role in this context: Proving their moral considerability comprises the most challenging aspect of the rights-of-nature debate (Palmer, 2011).

This matters because one 'weak link' breaks the entire moral 'chain' – an inability to overcome the difficulties of making ecosystems the subject of moral concern substantially weakens most claims that nature should possess moral rights (Palmer, 2011). These difficulties are twofold, encompassing an ontological and an ethical dimension. Firstly, philosophers struggle with the definition of the concept of ecosystems: We seem to continuously disagree where an ecosystem starts and ends spatiotemporally (Buege, 1996; Salthe & Salthe, 1989; Johnson, 1992). This poses a typical ontological problem because arguments on the moral considerability of ecosystems are typically grounded in the (human) perception of such entities as individual versus collective beings. And secondly, complications arise as the case of ecosystems challenges the applicability of common ethical concepts used in mainstream Western approaches to climate justice: To establish moral considerability, we need to demonstrated that interests have been violated and therefore harm has been caused. This has yet to be proven for ecosystems and poses a classical ethical problem (Palmer, 2011). Thinking about these issues matters on social and theoretical grounds. With advancing climate change and environmental degradation, measures taken to maintain ecosystem integrity and protect the planet must become more prominent (Brennan & Lo, 2021). This can best be achieved by making all aspects of nature the subject of moral concern to inspire better practices and more inclusive policy-making (Taylor et al., 2020) – essentially, we need to rethink how we relate to the environment. Considering theory, ecosystem moral considerability highlights the importance of clear usage of concepts while questioning normative grounding. Environmental ethics faces a multitude of (often contradictory) values and theories; moreover, the concepts used rarely overlap or augment existing theories (Palmer et al., 2014). Therefore, there is a need for conceptual clarity and consistency. More fundamentally, the question whether any normative ground for the moral considerability of ecosystems exists requires answering.

Within the deontological school, debate surrounding nature's rights rests on the mainstream Western assumption that ecosystems must resemble individuals to be of moral concern, and that a clear-cut dichotomy exists between the individual and collective level. Assigning these concepts leads to classifying ecosystems in two groups: a) Intangible complicated (or irrelevant) entities to

which our concepts cannot apply, and which therefore cannot qualify for moral concern (Cahen, 1988; Palmer, 2011), and b) simplified versions of themselves, resembling individuals and thereby justifying their moral considerability (Buege, 1996; Johnson, 1992). I call this the ecosystem dilemma: Underlying assumptions about individuality pre-determine philosophical arguments in a counterproductive way when trying to establish ecosystems as the subject of moral concern, ignoring their 'otherness' as entities. Other cultures may mitigate this issue through a different understanding of the human-nature relationship – this different relationship is why Indigenous worldviews have been receiving more attention within climate justice recently. Here, I will focus on one particular tribe, the Mi'kmaq, which are situated at the North American East Coast. Utilizing *netukulimk* – an alternative to stewardship – and its related concepts introduces the Mi'kmaw worldview centering around animacy, relationality, and circularity to the debate (Berneshawi, 1997; McKeon, 2012; Prosper et al., 2011). Given these new concepts, the statement that "everything is alive, and [...] related" (Brant Castellano, 2000, as cited in King, 2011, p. 9) paves the ground for a new approach to the moral considerability of ecosystems. As this thesis inspects ecosystems in the context of deontological and Mi'kmaw thought, it engages with the following research question: *Should ecosystems be the subject of moral concern?*

To answer the research question, I re-examine our perception of ecosystems that gives rise to their current definition (ontological dimension), and assess how we value them (ethical dimension). Assuming we are ready to reform our understanding of ecosystems, I argue that ecosystems can and should be the subject of moral concern. However, traditional Western approaches give a non-satisfactory answer to this question. Including Indigenous approaches is a possible means to accomplish this task, provided we respect their ontology and ethics (specifically Mi'kmaq TK) as *equal* to Western rights-based approaches to ecosystems. Equality, rather than superiority of one approach, allows us to uphold respect and protect everyone's well-being. Thus, constitutive values and *two-eyed seeing* are crucial to resolve the ecosystem dilemma.

This thesis will be divided in three chapters and a conclusion. The first chapter will engage with the deontological approach to ecosystems. Especially the limitations of the definition of ecosystems and of the concepts 'interests' and 'individuality' will feature in this. The second chapter will introduce the Mi'kmaq and their relation to ecosystems; special focus will lie on the concept *netukulimk* (roughly understood as 'stewardship') and its components. *Two-eyed seeing* will also be introduced in this chapter. The final chapter will concentrate on relating deontological and Mi'kmaw thought to each other in order to resolve the ecosystem dilemma. Finally, the conclusion will outline limitations and make recommendations for future research.

2) Deontological Approach and The Ecosystem Dilemma

2.1 Ecocentrism and the Deontological School

Environmental ethics as a discipline emerged as a critique of human-centred ethics; however, many of its core concepts include anthropocentric characteristics (Brennan & Lo, 2021). Lately, instrumental value – assessments of value based on the subject's usefulness to humans, a crucial idea in anthropocentrist worldviews – is being replaced by discussions of intrinsic, systemic, and relational (or constitutive) value of the environment (Himes & Muraca, 2018; Thompson, 2017)[1]. For the first time, non-human subjects, including ecosystems, have become the center of debates surrounding subjects of moral concern. Attempting to tackle this philosophical challenge, three main schools of thought within traditional Western ethics have emerged: consequentialism, the deontological school, and virtue ethics (Palmer et al., 2014). In this chapter I will be critically examining the most prominent one regarding nature' rights, the *deontological school*, in its approach to ecosystem moral considerability through concepts such as interests and harm.

2.2 Moral Considerability, Dimensions, and Ecosystems

First and foremost, some clarifications are due. *Moral considerability* refers to the ethical obligations we have towards other entities (Goodpaster, 1978, as cited in Dussault, 2018), meaning that we should take them directly into account when making a decision on how to act (Palmer et al., 2014). If an entity is a subject of moral concern, is becomes ethically relevant.

Furthermore, when constructing arguments on the moral considerability of ecosystems, a distinction between the *ontological and ethical dimension* must be made. The ontological dimension covers metaphysical aspects of moral considerability, "articulat[ing] a view about the ultimate nature of reality" (Thompson, 2017, p. 78), whereas the ethical dimension is concerned with values. Essentially, we can make arguments about the moral considerability of ecosystems on the grounds of what they are as beings (ontological), which then provides the basis for how we relate and assign value to them (ethical). Either of these dimensions can cause distinct philosophical challenges which are outlined below and in the next section.

Finally, *ecosystems* must be defined to advance the discussion. Hereby first disagreements among scholars of the deontological school arise. In most cases ecosystems are not defined at all, a sign of ignoring the difficulties that come with finding a biologically and philosophically adequate definition (especially spatiotemporal boundaries are contested). The result is a poorly specified main subject – the ecosystem – of the respective argument. In the few instances that definitions are

1 The applicability and ethical hierarchy of different values comprises its own subset of ethical considerations of nature's rights. Such extensive discussions exceed the scope of this thesis.

given, they tend to be indirect, implicit, and vague. Salthe and Salthe (1989) mention the "overall organization of flows of matter and energy" (p. 356) whereas Buege (1996) merely defines a 'collection' as "a grouping of groups or individuals" (p. 2) before further specifying a distinction between ecological (spatial relations) and genealogical (genetic information transmission) types of organization. (p. 5). For both definitions spatiality seems to matter, as does organization, but that is as far as the agreement and the specifics go. Note also that only the *proponents* of moral rights claims for ecosystems (see next section for details) provide definitions. This is problematic because definitions ensure we are discussing the same things. If this is not given in a field as complicated as the moral rights of nature, otherwise convincing arguments are likely to fail due to the absence of an adequately specified right holder. An exception poses Johnson's (1992) interpretation of ecosystems as "living systems with [...] organic unity and self-identity, having and acting so as to maintain their own character" (p. 154); this definition rejects a conceptualization of ecosystems as purely spatiotemporal aggregations of individuals, and exhibits clarity and precision. However, this seems to be the only clear definition in current scholarship.

2.3 Debates within The Deontological School

The deontological school is characterized by its focus on interests, rights, and obligations. Interestingly, it allows – contrary to consequentialist arguments – neglect of the maximization of the 'good' if it otherwise were to create an injustice (Palmer et al., 2014). When it comes to the moral considerability of ecosystems, scholars tend to share two assumptions: Firstly, individuality and interests are the only reliable criteria for successfully establishing (or denying) subjects of moral concern; secondly, maintaining a clear-cut dichotomy between the individuals and collectives is possible. Let's dive into these two assumptions and see what they actually mean.

The concept 'individuality' is linked to our perception of reality – who counts as an individual and why – and therefore an ontological assumption. Interests are understood as an underlying determinative mechanism that guides behavior (Johnson, 1992) and can be, according to the deontological school, linked to harm-avoidance and pleasure-seeking. Assigning value to entities based on their possession of important interests constitutes the ethical dimension of establishing subjects of moral concern. Bringing these ideas together and applying them to ecosystems reveals the basic deontological thought framework. If we believe that individuality is needed to express interests and thereby establish moral concern, it means we either need to find a way to define ecosystems as individuals with clear interests (Buege, 1996; Johnson, 1992), or we have to conclude that either of these cannot be sufficiently proven and it is therefore difficult or impossible to make ecosystems the subject of moral concern (Cahen, 1988; Palmer, 2011).

In a nutshell: We perceive ecosystems either as individual entities with identifiable interests, or as individual entities without interests; value is then assigned based on this general idea. Either way, arguments hinge on an understanding of non-human entities as individuals and their capabilities to have interests – a relatively limited scope for the debate.

The second assumption, the individual-collective-dichotomy, builds on the previous one. Defining individuals means to distinguish them from their surroundings and from other beings, drawing clear spatiotemporal lines. In this understanding an individual (e.g. one particular reindeer) must always be its own unique component first, before it can be part of an overarching collective (e.g. the ecosystem 'Canadian Arctic Tundra'). Generally, individuals can be defined in space and time, but for collectives – such as ecosystems – the geographic and especially the time scale (geological rather than human) become harder to pin down. Ontological individualism is common in traditional Western thinking and provides the base for much of the definitional problems the deontological school encounters with regard to ecosystems. A typical question in deontological papers is 'Where do we draw the line?' – i.e., how do we distinguish a right holder? Doing so in a logical, ethical, and especially non-arbitrary way has proven difficult due to what Johnson (1992) calls 'blending': No given entity is ever completely clear-cut in time or space, especially not collectives. This complicates the establishment of boundaries.

Unsurprisingly, the debate around the moral considerability of ecosystems has caused friction within the school. Scholars *disagree* about the way in which individuals and interests can be determined and defined, and what such endeavors would practically imply. The opponents of moral considerability of ecosystems believe that interests and harm are difficult to detect in fundamentally different entities (later termed entity otherness), and that we therefore cannot make credible claims for their moral status (Cahen, 1988; Palmer, 2011). Cahen (1988), taking an extreme position here, illustrates the problem from the opponents' perspective. If ecosystems were to function only as by-products to the survival-oriented behavior of individual living organisms, they clearly would not possess own interests or goals and therefore cannot qualify for moral considerability in the way that an individual person or animal can (Cahen, 1988). The proponents of the debate try to avoid this problem by centering their argument around claims of the individuality of ecosystems (later termed simplified personification) – if ecosystems can be defined as unique entities possessing certain characteristics, they can develop interests that should qualify them for moral considerability (Buege, 1996; Johnson, 1992; Salthe & Salthe, 1989). Buege's (1996) creation of an entire ontology for this purpose, employing a hierarchical approach rather than the common previously-mentioned dichotomy, demonstrates the importance of resolving the ecosystem case from a proponent's perspective.

The definition of interests and individuality plays a crucial role in this context, because it can basically predetermine the direction of the argument (i.e. supporters of ecosystems individuality and/or interests become moral considerability proponents, scholars questioning either tend to become opponents). Since each argument employs a slightly different definition for every single concept, it becomes gradually harder to group and compare them. However, the distinction between opponents and proponents of ecosystem's moral status remains basically intact.

2.4 Introducing the Ecosystem Dilemma and the Influence of Western Thought

To summarize, the two sides of the debate roughly agree about using interests and individuality as criteria for moral considerability and maintaining the individual-collectives distinction; yet, they disagree about the precise definitions and implications of these concepts. Under the given implicit assumptions, and with employing our standard concepts, ecosystems become either intangible entities that are difficult to grasp, or get personified down to a hard-to-uphold simple level. The moral considerability of ecosystems then must either be denied (in the former case), or can only be established by turning ecosystems into conceptual equals of individuals (in the latter case); no other option seems to exist in the current scholarship. I have termed this problem '*the ecosystem dilemma*'.

Part of this problem is our singular Western-centred point of view which limits the ways we can engage with the topic (Brennan & Lo, 2021). The deontological school has been trying to become more interdisciplinary to resolve its issues, outbranching to employ concepts such as health (Dussault, 2018), language (Vogel, 2006), and the biophilia hypothesis (Wilson, 1984, as cited in Taylor et al., 2020). Yet, the ecosystem dilemma persists: How can we avoid the two largely pre-determined and philosophically insufficient ends of simplified personification (leading to the acceptance of moral concern) and entity otherness (leading to the rejection of moral concern)? Can we find a conceptualization or understanding of ecosystems that makes them the subjects of moral concern without abstracting them down to an individual level, thereby avoiding predetermined flawed argumentation and the resulting loss of 'otherness' of ecosystems? There could be alternative (more ecocentric) features, not linked to interests, harm, or personification, that give moral worth to ecosystems. The traditional Western categorization of nature into morally valuable individual components and morally intangible collectives, on top of issues with the proper definition of ecosystems, is part of the reason why, although the field is expanding, the core debate remains stalled.

The discipline would likely *benefit from Indigenous perspectives* to become more inclusive and to move the debate in a more productive direction. Indigenous perspectives usually get lumped

into one category despite their differences and often unique concepts. I will avoid this problem by engaging with one particular group, the Mi'kmaq. This Indigenous culture has a long and sophisticated tradition of thinking about and interacting with nature. Concepts concerning human-nature relations are multifacetted and bridge the spatiotemporal definition problem alongside avoiding the individual-collective dichotomy. These insights could be beneficial for a non-interest based grounding of ecosystem moral considerability and to resolve the ecosystem dilemma.

3) *Netukulimk* and *Two-Eyed Seeing*: Mi'kmaq Traditional Knowledge

3.1 The Mi'kmaw Nation

The Mi'kmaq are among the oldest nations worldwide. Their ancestral homeland, Mi'kma'ki, spans modern-day Atlantic Canada and the Northeastern United States, and has been inhabited by Mi'kmaq clans for over 13,000 years (McMillan & Prosper, 2016). As a semi-nomadic fishing and hunting community, the Mi'kmaq have been structuring their lives around seasonal changes and the requirements of their environment since time immemorial (McMillan & Prosper, 2016). Characterized as a matriarchal, egalitarian, and family-oriented society (Berneshawi, 1997), the Mi'kmaw community relies on within- and between-clan consensus to make decisions. Furthermore, it has a long and sophisticated tradition of describing and interacting with its environment.

However, many rituals and customs were lost following colonization and assimilations programs (e.g. the Residential School system). Being ruled by a settler society, the Mi'kmaq have lost much of their native language and ancestral homeland, leaving their nation dispersed and their teachings neglected (Berneshawi, 1997). Climate change and other environmental problems have spurred the recent revival of Indigenous knowledge in (mainstream) science; in this context the Mi'kmaq fulfill a crucial role in environmental education across Nova Scotia, Canada (McKeon, 2012; Prosper et al., 2011).

3.2 Mi'kmaw Spirituality – Ontological and Ethical Considerations

The Mi'kmaw tradition is characterized by a *holistic worldview* in which spirituality, science, politics, community, and nature are tightly interwoven – a major distinction to many Western thinking traditions (King, 2011). This holism becomes even clearer when diving into specific subsections of philsophy: Individual Mi'kmaq concepts are interconnected and provide little guidance when isolated; furthermore, ontological and ethical considerations are often difficult to distinguish. The examples below illustrate the latter, whereas the former will be discussed in the last subsection of this chapter.

The Mi'kmaq believe in six worlds originating from *Niscaminou*, the Creator; these worlds include earth's various systems, the universe, and the ghostworld / land of the souls (Berneshawi, 1997; Hornborg, 2006). All worlds are interconnected, and some beings (human, animals, and supernaturals) can travel between them. However, this ontology does not interpret these traveling beings as superior, nor does it affect conceptualizations of animacy (Berneshawi, 1997; Bondrup-Nielsen et al., 2010). For the Mi'kmaq, "everything is alive, and [...] related" (Brant Castellano, 2000, as cited in King, 2011, p. 9) to each other like in a large family. Human exceptionalism, as practiced in many Western cultures, is nonexistent in this philosophy.

Diving deeper, it becomes evident that animacy is also relational: Albert Marshall, a Mi'kmaw Elder, explains how rocks are inanimate in their environment, but become animate when part of sacred rituals, whereas landmarks such as mountais are always 'alive' (Bondrup-Nielsen et al., 2010). Regardless of whether they currently exist in a *state* of animacy, other entities have to be met with respect, as they are 'related' to each of us. This is explicable through the Mi'kmaq's circular understanding of life and death. As death (of e.g. animals) provides the nourishment for the living, and makes the living re-enter the cycle through decomposition and re-absorption into other life forms, "consumption of all life forms [...] is considered as a celebration of the [...] ancestors" (Prosper et al., 2011, p. 6). The life-death circule must never be broken. This ensures respectful treatment of all other beings through mutually beneficial co-existence and co-dependence. Circularity is a common and important feature in Mi'kmaq traditions, making ontological and ethical considerations co-dependent and co-constituent.

Furthermore, Jickling (2005, as cited in McKeon, 2012) argues that ethical understanding is constructed through 'real' relationships (contact) and emotional understanding (empathy). The Mi'kmaq combine these processes into 'care-taking', emphasizing the 'self-in-relation'; this promotes a responsibility stemming from an internal emotional connection to others, facilitated through education, and not from externally induced pressure (McKeon, 2012). The Mi'kmaw language even contains a 'healing tense', dedicated to (re-)connecting with oneself and the environment, and to inform others of an ongoing process of healing (McKeon, 2012) – a unique expression of 'care-taking' for all living and inanimate things.

Indigenous TK in general, and Mi'kmaq TK in particular, is a "holistic and integrated way of thinking and doing" (King, 2011, p. 9). Its beauty lies in its interwovenness with the people – remaining dynamic, changing, and context-dependent, it stays in touch with social and cultural life, thereby revealing great adaptive capacities (King, 2011).

3.3 Mi'kmaw Ecosystem Conception

Ecosystems as an entity or concept do not exist in Mi'kmaq TK. Animacy and relationism as well as circularity (among other concepts discussed below) do not allow for such clear-cut boundaries. The Mi'kmaq have a unique connection with *'the land'*, their ancestral homelands and anything connected to them throughout the six worlds, but not to individual patches of land such as ecosystems. Of course, modern-day Mi'kmaq are familiar with ecosystems, as Western science and the English language have been dominant in Nova Scotia for nearly two centuries. However, the Mi'kmaq's connection with 'the land' remains extremely important.

3.4 Major Concepts in Mi'kmaq Traditional Knowledge

An up-coming concept in Western environmental ethics over the last years has been environmental / resource stewardship[2]. However, this notion of stewardship is theorized to originate in the Western concpetualization of 'nature' – "specific cultural [...] ideas about how the environment should be interpreted" (Hornborg, 2008, p. 15) naturally influence all subsequent concepts that refer to 'nature'. Consequently, the concept does not fit seamlessly into non-Western frameworks.

The Mi'kmaw concept best resembling resource stewardship is called netukulimk (Prosper et al., 2011). *Netukulimk* is about harmonizing "community nutrition and economic well-being [...] [with the maintainance of] integrity, diversity, or productivity of our environment" (Unama'ki Institute of Natural Resources, 2009, as cited in King, 2011, p. 3). This official definition has been equated to 'sustainability' in many cases, but this translation is a bit coarse. Linguistically, *netukulimk* means 'to seek well-being', and according to Mi'kmaq Elders it also encompasses a 'complete way of being' and a control mechanism for the actions of each community member – to e.g. not kill more prey than needed (Prosper et al., 2011). As such, it is a more integrated concept than sustainability, weaving ontological and ethical considerations together with action tendencies.

Making this concept more applicable to ecosystems, it includes some guidance on the relation between animate and inanimate life forms. *Netukulimk* is indicative of natural and community laws that build on interconnection; for this, respect and reciprocity are crucial. To honour the ancestors, as well as present and future generations, living off the environment is about provisioning as opposed to (Western ideas of) extraction (McMillan & Prosper, 2016). Provisioning is different to extraction in two major ways. Firstly, the resource is directly linked to the people – it is not intended to generate profits but instead ensures the survival of the community (which then in

2 Environmental stewardship has been defined in various ways, providing a multifaceted discussion in itself. For more information see Mathevet et al. (2018); I will instead continue to focus on the Mi'kmaw alternative to environmental stewardship – *netukulimk*.

return gives back to the land through ceremony); secondly, no waste is created (e.g. using all parts of an animal). Together, these processes conjoin the people and the resources they use in an emotional connection sustained by egalitarianism and gratitude. With a reciprocal and respectful relationship based on kinship, animate and inanimate aspects of the six worlds create a harmonious living space for all that is part of the cosmos.

Diving into some concepts that are integrated into *netukulimk*, I would like to start with *connectiveness.* The word 'connectiveness' did not officially exist in the dictionary for a long time[3]; the only acceptable spelling was (and often still is) 'connectedness'. This linguistic difference between the syllables -ed and -ive matters. 'Connectedness' describes "the state of *being* connected" (Bondrup-Nielsen et al., 2010, p. 176) – a typical quantifiable and easy-to-pin-down condition that emerged in mainstream Western science. 'Connectiveness', on the other hand, "details the action of *becoming* connected" (Bondrup-Nielsen et al., 2010, p. 176) – this is an active approach to interaction, and illustrates the fluency (both culturally and linguistically) the Mi'kmaq value to connect with the Creator. 'The land' is the holder of all language, and "the language of connectiveness, of interdependence, is a language of intimacy, healing and survival" (Bondrup-Nielsen et al., 2010, p. 177), creating an awareness of responsibility and a personal relationship with the environment that exceeds the scope of the Western term 'connectedness'. *Connectiveness* thereby adds the reciprocity dimension to *netukulimk*.

Two related concepts, *all my relations* and *seven generations*, introduce the spatiotemporal dimension. 'All my relations', or *Ms'it No'kmaq*, is about becoming part of the land and thereby becoming related to all on a subatomic level (McMillan & Prosper, 2016). Ceremony honors those relations that are necessary to stay alive, and recognizes e.g. animals as (blood-)relatives deserving of respect and gratitude (King, 2011; McMillan & Prosper, 2016). This is how people remain a part of the eternal cycle of life and death and become one with the land – in other words, a spacial boundary has been created – as required for truly understanding *netukulimk*. 'Seven generations' is the time frame in which we should be thinking about the past and the future: Deciding for any action, we need to keep in mind that it (positively or negatively) affects the next seven generations. These are conceived as our own children and grandchildren, and not just as 'any' removed future generations (McMillan & Prosper, 2016). Similarly, the previous seven generations' actions enabled the current generation's livelihood and should therefore be honored. The concept of 'seven generations' demonstrates that generations are more connected in Mi'kmaw philosophy than in the West, and creates the bigger temporal picture underlying *netukulimk*.

3 This changed recently; however, changes were made only in some dictionaries (*excluding* e.g. Mariam Webster), and after the publication of most for this chapter relevant articles. Therefore, I will stick with the articles' arguments while remarking that more up-to-date information may be available online through additional sources.

3.5 The Connector: Two-Eyed Seeing

Two-eyed seeing is a Mi'kmaw concept that has been coined in 2004 by Elder Albert Marshall who tried to find ways of better integrating mainstream Western and Mi'kmaq ways of seeing and doing (Bartlett et al., 2012). *Two-eyed seeing* brings together the strengths of Indigenous and Western science and ways of knowing it, "using both these eyes together, [equally,] for the benefit of all" (Bartlett et al., 2012, p. 335).

McMillan and Prosper (2016) prompt us to think about *two-eyed seeing* as a mutual mentorship; meanwhile McKeon's (2012) explanation of *two-eyed seeing* as having to examine our own cultural values like an object removed from us may remind us of Rawls's (1999) famous veil of ignorance (first introduced in the context of justice in 1971). Both concepts, *two-eyed seeing* and the veil of ignorance, invite us to strip our concepts of personal circumstances and to consider them purely on the basis of their 'objective' value to society, for the common good. Therefore, even though having been initially conceptualized with an eye on science, *two-eyed seeing* could be highly beneficial for climate justice, partially bridging the ontological and ethical gaps that exist between mainstream Western science and Mi'kmaq TK.

4) Resolving The Ecosystem Dilemma

4.1 The Ecosystem Dilemma Through the Mi'kmaw 'Lense'

Upon reviewing the last two chapters, it becomes obvious how different the deontological school and the Mi'kmaq are in perceiving their environment and their ethical obligations towards it. The deontological school fails to credibly establish the moral concern of ecosystems; instead it encounters the ecosystem dilemma, which philosophically pre-determines arguments to fit into the categories 'simplified personification' and 'entity otherness' to accept or deny the moral considerability of ecosystems. I have identified the concepts 'interests' and 'individuality', classical components of traditional Western thought, as the major assumptions causing this argumentative flaw. The Mi'kmaq, contrarily, engage in an almost circular philosophy where ontological and ethical considerations are closely tied together. A different understanding of animacy additionally to understanding the self in relation (as an equal component of the environment) via the concept of *netukulimk* have enabled Mi'kmaw philosophy to feature ecosystems, or more accurately 'the land', in considerations of moral concern.

I argue here that the Mi'kmaq credibly establish moral concern for (in)animate collective entities without falling into the ecosystem dilemma. Subsequently, I however disagree with prioritizing the Mi'kmaw approach over any other assessment of the moral concern of ecosystems.

Below, I will detail out this argument more.

First, the *ontological* dimension must be addressed: A strong definition of ecosystems is needed in order to launch this argument. Previous scholarship has shown that relatively little has been done in this area, and even less consensus has been reached (Buege, 1996; Johnson, 1992; Salthe & Salthe, 1989). The Mi'kmaq avoid this typical Western problem of drawing boundaries – an action that always includes a justification of *where to stop* and why – and instead conceptualize collective entities as one singular but endlessly diverse and layered entity, 'the land'. 'The land' is considered to be part of a bigger picture (this could but does not have to be the Mi'kmaq's six worlds) in which everything is in its 'proper place' (Berneshawi, 1997); that includes aspects we are unable to see or understand. This spiritual dimension is counterintuitive to Western materialism and alleviates pressure on the 'interests' concept through the realization that the one observable and empirically testable truth we usually strive for in traditional Western science (e.g. trying to determine what an interests may look like in a wetland) may simply not exist (Bartlett et al., 2012). This idea is also increasingly supported by theories originating in Western science (e.g. systems theory, and the research on subatomic particles) that encourage us to picture reality as "a network of relationships" (McKeon, 2012, p. 138) as opposed to drawing distinctions and boundaries. I want to emphasize again that animacy is a fluid concept in Mi'kmaw philosophy, and that the main idea is that everything is or at least *could be* alive. The *potential* for animacy is enough for an entity to be considered ethically relevant in the Mi'kmaw understanding of environment (Bondrup-Nielsen et al., 2010). Through the cycle of life and death this fluid animacy leads to relationism among all of creation. Returning to defining ecosystems, a strong definition does thus not necessarily require rigid boundaries. Perceiving ecosystems as interconnected contextually animate collectives that encompass non-material aspects and other features that are difficult to prove empirically, would be a good starting point.

In other words, I believe that the traditional Western idea of a spatiotemporally clearly defined ecosystem has little value for arguments of moral concern, and should thus be replaced by an idea similar to the Mi'kmaw concept of 'the land'. Humans are then *ontologically* distinct from 'the land' (the same applies to other species), but *ethically* equal to any other entity (see next section).

The *ethical* implications of this new conceptualization of collective (in)animate entities are quite different to the ones implied by the ecosystem dilemma of the deontological school. Interests and individuality feature less in Mi'kmaw philosophy, instead *netukulimk* carries the major prescriptions for ethical behavior. *Netukulimk* as a concept lacks any notion of human exceptionalism or superiority, therefore not grounding moral concern in the idea of organism-

specific interests (Berneshawi, 1997). Elder Albert Marshall illustrates this nicely: After stating that he would give his life for any person, he broadens compassion by claiming that he would do the same for the trees outside the window (Bondrup-Nielsen et al., 2010). This tends to take people aback, because the notion of human exceptionalism is deeply engrained in traditional Western thinking. We need to remember, though, that moral concern is not pie: Someone or something else getting a 'slice' does not take away from our own. In other words, our own moral worth is not tied to and does not diminish in the face of other entities gaining moral concern[4]. This misconception, giving rise to the interest concept, is nonexistent in the Mi'kmaw philosophy. Secondly, interest-based accounts often fail as they struggle to establish reciprocity with the inanimate world – an aspect that underlies many traditional Western accounts (Palmer, 2011; Vogel, 2006). This issue is, again, nonexistent for the Mi'kmaq as their idea of reciprocity, often resembled by *all my relations*, has a much wider range. In traditional Western thinking, reciprocity is associated with symmetry. This means that if we act towards an entitiy, but cannot prove that this entity is in fact *acting back* towards us, it becomes difficult to establish classical reciprocity and thereby interest-based moral concern (Vogel, 2006). For the Mi'kmaq, existing in the world, and with respect to one's surroundings, is enough to qualify as a reciprocal relationship (McMillan & Prosper, 2016). Reciprocity is then better understood as a form of *connectiveness* instead of an expression of interests. Moving on to ethical considerations tied to individuality, the Mi'kmaq (as opposed to the deontological school) do not rely on a clear individual-collectives distinction. Rather, everything is related and connected, and transforms over time – therefore any given entity right now may have been an 'ancestor' that re-entered the life-side of the cycle of life and death (Prosper et al., 2011).

To summarize, a family-like bond is created in which no living or inanimate entity should be valued over another. Essentially, harm to one is harm to all and to the self.

How do the ontological and ethical implications of Mi'kmaw thought then affect the ecosystem dilemma? I believe that by utilizing the Mi'kmaw 'lense', both issues of entity otherness and simplified personification can be avoided. Ecosystems, or 'the land', are (similarly to strands of the deontological school) perceived as complex and somewhat mysterious systems. However, in Mi'kmaq thought it does not follow that the land cannot be a subject of moral concern based on its complexity and human's inability to understand it fully. These factors foster a culture of humbleness and respect instead, admitting our own insignificance and ignorance in the face of greater things in the universe. Hence, entity otherness does not become an issue. As Mi'kmaw thought rejects human exceptionalism as well as the individual-collectives distinction, there is no need to abstract the land

4 This differs for obligations, which are limited in scope. However, my argument focuses on moral considerability in an abstract sense and less on its practical implications (i.e. the distribution of obligations towards nature).

down to the individual level, essentially personifying it. As all is related and transcends its initial form, no entity is more valuable than another; thus there is no need for simplified personification either to justify moral considerability. In line with this, obligations are born by the collective. The distribution is comparable to the 'ability to pay principle' for CO2 emissions: obligations are carried out by whoever is capable to do so (Heyward, 2021). Given their number and level of social organization, humans have a great ability, and therefore a great responsibility that is embedded within the overall obligation of the collective.

Does this mean that we should *prioritize* Mi'kmaw thought over the ideas of the deontological school, or any other school of thought for that matter? At first, it may appear that the answer is 'yes'; nonetheless, I argue that this would only pose a continuation of our pre-existing problematic thought patterns. If we want to enhance productivity and inclusivity of the discussion, we need to embrace cooperation and value plurality instead of determining one 'superior' point of view. To those who come from a traditional Western background that values the finding of one 'objective' truth, this may feel counterintuitive. But if we truly want to incorporate Indigenous thinking, we need to start actively applying it. The Mi'kmaq argue that forcing a different 'way of knowing' – a new ontology – on someone harms and potentially kills their spirit, therefore this should never be a way to resolve moral dilemmas (Bartlett et al., 2012). Instead, respect and horizontal cooperation are crucial to navigate the moral landscape.

Both traditional Western science and the Mi'kmaq offer a similar solution in this regard: Constitutive (or 'relational') value and *two-eyed seeing*. Constitutive value is similar to virtue ethics in the sense that is prioritizes well-being (Altshuler, 2014). The overall idea is that value is constitutive (as opposed to instrumental) of human beings and their actions towards the environment, creating an indirect obligation (Altshuler, 2014; Fowers et al., 2010). More specifically, fundamental-relational values (the ones that matter for ecosystems) encompass "not only material but also ontological conditions of possibility of life at all" (Muraca, 2011, p. 388), thereby allowing for a much wider range of ontological differences and varying interpretations of animacy. Different 'lenses' are embraced by constitutive value systems, which contributes to value plurality. Similarly, *two-eyed seeing* emphasizes the joint and equal employment of Indigenous and Western perspectives to benefit everyone. In this understanding, dialogue matters more than finding the 'perfect' approach – using each perspective's strengths demonstrates an evaluation of ideas purely based on their initial value and not on their origin. This allows the 'partners' to come from different ontological and ethical backgrounds and assumptions, thereby supporting value plurality.

To *recap*: Navigating questions of moral concern is difficult and urgently requires new contributions. Mi'kmaw philosophy provides a strong basis for making ecosystems the subject of moral concern, avoiding the ecosystem dilemma. Yet, prioritizing their view over any other would in itself defy their fundamental belief of the equality of spirits. Hence, different values and beliefs must feature in discussions of moral concern; the concepts that ensure value plurality are constitutive value (traditional Western thinking) and *two-eyed seeing* (Mi'kmaq TK).

4.2 Objections and Defense

There are three major objections to this argument, which can be summarized under the terms land-ecosystems-equation, personification-avoidance, and human rights compatibility.

The first objection targets the ontological dimension: Can we use 'the land' to make a credible claim for the moral concern of *ecosystems*? Are these two things not fundamentally different, and should therefore not be equated?

This is a valid objection, prompting two points for my defense. Firstly, the record shows that sticking to the ecosystem concept has been counterproductive. The term 'ecosystem' opens up a debate in itself, and has often been brushed over precisely because of its lack of conceptual clarity. In line with Occam's razor, maintaining a concept that creates more problems than it solves is not helpful – after all, conceptual fuzziness partially created the ecosystem dilemma. Secondly, the focus on ecosystems as a concept demonstrates the underlying (problematic) assumption of traditional Western thinking that all entities, including humans, must be fundamentally different in some way, and therefore 'deserve' different levels of moral concern. Focusing only on distinctions and differences is not helpful in the context of ecosystems. Similarly, nature's rights are often contrasted with human rights (HR). Yet, nature's rights are only gaining some moral ground recently, whereas HR already feature greatly in assessments of moral concern. Nature's rights should therefore not be perceived as a threat to HR, because this type of rights is purely 'catching up'. Returning to ecosystems, it is misleading to approach the collective system 'Earth', or sub-systems like the Mi'kmaw concept 'land', through dichotomous categories. Interestingly, the Mi'kmaq do not have this underlying need to prove why moral considerability should be given to the less 'animate' larger scale entities of the environment because they do not perceive themselves (or any other entity) as unique. When everything is connected, there is little need for rigid boundaries – 'the land' is as good as a concept to perceive our environment as any sub-category created by Western science.

The second objection concerns the ecosystem dilemma: Do we really avoid simplified personification by employing the Mi'kmaq's holistic approach? After all, we are just 'zooming out', as the object of concern becomes the entire 'land' / Earth's system; this does not necessarily mean that this new object of concern is not perceived or treated as an individual. This would imply the ecosystem dilemma has not actually been solved.

'Simplified personification' as a component of ecosystems in the way that I have identified it arises from ascribing higher ethical value to individual organisms than to collectives. To an extent I agree with the objection that this could still be an issue in Mi'kmaq TK: After all, the focus on reborn 'ancestors' as persons worthy of respect might suggest an ethical evaluation on the basis of individual (family-like) connections. However, if we also remember that a distinction between individuals and collectives effectively *does not exist* and therefore does not ethically matter in Mi'kmaw philosophy, it becomes difficult to uphold the case for simplified personification. As Elder Albert's example has demonstrated, the same care and compassion that the Mi'kmaq bring towards humans and animals also gets extended to inanimate (or contextually animate) entities like trees, landscapes, and 'the land' in its entirety. This happens without trying to determine interests for these entities, nor by rigidly defining each entity that the environment constitutes of. The fluidity and context-dependency of entity classifications given through *netukulimk* create the baseline for behavior that does not need to rely on perceived individuality to make inanimate collectives the subjects of moral concern. Although there are different ways to interpret the implications of the Mi'kmaq's relationship with the ancestors, I maintain that inanimate collectives do not get personified down to a simple level in this philosophy.

And finally, how are these results and the Mi'kmaw philosophy compatible with HR? How, if at all, does this analysis, which centers around the rights of ecosystems, avoid a reverse bias *against humans* and their (moral) rights?

This objection is often given in the context of ecocentrism versus anthropocentrism, and it is highly applicable here. First and foremost, HR are mainly a legal category, but they are built on a moral foundation. In this context we must be aware that rights are not the only important moral category. In fact, rights and interests are precisely what created this tension around the moral worth of ecosystems, and it is therefore questionable how helpful they are as a comparative tool across contexts. Other moral categories such as values and obligations might be relevant and can be tied to any given entity, thereby establishing moral worth for said entity without granting it rights. Obligations are limited and can be exhausted (we can do only so much for others), but this is not true for values. Values are a flexible concept that can assign moral worth to humans and nature simultaneously, and they feature greatly in Mi'kmaw philosophy. Indeed, it is possible to interpret

the entirety of *netukulimk* and its attached concepts as a value framework that could be used in junction with e.g. virtue-based accounts. Possible Mi'kmaq 'values', distilled from *netukulimk*, could be equity, relationism (connection based on kinship), and transcendence. These values provide moral worth to humans and any other aspect of the environment – giving moral worth to nature must therefore not necessarily imply the neglect of HR. Ideally, we would place additional moral value on the environment *while* protecting (legal) HR. And in reality, this is increasingly the case: A healthy environment promotes human well-being and can therefore be an important step of ensuring HR. As such, the moral rights of nature and HR are not mutually exclusive; values are the key to unlocking their joint potential.

5) Conclusion

The previous analysis has demonstrated how Mi'kmaq TK can resolve the ecosystem dilemma, while ensuring value plurality through constitutive values and *two-eyed seeing*.

Concluding, this thesis has two limitations. Firstly, it focuses on a single philosophy to resolve the ecosystem dilemma. Different perspectives would likely lead to different results, and a comparison among multiple 'lenses' could potentially build a more convincing argument. However, this is also a strength: Engaging in-depth with a completely different worldview can reduce mental barriers and introduces new ideas into our debates. This could inspire other researchers to fully immerse themselves in different perspectives to gain new insights.

Secondly, the use of concepts in this analysis could have been more extensive. As I have concerned myself mainly with 'the bigger picture', less attention has been devoted to specifying all related concepts. Much more could be said on the topic of interests, since definitions vary widely and can provide many sub-discussions; here I have instead opted for the overall idea of the presumed existence of interests. Similarly, different types of values (e.g. intrinsic, instrumental, and many pre-selected groups of constitutive values) could have been explore more in-depth. This thesis focuses on accomodating for both deontological and Mi'kmaq perspectives, which unfortunately limits the depth of conceptual exploration.

Three compelling avenues of future research are worth pointing out. Firstly, it could be interesting to compare different Indigenous approaches to ecosystems. This way we could examine different ways to frame and resolve the ecosystem dilemma while maintaining a connection to moral rights and the deontological school. After all, there may be better ways to combine classical deontological concepts (e.g. rights and interests) with Indigenous philosophical frameworks.

Secondly, returning to the Mi'kmaq, a joint analysis with virtue ethics could be beneficial. Virtue ethics further explores the value dimension of moral concern, which makes it a valueable source for assessing the different ways in which ecosystems can become the subject of moral concern. Virtue ethics rarely engages with literature outside of its own field and could contribute many unique insights in a collaboration with a holistic worldview such as the Mi'kmaq's.
And finally, the relationship between Indigenous worldviews and HR holds much potential for normative research. I have barely touched upon this, but a deeper dive into the implications of the Mi'kmaw worldview for HR could provide fertile ground for discussions of the relationship between humans and the environment. HR and environmental protection are often framed as opposing sides – another example of the Western tendency to create dichotomies – although they are arguably constitutive of each other. HR through the Mi'kmaw 'lense' could be a valuable addition to contemporary philosophical thought.

I believe that anyone who will make the time to carefully and genuinely consider the here introduced Mi'kmaq concepts will contemplate approaching the environment in a different way. Much dismissal of ideas comes from a feeling of threat, the 'threat' to be wrong and to be challenged by a different worldview that could potentially dominate over one's own (Sniderman et al., 2004). This fear is again rooted in the traditional Western assumption that a hierarchy with a 'dominator' must exist in all aspects of life. Mi'kmaq TK exhibits the opposite: A peace offering in the form of value plurality, a way to co-exist in cooperation "for the benefit of all" (Bartlett et al., 2012, p. 335). If this message was to come through, more room for discussion and change would become available.

Ultimately, this is what my thesis is about – it aims to demonstrate that questioning our own (cognitive) biases and assumptions is necessary to facilitate a better life, and that respectful cooperation is needed to move beyond the thinking patterns that arguably created our (environmental) problems. Discussions surrounding the moral concern of ecosystems challenge many of our underlying assumptions about how the world is and how it should be treated, and therefore provide the ideal 'playground' for philosophically inspired change. In many cases, to use the words of the Elders Albert and Murdena Marshall, "the fence is all in our minds" (Bondrup-Nielsen et al., 2010, p. 175).

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