# Making A Relative Out of Cannabis: The Biggest Threat of Cannabis on Brain Development Could Be The Way We Relate to It

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Abstract: The main objective of this article is to disentangle the current conversation on cannabis in order to redefine our relationship to the plant. While there already exists an extensive body of literature in the field of substance use disorders relating to attachment theory and the importance of human bonding as a means to overcome substance misuse, there continues to be a gap pertaining to how one's attachment and relationships to the Land and medicinal plants impact substance use. In broadening the discourse on attachment theory to the cannabis plant, and by challenging Western norms, which separate humans from nature, one may recognize that there is an impoverished understanding of plant medicines amongst mainstream cannabis culture and the scientific community. The current dialogue on cannabis is fragmented and polarized. This thesis, offers a third option to examine the eco-centric 'self', and posits that a filial link to the Land will ensure positive impacts to the growth, consumption and legislation of cannabis.

Résumé: L'objectif principal de cet article est de démêler la conversation actuelle sur le cannabis afin de redéfinir notre relation avec la plante. Bien qu'il existe déjà un vaste corpus de littérature dans le domaine des l'abus de substances lié à la théorie de l'attachement et à l'importance des liens humains comme moyen de surmonter l'abus de substances, il continue d'y avoir un écart concernant la façon dont l'attachement et les relations avec la terre et les plantes médicinales ont un impact sur la consommation de substances. En élargissant le discours sur la théorie de l'attachement à la plante de cannabis et en remettant en question les normes occidentales, qui séparent les humains de la nature, on peut reconnaître qu'il existe une compréhension appauvrie des plantes médicinales au sein de la culture du cannabis et de la communauté scientifique. Le dialogue actuel sur le cannabis est fragmenté et polarisé. Cette thèse propose une troisième option pour examiner le « soi » écocentrique et postule qu'un lien filial à la terre assurera des impacts positifs sur la croissance, la consommation et les législations du cannabis.

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I would like to acknowledge the Land for being the teacher that you are. Thank you for being patient with me, as I try to continuously build and rebuild my relationship with you. Help me to keep hearing your wisdom, by staying humble and grounded, and allow me to understand what you are revealing to me.

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**Personal Introduction to the thesis:**

Beginning in 2014, when I was pregnant with my first child, I became aware of the genetic predisposition my children had to schizophrenia. As I tried to amass more knowledge on the subject, I was introduced to the notion that a high dosage of the THC compound-- found in cannabis, is a trigger for psychosis and worsening states of schizophrenia. As a new parent, I wanted to better understand how to speak to my children about the potential risks associated with cannabis, in a non-stigmatizing way. Much to my dismay, it appeared that both scientific journals and cannabis advocacy blogs produced polarizing views on the subject. Some of the information claimed that cannabis was predominantly hazardous to one's health, while other data listed it as a miracle drug without acknowledging the associated risks. I found it difficult to reconcile the duplicitous culture of cannabis and the lacking approach to cultivate neutral discussions on the topic. Surely, there had to be a way to acknowledge both the benefits and potential risks associated with engaging in a relationship with medicinal plants, such as cannabis.

As a youth, I spent years learning about medicinal plant remedies. Exchanging knowledge with others about sweetgrass, rat root/wegas, tobacco, sage, peyote, cedar, et cetera, I gained a deep appreciation and reverence for the healing properties of natural medicines. In 2014, while attending Dechinta Bush University in the Northwest Territories, I deepened this knowledge, incorporating the Dene principles associated with harvesting plants for medicinal purposes; teachings gifted to us by the Elders, who instructed our classes and led our medicine walks. Although not a consumer of cannabis myself, the knowledge of how to harvest and respect other medicinal plants, reframed my relationship with the cannabis plant. I understood that plant medicine is not without risk. There are protocols to follow when deciding whether or

not to use medicinal plants, a process to psychologically prepare one's self for the healing, and a respect for the agency of the plant by speaking your intentions and purpose. It is vital to know what you can and cannot not mix the medicine with, how often and how much to take, and most importantly, how to offer gratitude to the Land for its gift. Applying this background knowledge to the cannabis plant, ultimately provided me with a perspective, less rooted in fear of the potential risks it could pose to my children and more aligned with a relational understanding of how we interact with the Land and medicines in general. This provided the foundation for my thesis, as I felt it lent an important insight, currently missing from the discourse on cannabis. While completing my course work in Transcultural Psychiatry, I was introduced to the concept of the eco-centric 'self'. This theory incorporates the protocols listed above for how to interact with medicines, acknowledging that one is in constant interaction with one's environment and that healing or illness results from an imbalance in relationships with the Land. (Kirmayer, 2007) It helped me to conceptualize a possible alternative for how we could approach the cannabis discourse moving forward. It is my hope that through sharing this worldview of a renewed relationship to the Land, and applying it more specifically to the plant, Canadian society can inform/reform its current relationship and perceptions of cannabis for the betterment of all.

**Introduction (Rationale and Objectives of Research):**

The intention of this thesis is to challenge the polarized discourse on cannabis by suggesting a paradigm shift of the 'self' in order to form a neutral and informed third option. This third option explores the eco-centric view of 'self', in terms of the implications it would have on our relationship with cannabis. As previously mentioned, there appear to be two camps in the cannabis discourse; the ardent supporters and those primarily concerned by the risks of cannabis consumption. This dichotomy of ideologies leaves very little room to acknowledge that there can be both positive and negative consequences. One side overwhelmingly argues for the healing benefits of the plant,(Verma et al., 2021) while the other fixates on the plethora of adverse effects associated with early or chronic use of cannabis (Memedovich et al., 2018). Each tenet makes claims to the exclusion of the other. The ecocentric view of 'self', however, necessitates a balanced relationship between both the plant and humans before true healing can occur. In concrete terms, this means that both ideologies are correct to an extent in that cannabis can have both positive and negative effects. However, if the plant is considered the sole instigator of both the benefits and the harms, neither argument is complete. The health and agency of the cannabis plant must also be factored into the debate, as an equal partner in the relationship. It is not accurate, in this view, to say that cannabis is solely responsible for both the benefits and associated risks. On the contrary, establishing a healthy relationship and engendering a sense of respect towards the plant, contributes greatly towards whether healing or illness will manifest. If for example, consumers respected the intelligence of the plant (Trewavas, 2016), the protective factors of the cannabis would be held paramount, and its psychoactive THC levels would be maintained at 2% in its natural form. Sky-rocketing cannabis induced psychosis in youth (Grewal, 2017) would instead be acknowledged as the result of the cannabis industry's

manipulation of the plant to produce threatening and addictive levels of 20-95% THC. Attributing agency and knowing to nature, requires those who use, sell and prescribe cannabis, to depart from the Western notions of humans as separate from nature. It requires that humankind become accountable and engage in an ecocentric view of the 'self', manifesting a respect for the plant, as a precursor to a healthy and balanced relationship with nature. (Geniuz, 2015)

While there already exists an extensive body of literature in the field of substance use disorders relating to attachment theory and the importance of human bonding as a form to overcome substance misuse, there continues to be a gap pertaining to one's attachment and relationships to the Land and the cannabis plant. By broadening the discourse on attachment theory to the cannabis plant, therefore, and examining the cultural context of one's relationship to 'nature', 'self' and 'medicine', one finds the middle ground between these opposing views and provides an alternative for a better relationship with cannabis moving forward.

Considerations when Rooting the Discourse on Cannabis in the Ecocentric View of 'Self':

Ecocentrism, a concept of 'self' formulated in transcultural psychiatry (Kirmayer, 2007), is generally the foundation of the worldview for many Indigenous nations and cultures. Although it is not a catch all term, it provides the framework for how the 'self' is understood in relation to the natural world. As such, this section details the considerations that should be accounted for, when rooting the cannabis discourse in Indigenous knowledge and science. While analyzing models akin to ecocentrism can be useful when simplifying large concepts--such as the 'self', there is an inherent risk of oversimplifying the principles and compromising the integrity of the ideology. While this thesis can be used as a general guide, for explaining how Indigenous knowledge keepers can contribute to the cannabis discourse, it is vital that the information is not applied uniformly. Each nation and community has their own ways of relating to the Land and

pan-Indigenous approaches should not be applied. It is also important to understand that different generations within Indigenous communities may have varying perspectives on cannabis which will have been influenced by their experiences. (Pauktuutit, 2020) One should not assume that every community or individual will hold the same view toward cannabis, nor have the same relationship with the Land.

Indigenous communities have built practices and knowledge around environmental stewardship for millennia. However, as these ontologies clash so vehemently with the Western egocentric 'self's need for containment, pursuit of individual goals and wealth and control over one's emotions and environment, these nations have been targeted through endless policies of genocide. It is crucial, therefore, that in the process of learning from Indigenous cultures, true reconciliation and cultural safety be put at the forefront. We so desperately need these ways of knowing and practices to become part of the mainstream discourse, in order to fully unravel the complexities of a healthy ecocentric view of the 'self'. However, we cannot do so by simultaneously exploiting these knowledge systems and propagating environmental and institutional racism.

Indigenous Knowledge of Plant Medicine is Medical Science:

Part of reframing the discourse on cannabis in the ecocentric view of the 'self', means recognizing and accepting medicinal plant healing and Indigenous knowledges as medical science in their own right. It is important to note that medicine in these ontologies is not solely expressed in reference to a physical pharmacological substance that impacts one's biology. Medicine can be understood more broadly as accounting for one's attitudes and actions in relation to a medicine as an integral part of the healing process. The way in which we perceive, relate to and care for the plant medicine, therefore, becomes part of the overall medicine we

receive. An ecocentric view of 'self' underpins the efficacy of plant medicines that Indigenous knowledges often include in their approaches to medical science.

Many Indigenous Peoples and traditions have rigorous methods of data collection, living libraries of oral knowledge and detailed pictorial and linguistic resources of medicine, metaphysics, biology, astronomy, et cetera; and yet, their expertise is classified as 'traditional knowledge' rather than 'science'. Pitseolak Pfeifer, an Inuk scholar from Nunavut, works to dismantle the power and politics historically perpetuated by research in the North with Inuit. In a piece entitled Addressing the Credibility Gap (Pfeifer, 2018*),* he coined the term, "credibility gap" to acknowledge the phenomenon that attributes value to "scientific knowledge" while devaluing "traditional Inuit knowledge". He argues that for true reconciliation to occur and for fundamentally better research to take place, different values cannot be attributed to the two forms of knowledge- they must be equated. Inuit traditional knowledge or Inuit Qaujimajatuqangit, therefore, must simply be understood by southern institutions and policy makers as Inuit science.

Pfeifer explains his dismay for this 'credibility gap', as it perpetuates the view that Inuit (traditional) knowledge does not have (the same) credibility compared to Western academic knowledge. This holds true for other Indigenous nations, who continuously have their knowledge appropriated and extracted by Western researchers and pharmaceutical companies, without acknowledgement of their expertise. For Indigenous communities that have utilized medicinal plants for time immemorial, this 'credibility gap' ignores the intimate knowledge and stringent testing measures that have been conducted with local plant and animal medicines for centuries, and it delegitimizes the oral tradition that passes this knowledge onto future generations. Pfeifer argues that "Traditional Ecological Knowledge is only considered quasi-credible and

quasi-legitimate in research if it is presented and engaged with via education or research institutions." (Pfeifer, p. 31) He further adds that, "in academic and research institutions, knowledge is divided into academic disciplines, producing and reproducing the objectification of the human and natural elements the Western knowledge system works with. It means that research takes on this fragmenting view of life, which fundamentally ignores the holistic Inuit ontology [and that] because education and research institutions endorse this disciplinary mode of inquiry, anything different is necessarily less: Inuit knowledge ranks lower in the hierarchy of knowledge." (Pfeifer, p. 31) He states that "Hunters are Arctic scientists and professors, experienced wildlife, ice, and water researchers, and environmental knowledge keepers." (Pfeifer, p. 31) He adds that adopting this "view challenges Western-based ontologies of science and research: It draws on Inuit traditional knowledge and applies it to the current political-economic context of paid labour to bring positive change to communities, rather than keeping hunters and their knowledge exclusively in the ecological and cultural domain." (Pfeifer, p. 31)

When addressing a topic such as cannabis education within Indigenous communities, funding agencies and policy makers should keep in mind that the hunters, Elders and community members, must be regarded as equal, if not greater contributors of scientific knowledge, than the psychologists, academics or neuroscientists. While experience with the cannabis plant may differ amongst Indigenous communities, it is important to note the extensive experience regarding other local medicinal plants can add immense value to the cannabis discourse. For this reason, it may be easier to conceptualize and understand protocols, from a cultural point of view that already promotes ecocentricity at its core, which could later be attributed to the cannabis plant.

It is important to give ample credence to the existing bodies of knowledge seated within Indigenous communities when developing programming for cannabis education. It is not to say that recent findings within neuroscience or psychology would not be useful to cannabis education. If you take the Inuit principle of Piliriqatigiingniq "the concept of collaborative relationships or working together for a common purpose" (NCCAH, 2012) or the Mi'kmaq concept of *Etuaptmumk, "the gift of multiple perspectives"* (Marshall, 2017) one can envision a potential fusion of how to understand the effects of cannabis in a rapidly changing world. However, collaboration must also come with a concerted effort on the part of non-Indigenous scientists/researchers to ensure that knowledge dissemination of cannabis is not just slightly modified to be "culturally-appropriate" for Indigenous Peoples. It is fundamental that it be designed with Indigenous communities from the precept and to be culturally-rooted and community-grounded.

This is the mandate for Environment and Climate Change Canada's new division of Indigenous Science, established in 2022 and led by Myrle Ballard of Lake St. Martin First Nation. Ballard explains that the government's approach in this division is to use "a process she calls bridging, braiding and weaving," whereby, "bridging means raising awareness about Indigenous Science within the government [and] braiding when Western scientists work together on research with Indigenous peoples on the land. The weaving process will begin, when the department of ECCC, starts weaving Indigenous and Western science for better decision-making." (Sanders, 2022) This approach is promising and might have further

implications down the line for Canada's healthcare and education systems, particularly when creating policies around cannabis and other local traditional medicinal plants.

The framework explored in the manuscript article of this thesis embeds the ecocentric view of the 'self' into the cannabis discourse as part of cannabis medicine. As will be discussed in the literature review and the article itself, the attachment and bond to the Land is part of this ecocentric view, which respects non-human beings as relatives and persons with their own agency and selfhood. There is already a great deal of literature that speaks to attachment theory and healthy attachment to others in society as a means to reduce problematic substance use. The gap in the literature, therefore, is harnessing the concept of the ecocentric 'self' to demonstrate how attributing personhood to nature and building healthy bonds with it can lead to similar results of less problematic use of cannabis.

**Literature review:**

In the 1960s, British psychiatrist John Bowlby pioneered the field of attachment theory. This theory in early childhood development focuses on the child's close bonds and relationships and how the 'self' is developed in relation to others. (Bowlby, 1979) Bowlby speculates that from the time a child is born, physical and emotional proximity to a loved one is critical; and in the absence of this dyadic bond between mother and child, loneliness, anxiety and sadness ensue. (Bowlby, 1988) This bond, which fosters a sense of security and soothing, through propinquity to the mother, is understood to extend a lifetime, and to affect all future relationships for the individual. (Bowlby 1988; Fonagy et al. 2002; Stevenson-Hinde 1990; Fletcher et al., 2015). Internal Working Models, another term founded by Bowlby, is a method for children to interpret themselves in relation to their environment. (Anda et al. 2002; Padykula and Horwitz 2012; Thompson 2008) It impacts how close relationships are maintained, how emotions are regulated, and how negative experiences are managed. (Main 1995; Wallin 2007).

The theory has been applied across many disciplines with growing reliance on this model. In a recent review by Schindler (2019) for example, he claims that since 2005, the number of studies linking attachment to substance use disorders has tripled. While numerous studies demonstrate how attachment theory and healthy bonding practices relate to substance use disorders; these speculations have omitted the importance of the individual's bond with the Land or other non-human actors, which may prove beneficial in both traditional attachment theory and when applied to the cannabis discourse. Including the Land into attachment theory as a sentient caregiver, with whom one may form healthy bonds, builds off of the promising work underway in the field of child welfare in Canada by Indigenous scholars, like Cathie Richardson and

Jeannine Carriere (2009), as well as non-Indigenous child welfare advocates, Choate and Tortorelli (2022).

Choate and Tortorelli argue that the dyadic relationship between mother and child, in the nuclear family presented in attachment theory, is a Eurocentric concept that does not account for how other cultures view the 'self'. Furthermore, it devalues the importance of non-parental or non-human kinship relations in the attachment process. They claim that they are not aware of any literature, which necessitates that internal working models must take place within these dyadic relationships, and they posit that a universal definition of attachment does not exist. They counter that there is a great deal of supporting evidence that demonstrates how attachment varies from nuclear, communal and collectivistic arrangements, noting that the latter two options allow for connections that are "numerous, intersectional and multidirectional." (Choate et al. 2022)

In the field of substance use and attachment, Kazdin states that there is not one way to tackle substance use disorders, and that providing a variety of options for how people can conceptualize their relationship with substances is needed. (Kazdin, 2011) If we already know that applying attachment theory to problematic substance use is effective, then introducing the concept of the eco-centric 'self' provides another layer in which we can understand identity and healthy bonds in relation to one's environment.

The current literature supports the fact that despite the higher cost, relationally based theories for substance use are more sustainable than short term cognitive and behaviorally-focused programs. (Fletcher et al., 2015; Flores, 2006). By addressing emotional and relational processes, researchers argue that they can inform behaviour and functioning rather

than merely altering it. As such, relationally based therapies can produce residual effects contributing to benefits for individuals, their loved ones and shared communities. (Fletcher et al., 2015)

Researchers suggest that individuals who consume substances in order to regulate their emotions feel a sense of security with the substance that they are unable to achieve in their human relationships. (Basham 2005; Padykula and Conklin 2010; Fletcher et al., 2015; Khantzian, 2011) The Self-Medication Hypothesis, coined by Edward Khantzian and David Duncan, theorizes that self-medication is done out of the need for comfort and contact rather than for pleasure seeking; when one is experiencing an alienated sense of self. The hypothesis states that lacking the ability to self-regulate and identify one's self, leads to eschewing the need for close personal human relationships. (Khantzian 1997; Khantzian 2012; Suh et al., 2008). Fletcher et al. notes that drug use to self-soothe often inspires feelings of agency, ultimate independence and resilience in the consumer. It also provides a 'secure-base' (Flores 2004; Schindler et al. 2005) to simultaneously express loneliness and fear (Fletcher, 2015) through attempts to self-repair. (Flores 2004; Schindler et al. 2005)

This pursuit of self-sufficiency to the exclusion of other humans, while also desperately seeking connection is said to be remedied by learning how to build comforting and reliable human relationships. (Flores, 2004) This approach, however, continues to operate in Western norms of what constitutes personhood. From an ecocentric view of self, the security one feels with cannabis plant medicine could be harnessed, as a teacher for self-regulation, but would not result in substance dependency. Dependency still implies an unhealthy relationship with the plant, even if it is comforting to the consumer. By depending on the plant to provide you with

what you need in the absence of a consensual, mutually beneficial relationship with the cannabis person, one continues to mirror unhealthy behavioural patterns that they exhibit in human relationships.

Ecocentric protocols, such as psychologically preparing oneself for consumption, asking the plant if it can be consumed, paying the Land for what it has given you, caring for the plant throughout its lifetime and handling it with respect and positive thoughts, do not figure into the equation of substance use to soothe and regulate one's emotions through self-medication in the form of dependency. In the self-medication theory cannabis is understood as an attachment 'object', a means to an end, to accomplish the individual goal of escape from discomfort and pain stemming from one's human relationships. (Hofler et al., 1996) (Flores, 2006) Spiegel and Fewell go as far as to say that for insecurely attached individuals, who use substances, a drug can become the only attachment 'object' in their lives. (Spiegel and Fewell 2004).

By using an attachment framework, Padykula and Conklin believe that alternative strategies for self-regulation can be achieved. (Padykula and Conklin 2010) Although these strategies suggest increasing human interactions, (Landau-North et al., 2011) there is some literature that points to attachment therapies in wilderness treatment centres as an effective means to address substance use. While these treatment centres still focus on human relationships in their programming, they view the nature 'backdrop' as a helpful setting wherein to heal. While this opens a window for relating substance use to nature, it still does not capture the importance of relationships and attachment to the Land, nor does it challenge the Western beliefs surrounding the individualistic 'self'. (Russell, 2001; Bettmann et al., 2007; Bettmann et al.,

2013) Therefore, entering the discourse on cannabis from an ecocentric model of the 'self' can bolster the work that has already been done in the field of substance use and attachment theory. It will also challenge, however, the way that cannabis is discussed, whereby the plant becomes not an 'object' of attachment, but rather another actor in the relationship to deter problematic or chronic use.

**Manuscript: Creating a New Discourse for Cannabis as a Medicinal Plant by way of the Eco-centric Self**

Dr. Gabor Mate says that the opposite of addiction is not sobriety. The opposite of addiction is connection. (Mate, 2018) An impoverished understanding of plant medicines and the natural world in modern-day Western societies has led to the common trope in cannabis culture, that cannabis is natural and ergo safe. Conversely, recent scientific studies regarding the highly addictive and psychoactive agent of THC in cannabis, which is viewed as a catalyst for psychosis, have led to a variety of failed societal and political interventions to brand cannabis as an extremely harmful substance. There is a third option, however, that recognizes how one's relationship and connection to the plant is an integral factor in the current illness/healing dichotomy.

While leading scientists and psychiatrists in the area of substance use disorders would attribute the improper or chronic use of substances as a means to respond to trauma (Mate, 2018) and/or an imbalance in interpersonal relationships (Basham 2005; Padykula and Conklin 2010; Fletcher et al., 2015; Khantzian, 2011) , they are neglecting the very real truth that Western society has undergone a removal from nature which has resulted in the misuse of medicinal plants, such as cannabis. It is true that people are seeking out substances to respond to trauma or failing relationships, but there remains a layer of this discourse that is not currently being emphasized-which is the relationship one has to the natural world and to natural medicines in general. The fact that cannabis advocates often use the words ‘natural’ and ‘safe’ interchangeably could be understood as lack of knowledge on medicinal plants, resulting from a Cartesian worldview that classifies human beings as separate from nature. This is further

compounded by the growing phenomenon of nature-deficit disorder amongst children in urban settings that has resulted in children being able to identify significantly more brand logos than they can local animals or plants. (World Economic Forum, 2019) Being less in touch with nature, obstructs one's understanding that plants carry both benefits and risks respectively, and thus must be handled with reverence and knowledge, which is paramount in medicinal healing. Indeed, the belief and practice of human/nature separation is likely the most problematic issue in the cannabis discourse overall.

There is a third option to understanding cannabis that circumvents the current binary debate of good versus bad, which is that cannabis is neutral. This implies that it depends on how individuals interact with or relate to the plant, that dictates an overall positive or negative experience. I will make this explicit by explaining how the ecocentric view of the 'self', a term made popular by transcultural psychiatry, can change the way we relate to the cannabis plant. Once this lens is applied, I will harness attachment theory to demonstrate how a healthy bond to the plant will concretely diminish problematic use of cannabis.

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A Unidirectional and Commercialized Relationship with Cannabis:

Currently, the discourse on cannabis is predicated on the epistemological perspective of the plant as a commercial substance, composed of chemical compounds devoid of agency, which indiscriminately trigger biological and psychological processes. Scientific studies and lay perspectives alike (Jikomes, 2016; Karila et al., 2014) intimate that studying isolated biological mechanisms, systems and processes of how cannabis unidirectionally impacts human physiology can take place in a vacuum. They disregard the individual's preparation for consumption or

societal and cultural considerations as though they do not impact one's experience or consumption patterns of the plant, and what's more, the resulting healing properties or illnesses that ensue. This sterile view of how the plant impacts humans tells a one-sided story, that shifts blame to the plant, rather than the human for the outcomes of their consumption. It posits humans as a recipient of effects from the cannabis plant rather than an active participant in their experience. It labels cannabis in black and white terms as either 'good' or 'bad' depending on how the data is interpreted. Human error, misuse and manipulation of the plant are rarely, if ever, cited in the scientific literature as contributing factors to illnesses being '*caused by'* the plant.

Understanding that the relationship with cannabis involves more than the biological effects it has on humans, weighs heavily on a paradigm shift from consumable product to one of reciprocity. It recognizes the responsibilities to the plant involved in the relationship and the possibilities for healing that can be achieved once balance is restored in the human-cannabis connection. It incorporates a holistic approach to healing where both human and plant are equal actors in the greater ecosystem of nature and acknowledges and respects the agency of both beings in the relationship. Adopting an ecocentric view of 'self' is one such way to reconceptualize this relationship.

It is important to note that this is not the first time medicinal plants have been interpreted in a unidirectional and commercialized manner in Euro-American culture. For example, claiming that cannabis is the new tobacco (Mack et al, 2000) is problematic, as the campaign to demonize tobacco has alienated important traditional practices, which use it to maintain health in ways that have been extensively researched and orally preserved in Indigenous knowledge-bases. Tobacco

as a plant is **not** bad for one's health. Consuming naturally grown tobacco that is cared for and loved by those who harvest it for trade and consumption is **not** bad for one's health.(Cancer Care Ontario, 2022; Tobacco-wise, 2022) Adding 600 ingredients (The American Lung Association, 2020) to transform tobacco into a cigarette, however, *is* bad for one's health. We must be careful, therefore, to elaborate upon illness narratives to include a holistic representation of how human manipulation, commodification and depersonalization of natural medicines is more damaging to health than the plant in its pure form. This approach is finally being acknowledged by organizations such as The Canadian Cancer Society, who has done extensive engagement with Indigenous stakeholders, and has now produced TalkTobacco, (Canadian Cancer Society, 2022) which is a free, virtual care service that targets *commercial* tobacco cessation rather than simply 'tobacco cessation' for the aforementioned reasons. A similar approach could be adopted to frame a narrative for discussing *commercial* cannabis' adverse effects from high-levels of THC (Pierre, 2017; Gobbi et al, 2019; Mammen et al., 2018; Gorelick et al., 2017; Meier, 2017; Freeman et al., 2015) versus traditionally grown and harvested 2% THC-strain cannabis plants.

Medical Cannabis and Cannabis as a Medicinal Plant are not Commensurable Terms

As described above, the current relationship with cannabis is one of commercialization and unidirectionality. It positions cannabis as a substance and a commercialized product, to be 'used', rather than being afforded the respect, personhood and reciprocity that a medicinal plant deserves. From both a lay perspective and medical opinion, cannabis has long been respected for its medicinal properties, (Procon, 2022; Bridgeman, 2017) however, according to a study by addiction psychiatrist Elizabeth Stuyt, spanning from the 1960s to 1980s, cannabis in its 'natural' form contained less than 2% of the addictive and psychoactive agent Tetrahydrocannabinol,

better known as THC. In today's cannabis market, high-THC strains are being bred with as much as 17-28% THC and some concentrated THC products such as oil, shatter, dab, and edibles have been able to increase the THC to as high as 95% or more. Through a historical analysis, Stuyt found that from 1995-2015 this equated to a 212% jump in THC content in the cannabis flower. (Stuyt, 2018)

One would assume that recreational cannabis differs from medical cannabis given the distinction of terms, however, this is not the case. Commercial cannabis, therefore, encompasses both medicinal and recreational cannabis. Lester Black explains that "Medical and adult use (recreational) cannabis are merely legal categories, not different kinds of cannabis plants or products. Medical cannabis requires a doctor's recommendation while recreational cannabis is available to anyone over the legal age limit."(Black, 2022) In a recent study, Cash et al (2020) mapped cannabis potency in medical and recreational programs in the U.S, and they found that there was very little difference between products being sold in medical and recreational establishments. With medical cannabis users often buying from both medical and recreational cannabis stores (Black, 2022), it is more a case of semantics than it is about true medicine.

Dr. Goulao, who was responsible for decriminalizing all substances in Portugal, expresses that "there's a lack of intellectual seriousness in discussions about the regulation of substance use, especially regarding cannabis [and] that discussions about its medical use should be held separately from discussions about recreational use…mixing both issues creates a lot of confusion among citizens and politicians." (Ponte, 2015) This argument does not hold much merit if the current composition of the plant is far from a meaningfully medicinal strain and may lead to worsening states of health over time. (Pierre, 2017; Meier, 2017; Freeman, 2015).

Despite some doctors prescribing cannabis in order to combat depression, anxiety and PTSD, strains of cannabis high in THC are also correlated with "creating or worsening many mental health problems including anxiety, depression, psychosis, and suicidal ideation. (Pierre, 2017; Meier, 2017, Freeman 2015; Stuyt, 2018) High strains of THC are also known to produce significantly higher odds of stroke and myocardial infarction or coronary artery disease (Shah et al 2020), and even liver failure (Habbousheet al, 2018).

Although, mainstream cannabis culture highlights the medicinal benefits of this 'natural' substance throughout history, it neglects to acknowledge that the medicinal/recreational cannabis flower of 2022, which Styut found to contain on average 18-27% THC, is not the same cannabis that was being prescribed in the early 1900s in North America and in Traditional Chinese medicine for thousands of years at less than 2% THC. At the root of the issue lies an epistemological incongruence in Western dialogue about the plant, that at once tries to define cannabis as both a 'natural medicine' and as a 'recreational drug of abuse'. From an ecocentric view of self, as will be explored in the next section, these concepts are antithetical.

As psychiatrists delve into the healing world of psychotropic plants, research by both Indigenous and non-Indigenous scholars advocate for protocol and ceremony when partaking in a medicinal experience with plants. (Redvers, 2019) (Lifshitz et al., 2018) This concept, however, becomes blurred when a plant medicine, such as cannabis, is deemed as both recreational and medicinal and is potentially being abused with other substances, such as alcohol, on a chronic basis. If we are truly concerned with building a better relationship to the plant, we must acknowledge that we cannot respect a medicine if we also perpetuate abuse towards it by not following protocols of respect in its growth, harvest and consumption. This could open a

dialogue of how people's relationship to the plant can contribute to the healing or illness that it offers in return.

Ultimately, the misconception that a plant coming from the 'natural world' is inherently safe, stems from a system that both lacks basic knowledge of plant medicines and that harbors a general mistrust of Western synthesized pharmacology. Without the guidance of healers who respect the plant medicine and who are trained in how to interact with it, there is an inherent risk of misuse that will undoubtedly lead to demonizing the plant, as has happened with tobacco. To rebuild a healthy and more coherent relationship with the cannabis plant, we must first understand that ideas of the 'self' differ between cultures and that relationships that recognize personhood, respect and agency are not universally reserved for humans.

Situating the 'self' in relation to nature and Cannabis:

The introduction of this article explored the current mainstream relationship with cannabis, and how it is often a polarized debate between the benefits and harms attributed to the use of the plant. Cannabis is understood to have a unidirectional impact on humans and there is no distinction between the medicinal and recreational commercialized product. Although the word 'medicinal' implies respect, strict protocol and proper dosing of the plant, recreational use could be interpreted as a form of abuse to the plant, if consumed chronically or out of context. In Western cannabis culture, however, consumers rarely differentiate between these labels except for legal purposes. (Black, 2022) The following section will explain how applying an ecocentric view of 'self,' will provide an alternative relationship to cannabis as medicine. It is a view that attributes personhood and agency to the plant, follows a set of protocols regarding balance, and understands that healthy relationships to the natural world will result in healthier consumption

practices. Next, the concept of ecocentricity will be elaborated, through the Inuit concept of 'Sila', and how it supports the theory in practical terms when applied to cannabis.

The ecocentric 'self' is a term made popular by the field of Transcultural Psychiatry. In the article entitled *Psychotherapy and the Cultural Concept of the Person,* Laurence Kirmayer lays out four general ways in which the self can be construed; egocentric (predominantly found in European cultures), sociocentric (predominantly found in East-Asian cultures), ecocentric (predominantly found in Indigenous cultures) and cosmocentric (predominantly found in African cultures). He cautions, however, that these "ways of construing the self are not mutually exclusive and while certain cultures might put a greater emphasis on one perception of the self than the others, every person has the capacity to and does to a certain extent, inhabit all four schemas of the 'self'. (Kirmayer, 2007, p 246) Kirmayer explains that concepts of 'self' and personhood, therefore, position an individual in society and dictate how one attributes causality and agency to health and illness. (Kirmayer et al. 2007)

The ecocentric sense of 'self' is described by Kirmayer as someone who sees themself as part of an ecosystem, constantly transacting with non-human persons and that motives, agency and perspectives are embodied by animals, plants and the elements. (Hallowell, 1955; Tanner, 2004; Kirmayer, 2007) These are usually characteristics that are more emphasized by Indigenous cultures throughout the world. Human and nonhuman beings from this perspective are understood to be kin who are interdependent on one another. Illness, therefore, results from an imbalance in these relationships. (Kirmayer, 2007) Non-human persons are also understood to bestow gifts and metaphors for recovery and healing and humans are to respect these gifts through ceremony and exchange. (Kirmayer, 2007) In the words of Mohawk scientist and activist, Dawn Martin-Hill, "These sophisticated ways of interacting with nonhuman beings have

been developed over millennia for the purpose of survival as well as for the pursuit of holistic well-being on Earth for millennia to come". (Martin-Hill, 2020)

The Euro-American concept of the person, however, tends towards individualism that sees the 'self' not as a cultural construct, but as an indisputable, unique and autonomous biological organism bound by one's skin. (Sampson, 1988) (Hsu, 1971) (Kirmayer, 2007). Contrary to individualists' beliefs about being autonomous entities separate from nature, Nedelsky (1990) explains that, the borders of the individualist 'self' were actually derived from the need to demonstrate independence from the British monarchy by tying ownership and property to the notion of individual rights in the American constitution. One's individual dominion and ownership of property by way of parceling Land into neatly defined borders, consequently, became how the self was defined as bounded by skin in Euro-American individualism. (Nedlesky, 1990). This intentional, if not artificial, separation from and ownership of nature in the Western mind, has serious implications for how one relates to illness narratives as well as healing discourses relating to cannabis.

In the egocentric mind, the 'self', extending no further than one's skin and biology, becomes othered from the cannabis plant, bound by its own leaves and flowers. Moreover, the power relationship ensuing from this otherness is one of ownership, exploitation, and control. The egocentric 'self' has slotted the cannabis plant into an overarching category called 'nature', which generally tends to be anything other than human or that which has not been synthesized or reformulated by them. Rather than understanding the 'self' within a shared environment of equal agency or in an ecosystem of exchange, support, and collaboration, the cannabis plant is individually potted, mass produced, packaged, marketed and sold. It is not grown alongside other plants that provide it sustenance. It does not mingle with other organisms that bind to the root

networks beneath the soil or contribute to its environment in reciprocity. It is most definitely not considered deserving to thrive in the way that it chooses to or to even be asked what it prefers. When the plant does not adjust to and obey the sterile conditions of a hot house or mono-culture farm, it is doused in chemicals and told to conform to the grower's requirements. It is a relationship of ownership and entrapment, of two bound entities, with the egocentric human 'self' having the upper hand.

Humans in Western society, growing further and further disconnected from themselves and from the environment around them, ask for a product that can numb the pain caused by isolation. (Basham 2005; Padykula and Conklin 2010; Fletcher et al., 2015; Khantzian, 2011) The cannabis plant, with its numbing properties seems to be a logical choice. Except, over time, consumers build a tolerance to the cannabis plant's low dosage of numbing agents, and soon it is not enough. (Marshall, 2020) The plant must be manipulated and bred to provide a higher numbing effect. 2% of THC is  no longer sufficient, 95% is necessary. To the egocentric 'self', the flowers and leaves that bind this 'modified' plant in its green skin, look the same on the outside, and thus, this altered plant remains as part of the 'natural' world.

The view held by the egocentric 'self', differs from that of the ecocentric 'self' substantially. As mentioned above, in the ecocentric view of the 'self', plants and other non-human persons are attributed agency, personhood and respect, with relationships often being filial in nature. Illness is understood to arise from an imbalance in the relationships between humans and their environment, and healing occurs when this balance is restored. If Western science accepted that one could form familial bonds and attachments to the cannabis plant, it would greatly impact the way substance use disorders are discussed.

As witnessed throughout the recent Covid-19 pandemic, increased cannabis use in Canada satisfied the needs of a frenetic, isolated and disconnected society (Imtiaz et al., 2021), however, scientific articles continue to cast blame on the components of the plant when adverse effects emerge. (Zehra, 2018) The plant is villainized for its effects on the neurobiology of the consumer, and suddenly, the plant becomes an evil that should be avoided entirely. Society turns a blind-eye to the fact that this altered plant is a by-product of a disposable consumer-based culture that is unsustainable and destructive by and to nature. A society, who has become numb. There is nothing 'natural' about this plant or process at all. To better understand how we can rectify this situation, we must unearth what balance and harmony with plants and the natural world entails. Our society's future relies on learning from cultures whose worldviews place humans in healthy relationships with the Land, Waters and Sky. Through an ecocentric view of 'self', one comes to understand how humans are tied to the natural world and in so doing, allows one to define the 'self' in constant relationship and exchange with it, as a marker of identity and 'self-hood'.

The concept of illness as a result of imbalance in ecocentricity is well explained by the Inuktitut word 'Sila'. "Although 'Sila' is often translated by Qallunaat (non-Inuit) to mean climate or weather, its definition in Inuktitut is much more profound. Qitsualik (2013) explains that the term is possibly one of the most important concepts in Inuit philosophy and that it spans themes as expansive as "intellect, biology, psychology, environment, location, and geography" (Cameron et al. 2015). It can also mean, "air, atmosphere, sky, wisdom, spirit, earth, universe, and all." (Qitsualik, 2013, p.29) For cultures who tend towards more ecocentric definitions of the 'self', one's identity is not limited to a fixed biological organism but rather is in constant transaction with other beings (both human and nonhuman). (Kirmayer, 2007)

In the example of ‘Sila’, the mind of an individual is interwoven with one’s environment, body, cosmos, spirit, the Earth and ‘all’. These things cannot be separated or completely untangled from one another. Although the term ‘Sila’ is unique to Inuktitut, the general epistemology that humans are but one element in the overall flowing system of the Land (Qitsualik 2013, p.27) is not. In fact, it is the ethos of many Indigenous cultures who hold a deep respect for the Land, Waters and Sky, with whom they share their home and identity. The term ‘Sila’ is one of fluidity, it is ever-changing and in constant flux. (Qitsualik, 2013) This ideology is in contrast with the Euro-centric notion of egocentricity, which desires conformity, predictability, and fixity of both the environment and the ‘self’. (Kirmayer, 2007) If one were to attempt to directly translate climate change into Inuktitut “as *silaup asijjiqtitauninga ,* meaning, ‘*sila* being made to change’—it would be confusing for many speakers of the language because it implies causality and human intervention. Within Inuit philosophy, it is impossible and even nonsensical to imagine that humans could cause ‘*Sila’* to change.” (Cameron et al, 2014) “It is more comprehensible, however, that silaup asijjirluktauninga (the notion of unethical abuse of ‘*sila’)* (McGrath, 2005) could lead to the end of life on Earth as humans know it- but, conversely, not the end of Earth, Sea or Sky.” (Cameron et al. 2014) In reference to cannabis then, one could infer that it is the lack of observance of the plant’s intelligence which has led humans to produce higher strains of THC known to increase the adverse effects associated with chronic consumption patterns. It is human actions, not the plant, that are responsible for illness. The intention to achieve an augmented high has led to the unsustainability for human consumption, but conversely, not the end of the plant itself.

Cameron et al. explain that, “While environmental change – even dramatic and extreme environmental change – is understood in Inuktitut as something to greet with patience, resilience, and creativity, abuse and harm are dealt with through Inuit frameworks of justice, relationality, and healing.”(Cameron et al. 2014) Therefore, if we are to apply the concept of ‘Sila’, as an extension of ourselves, to include mind, climate, biology, etc, we might approach the current use of cannabis in a socio-political context differently. If we understand that not attributing respect to the intelligence of a natural medicine translates to the alteration or abuse of our own body and mind, then the way in which we grow, harvest and consume cannabis matters, because our impact on the plant is directly linked to its impact on us.

Egocentricity has provided the illusion that we are cut off from other beings as unique individuals. Ecocentricity invites us to find fulfillment in our interconnectedness, by promoting harmony and balance with all things. The way we treat others is how we treat ourselves. The way we harm others, is how we harm ourselves. This process of restoring balance in our relationships with other living things, can also be witnessed in the Inuit concepts of healing and justice. Cameron et al. say that these frameworks are “only possible insofar as those who have caused harm acknowledge and account for their actions, and work to restore harmony. Whereas Canadian legal systems typically seek to punish the offender and focu[s] primarily on the offense … the priority within Inuit customary law was not necessarily to punish...or provide ‘justice’ per se but rather to ensure the community returned to a state of harmony, peace, and equilibrium” (Pauktuutit 2006, p. 9) (Cameron et al. 2014)

In reality and metaphor, cannabis plays a very important role in helping us to regulate homeostasis (balance in our bodies). The endocannabinoid system in our bodies exists in order to promote a balance in energy, food intake, and gastrointestinal tract activity. (Lu et al. 2016)

Therefore, when the cannabinoid molecular compounds found in cannabis interact with our natural endocannabinoid system, it can prove helpful to people who are suffering from an imbalance. These include effects such as an increase in appetite, often recounted anecdotally by patients undergoing chemotherapy.

In this way, cannabis attains agency. It becomes the teacher from whom we can observe and learn, as it helps us on our journey to find the balance and harmony that Qitsualik and Cameron et al. mention above. Respecting cannabis as a teacher requires us to listen to the intelligence inherent in the plant. (Trewavas, 2016) The major proponent for homeostasis, for example, is found in the chemical compound cannabidiol, also known as CBD. (Fischer et al., 2017), However, when breeding for higher and higher strains of THC, we inversely lower the CBD causing further disharmony of the delicate balance naturally found in cannabis. It becomes apparent, therefore, that our interaction and relationship with cannabis can either positively or negatively impact our experience with it.

Attachment Theory, Substance Use and Making a Relative Out of Cannabis:

The first half of this article, set the theoretical framework for ecocentricity versus egocentricity to differentiate how the 'self' can be understood in relation to cannabis. The following section will describe how applying an ecocentric view of the 'self' to attachment theory can further bolster the research being done in this field. Western researchers have been connecting problematic substance use patterns to attachment theory for decades, and they have had success in deterring such behaviours, however, they have done so in a purely egocentric view of 'self'.

In the 1960s, the field of attachment theory was founded by John Bowlby, to understand how children's early bonds and relationships impacted the way that 'self' was developed in relation to others. (Bowlby, 1979) This initial relationship of security formed between mother and child was said to affect all relationships that individuals built from then on. (Bowlby 1988; Fonagy et al. 2002; Stevenson-Hinde 1990; Fletcher et al., 2015). The theory stated that physical and emotional proximity to a loved one during childhood was critical, and that the absence of this bond, between mother and child, resulted in loneliness, anxiety, and sadness. (Bowlby, 1988) Internal Working Models, as described by the theory, set out how children interpret themselves in relation to their environment (Anda et al. 2002; Padykula and Horwitz 2012; Thompson 2008). They also impact how close relationships are maintained, emotions are regulated and negative experiences are managed. (Main 1995; Wallin 2007).

Choates and Tortorelli argue that this Eurocentric theory revolves around a nuclear family mentality and does not account for how other cultures view the 'self', or how non-parental/non-human kinship figures impact the attachment process. (Choate et al. 2022) In the case of ecocentricity, for example, we explored how the internal working model of the ecocentric 'self' is in constant transaction with nature to maintain balance and harmony, and the notion that kinship in some Indigenous cultures can extend beyond human relationships to elements of the natural world. "This ecological view of kinship categorizes social obligations such as reciprocity in relationship with plants. Plants, animals, and humans are related, and each is both a producer and a consumer with respect to the other, in an endless cycle" (Youngblood Henderson, 2000, p.260).

The field of substance use and attachment theory has provided a rich foundation for how problematic substance use can be tackled, but Kazdin (2011) asserts that there is not a universal method or approach to how the theory should be applied. A variety of options for how people can conceptualize their relationship with substances is needed (Kazdin, 2011). Recognizing the Land as kin, provides us with a new avenue for relating cannabis to attachment theory and furthering the benefits we have seen evolve over the past 70 years in this field. Attachment theory in substance use disorders claims that healthy relationships and bonds are known to be beneficial when overcoming addictions or abstaining from problematic consumption of substances. Making cannabis a relative, therefore, and building healthy relationships and bonds with the Land would provide a similar effect of deterring substance use disorders. Healthy attachments to the Land transcend metaphor and provide concrete solutions to the current adverse effects of cannabis misuse.

Referring to a plant as a grandmother, teacher, person, etc. with a lineage of plant beings that brought it to life, psychologically sets the stage for a much different interaction with cannabis. In her book, *Plants Have So Much To Give Us, All We Have To Do Is Ask*, Makoons Geniusz, an Anishnaabe writer, explains that "To the Anishinaabe, cedar is called "nookomis," or grandmother. This familial name opens the line of spiritual communication and respects the plant's cognizance. It recognizes the relationship between the Anishinaabe and the cedar, a plant that revealed all of creation — natural, spiritual and physical — to a lost people." Most importantly, her book teaches that "respect and permission precede harmony." (Geniusz, 2015)

In his book, *Healing the Soul Wound,* Dr. Duran explains that the protocol he learned from different traditional providers, is not to discourage the use of a substance. Instead, he has

been taught to encourage individuals to make a relative out of the substance that they are consuming. He explains that once one exchanges information about one's lineage with the medicine and reciprocates with an offering to the plant, it completely shifts the relationship. He claims "that when counseling people to use this method, they often come back very upset because by speaking to the spirit of the medicine, it has ruined their prior abusive relationship with it. They often report that by simply attributing that personhood to the medicine they are consuming, they cannot consume it in the same way." (Duran, 2019)

By acknowledging the 'personhood' of the plant, it regains agency to change and adapt itself as a medicine in direct response to human thoughts and desires. (Hallowell, 1955; Tanner, 2004). By consistently maintaining a healthy relationship with the plant, the consumer enters into a conversation with the consumed that necessitates the agency of both actors for proper integration of the medicine. Lifshitz et al explains this by stating that "The interior and exterior environment that constitutes a self in set and setting, and which are facilitated through ritual and ceremony, affects the way that a medicine impacts the body. That is to say that a person's cognitive openness to a medicine's capabilities to heal, as well as their preparation for such an experience, is just as important as ingesting the medicine itself." (Lifshitz et al., 2018) This explains why when we make a relative out of a medicine; we feel connected to it, we trust it to take care of us as we cared for it throughout its life cycle, and we respect it by only integrating it into our bodies when needed.

Currently, researchers who apply attachment theory to substance use in the egocentric view of the 'self', highlight the security that one feels in consumption of a substance to regulate their emotions when they are unable to do this in their human relationships. (Basham 2005; Padykula and Conklin 2010; Fletcher et al., 2015; Khantzian, 2011) The Self-Medication

Hypothesis, coined by Edward Khantzian and David Duncan theorizes that self-medication is done out of the need for comfort and contact rather than for pleasure seeking when one is experiencing an alienated sense of self. The hypothesis states that lacking the ability to self-regulate and identify one's 'self', leads to eschewing the need for close personal human relationships (Khantzian 2012) (Suh et al., 2008). It also suggests that drug use to self-soothe inspires feelings in the consumer of agency, ultimate 'independence' and resilience while providing a 'secure-base' (Flores 2004; Schindler et al. 2005) to express loneliness and fear (Fletcher, 2015) through attempts of self-repair. (Flores 2004; Schindler et al. 2005)

From an ecocentric view of 'self', however, the security one feels with cannabis plant medicine could be harnessed as a teacher, who could educate on self-regulation, instead of being viewed as a substance of dependency. As mentioned above, cannabis has a great deal to teach us about homeostasis and balance. The ecocentric 'self' would recognize cannabis as another person or relative and thus, it would not mimic unhealthy behaviours of dependency towards the plant, or expect it to regulate one's emotions for them. Eco-centric approaches, such as psychologically preparing oneself for consumption, asking the plant if it can be consumed, paying the Land for what it has given you, caring for the plant throughout its lifetime and handling it with respect and positive thoughts, would not allow for such a relationship of dependency.

As Duran previously mentioned, simply addressing the plant as a relative fundamentally changed the relationship his client's had with cannabis. Building a deeper bond with plant medicine that is founded on respect, moderation, caring, and reciprocity, like Geniuz' description

of the Anishnaabe's relationship to cedar and the traditional applications of tobacco mentioned at the beginning of the article, fosters feelings of connection. Recall Dr. Gabor Mate's quotation that states, "the opposite of addiction is not sobriety, the opposite of addiction is connection". By making cannabis a relative, researchers and therapists would no longer refer to the plant as an 'attachment object'. (Hofler et al., 1996) (Flores, 2006) It would also be unfounded to claim that for insecurely attached individuals who use substances, a drug can become the only 'attachment object' in their lives. (Spiegel and Fewell 2004). The interpersonal connections formed by the ecocentric 'self', do not rely solely on improving human interactions, as is currently cited in the literature on substance use and attachment theory (Flores, 2004), instead, the cannabis plant itself can become a means of healthy attachment in its own right.

Once cannabis is understood as a relative, responsibilities and reciprocity are required. Indeed, digging your hands into the soil, watering the plant and watching it grow in an environment that it flourishes in, could be the very first steps in bonding to this medicinal plant. It may also provide an emotional connection that could aid in overcoming a sense of loss, anxiety, disconnection and emotional dysregulation. (Brennan, 2021; Thompson 2018) Making a relative out of the cannabis plant transforms the relationship from one of use, commercialization and exploitation, to one of reciprocity and respect. It highlights our interconnectedness, outlines our responsibility to live in balance with the natural world and to be accountable in our own healing. It changes our patterns of consumption to be intentional and informed and challenges us to consider the conditions wherein we are nurturing the plant and how we are giving back to its overall ecosystem. Are we growing medicine gardens or mass-producing cannabis in hot houses in a product assembly line fashion?

Building a relationship with the plant may also have implications on policy. For example, certain provinces in Canada allow individuals to grow a plant in their home, while others are only permitted to maintain a transactional relationship of purchasing it from a commercial cannabis establishment legislated by the state. (Warren, 2022) Bonding to cannabis as a relative allows us to view the plant as multifaceted, having its own intelligence and gifts to offer. As a person, we welcome it as a complex being and understand how the very plant that can induce psychosis in a human who consumes too much THC, can simultaneously be the plant that provides relief to those living with schizophrenia through consumption of CBD. (Batalla et al, 2019).

Making a relative out of the plant and unpacking our interconnectedness with the Land, goes beyond being a cultural belief or an abstract epistemological framework of the 'self'. When we begin to understand the very real implications of bonding with and creating healthy attachments to cannabis, to the Land, and to the natural world which we are an extension of, we recognize that we cannot study cannabis' effects in isolation of humans or societal relationships. Nor can we study what cannabis does to humans without also studying what humans are doing to cannabis. With an ecocentric view of 'self', we exit out of the commercial relationship that treats cannabis as a substance to be used and exploited in a unidirectional manner and delve into the world of true medicinal benefits that the plant has to offer. In return, we demand a different relationship with the plant-one that affords cannabis respect, agency and personhood.

**Conclusion:**

This paper has identified society's current relationship with the cannabis plant as one suffering from a binary debate between medical science and recreational cannabis culture. Cannabis is viewed as a substance that offers either positive outcomes or negative consequences. This discourse offers the possibility for a third option, that relies instead on one's relationship with the plant, rather than focusing solely on the 'qualities' of the plant. Currently, cannabis is understood as unidirectionally impacting humans, being 'natural' despite its substantial alterations, and as being 'medicinal' without a clear awareness of ecocentric protocols. By applying an ecocentric view of the 'self' and embedding it in the promising research that has arisen through application of attachment theory in the field of substance use disorders, we can concretely see how reconceptualizing our relationship and kinship with cannabis, can impact our interactions with it as a society.

The Mental Health Commission of Canada is urging that future research regarding cannabis be nuanced, account for the complex context of cannabis use, and go beyond studying only the possible harms associated with problematic use patterns, (MHCC, 2019) This article challenges current research, the cannabis industry and psychoeducation on cannabis to re-evaluate their egocentric perspectives in relation to cannabis. While leading scientists and psychiatrists in the area of substance use disorders attribute the improper or chronic use of substances to trauma and/or an imbalance in interpersonal relationships, the field lacks research based on an ecocentric perspective that examines the current imbalances in relationship to the natural world and to natural medicines in general. Ultimately, by recognizing our kinship to the cannabis plant and more broadly situating ourselves as a part of our environment, rather than separate from it, we begin to focus on the health and prosperity that cannabis can bring us and what we may offer in return.

**Discussion of Findings and Future Directions:**

This section is meant to elaborate on the practical and applied aspects introduced in the manuscript. There are several practical applications of the theoretical framework set out in this article that could result in concrete changes for the discourse on cannabis legalization moving forward. The applications that follow, focus on legal, political and ideological reframing of our relationship to the plant in terms of how we can afford it personhood, agency and greater respect.

**Legal and Political Applications of the Article**

Canada is a patchwork of political and legal relationships with the cannabis plant. Currently, cannabis policies are under the jurisdiction of each province and territory. This has resulted in a variety of different approaches to policy, due to the expedient process of legalization in 2018. These policies are based purely on Western scientific research and worldviews, which can often be conflicting in their findings. This means that while some provinces have allowed for citizens to grow their own plant in the household, others, such as Quebec, have maintained that cannabis can only be purchased from the SQDC, which is regulated by the province. As mentioned in the article, this restricts Quebec residents to a purely transactional relationship (Warren, 2022) to the plant rather than a relational one. Other jurisdictions, such as Nunavut, only have access to cannabis through online ordering, resulting in higher price points and a lack of accessibility, oftentimes preventing residents from accessing legal cannabis and perpetuating relationships with black market sellers. (Brown, 2019) Applying the framework laid out in this article is, therefore, challenging due to the emphasis on laws that restrict one's relationality to the plant. Moving forward, Canadian policy makers should conduct a cross-jurisdictional scan in order to map the different ways that citizens can interact with the plant. In order to better inform their policies, the government should also draw an analysis on how other sociological factors such as trauma, social determinants of health and colonization factor into consumption.

Furthermore, on a national scale, we could broaden our discourse on legalization to attribute personhood to the cannabis plant. In a 2013 Tedx Talk, Potawatomi researcher, Dr. Robin Wall Kimmerer, speaks about her nation's relationship with strawberries- also known as the berry people. When she talks about personhood, Dr. Wall-Kimmerer implores the audience to think of ways in which human rights are applied to other non-human entities, such as corporations. If personhood is granted to enterprises, it follows, that the same privilege might also conceptually allow for berries and other plants to have agency, personhood, and rights combined to the responsibilities and gifts that they fulfill in our relationship with them. She recognizes strawberries as "sovereign beings, with their own intelligences, their own wisdom, their own responsibilities." Wall-Kimmerer argues that the natural world is a source not of commodities, but gifts. She elaborates that "When something is understood as a gift and not a commodity, a door opens, an opening for the potential for reciprocity." (Wall-Kimmerer, 2013)

Dr. Wall-Kimmerer's perspective is very much aligned with the Bolivian and Ecuadorian approaches which include the agency of Pachamama (Mother Earth) in their constitutional framework. Maria Valeria Berros, explains that "This reform challenges older paradigms of progress and development, and puts the idea of harmony with *Pachamama* on center stage. *Pachamama* is no longer seen as a set of natural resources to be exploited or as a chain of natural elements that comprise the environment and must be protected. The debate goes beyond this, and it intends to establish new ways of thought and living with a claim that nature has its own rights." (Berros, 2015)

This legal paradigm shift, being adopted in other countries, allows us to take the legalization of cannabis in Canada one step further, by not only legalizing the consumption and sale of the plant, but also considering the agency of the plant itself. While the rights and personhood of cannabis corporations as well as the individual and collective rights of Canadian citizens in relation to cannabis continue to evolve, we have the opportunity to extend the same rights and personhood to the cannabis plant.

Enacting these policies would result in more ethical harvesting practices and has the potential to redefine the inherent wisdom the plant has to offer. If, when occurring naturally, the cannabis plant produces an equal amount of 2% THC (psychoactive component) to 2% CBD (antipsychotic agent), we may draw the conclusion that cannabis is attempting to apply its own protective factors against distressing psychosis. If the cannabis industry is selectively breeding for plants much higher than this 2% ratio, then the consumers and the industry should consider the sociological aspects of why they value and consume this manipulated version of cannabis that contains such a potent numbing/psychoactive agent. Rather than attributing any harmful resulting side effects to the plant, the industry and consumers must accept the moral culpability for their role in creating these unsafe conditions. Much like the example of commercial versus traditional tobacco, it places the onus back on the industry and consumers, and could propel a new conversation of how we ought to be growing a healthier cannabis plant rooted in its own prevailing knowledge.

**Harvesting Practices: Taking Care of the Medicine as it Takes Care of Us**

Dr. Robin Wall-Kimmerer acknowledges that we are not deserving of plants' medicine simply because we find it at our feet." (Wall-Kimmerer, 2013) If we want to continue to partake in the gifts the medicine bestows, we must treat it ceremoniously. In her Tedex talk and her book, *Braiding Sweetgrass*, she describes these ceremonious protocols from her nation's wisdom as The Honourable Harvest:

1. Never take the first plant that presents itself to you, for it may be the last.
2. Ask permission if you can harvest it, do not assume it is just there for the taking.
3. Listen for the answer. There may be a sign or a feeling you get intuitively that says this is not the right plant to harvest. Recognize that just because you ask, does not mean you are automatically given permission to harvest it.
4. Take only what you need.
5. Use everything you take. Do not dishonour the harvest by wasting it.
6. Minimize harm. Don't use a shovel when a trowel would do.
7. Be grateful. The Land freely gives and if we forget to be gracious and adopt a mentality of superiority, we can be rudely awakened to a poor harvest.
8. Share what you've taken. This is a way of being grateful and maintaining good relationships in our society.
9. Reciprocate the gift. Always be thoughtful of what you can contribute back to the plant and its environment as a demonstration of gratitude. This is how we maintain all healthy relationships in life.
10. Defend them fiercely....love them so much that you will not let them be lost (Wall-Kimmerer, 2013)

Finally, she claims that the honourable harvest is our *responsibility* in return for the gifts that the Earth gives us. As was mentioned in the thesis manuscript article, Youngblood-Henderson explained kinship to plants and animals in terms of responsibility. Therefore, by making a relative out of the plant and respecting its agency and personhood requires us to modify our relationship to cannabis by paying attention to how it is grown. If we were to take cannabis' personhood into consideration, with the legal protection afforded to the plant by the state, one could imagine a shift in laws that would promote healthier harvesting practices in the industry. The vast majority of both legal and illegal cannabis grow operations are unsustainable for surrounding ecosystems or are removed altogether from a natural environment. For bigger yields and higher profits, cannabis has been industrialized like other crops in the food industry or grown in controlled, sterile settings. This practice is causing catastrophic environmental impacts while simultaneously being marketed as 'natural' and 'organic'.

There are many ways to explore how Indigenous knowledge systems from around the world could impact the global cannabis industry, which would not only build a better relationship to the plant, but also implement more sustainable harvesting practices in general. (UN, 2017) The United Nations (2017) has identified Five Indigenous farming practices that contribute to sustainability; agroforestry, inter/mixed-cropping, crop rotations, water harvesting, and polyculture. While some of these are already happening in small pockets of the cannabis industry, a wider adoption of these practices could improve the quality and livelihood of the medicine, for both the plant and for our consumption of it. As with the Inuktitut concept of 'Sila' suggested earlier, there is an inter-relatedness between one's environment and one's mind,

biology, etc…Therefore, the improvement of one's environment results in the improvement of one's health and identity of self. Better harvesting practices would directly correlate to better mental and physical health outcomes. Were such measures put in place, future research could look at the correlation between agricultural practices and human health outcomes. Below are two examples of sustainable harvesting practices that could be applied to cannabis.

Agroforestry

Agroforestry is the "deliberate maintenance and planting of trees to develop a microclimate that protects crops against extremes" (UN, 2017) This approach is also a necessity to combat the impacts that the illegal cannabis industry inflicted on forests for decades. Because these grow operations were required to hide in forests to remain undetected, they clear-cut large areas and contaminated the ecosystems with poisons and insecticides. Greta Wengert, co-founder of the California nonprofit, Integral Ecology Research Centre, studies the effects of illegal grows on forest ecosystems and has noted the increased and indiscriminate use of these poisons by cartel growers in recent years. (Wengert, 2021) These chemicals are affecting cannabis, the soil and the surrounding wildlife. The legalization era of cannabis could focus on harnessing Indigenous knowledge systems of agroforestry for production over indoor grow operations, to produce more eco-friendly crops while also drawing attention to and mitigating the environmental harm being caused by illegal grow operations.

Inter-cropping

Another Indigenous farming method is mixed/intercropping, (UN, 2017) which strives to create a thriving ecosystem of symbiotic growth between plants; this improves the resilience and health

of the plants and the Land in total. (Russo, 2016) On the blog known as Project CBD, Sarah Russo wrote a piece entitled Marijuana Not Monoculture (Russo, 2016). She describes her fear, as a cannabis advocate, that the industry is based on the broken corporate model of monocropping/monoculture. This is the process of growing one crop with the exclusion of others. She cautions against this approach, as it is neither sustainable long-term, nor beneficial for the overall plant medicine. She states that "sustainable growing practices mimic what is done in nature". She challenges the buzzwords trending in the industry such as "organic" and "sustainably grown" when the industry by and large is using mono-cropping or sterile environments as their growing methods. While she acknowledges that there is a large consumer demand, she advocates for a growing method that is "conducive to healthy stewardship of the Land". She cites the Haudenosaunee example of companion planting known as the "Three Sisters Method". By planting beans, corn and squash in close proximity, the farming process is both holistic and beneficial to each plant's growth. She says that "the beans act as a nitrogen-fixer, which is essential for plant growth; the corn feeds off the nitrogen; the beans use the corn to climb on; the squash provides a source of shade and natural mulch, which conserves moisture in the soil and aids the growth of the beans and corn." (Russo, 2016)

Daniel Stein, a regenerative cannabis farmer in Humboldt, California explains that "With regenerative practices, you're creating a balanced ecosystem in the soil. You're giving the plant all that it could possibly want so that it gets to express itself to its fullest, without ever being in want of the proper nutrients and minerals. A plant's relationship with soil biology and the plants around it creates a web of mutual support" (Margolin, 2021) Finally, Kate Miller, a permaculturist who includes cannabis in her medicine garden at Alpine Botanicals in Nederland,

Colorado, expands on this practice of companion planting in terms of how it affects other organisms in the environment. She states, “even more important now that we see what’s happening to the planet, to soil fertility or lack thereof, and to pollinating insects. Pollinators such as honeybees, butterflies, bats, and other insects simply do not thrive in a monoculture.” (Russo, 2016) Furthermore, cannabis growing can go beyond intermixing with plants alone. In 2018, Yukon’s Carcross-Tagish First Nation, for example, was considering growing cannabis, along with vegetables, using aquaponics to grow salmon and waste nutrients to fertilize crops. (Barrera, 2018) Thereby focusing on the stewardship of cannabis in the greater consciousness of a knowledgeable environment, allows for the whole ecosystem-of which we are a part- to thrive. Instead of adhering to rigid attempts to manipulate our environment, we might, conversely, learn to adapt to it.

This section looked at the practical applications resulting from the theoretical concepts of ecocentricity and kinship to the cannabis plant laid out in the manuscript entitled Creating a New Discourse for Cannabis as a Medicinal Plant by way of the Ecocentric Self. The suggested applications focus on the legal, political and ideological shifts resulting from a renewed relationship to the plant. This relationship connotes the responsibilities, reciprocity and equal agency necessary for a balanced relationship with the cannabis plant. It implies that when we act as part of the environment rather than as separate from it, everyone benefits. There are ways for us to live that can promote well-being on Earth rather than obstructing it and the more connected we feel to a world that we have positively contributed towards, the better our overall health will be.

**Conclusion and Summary of the Thesis:**

This section focuses on how the objectives of the research have been met and will discuss the implications of findings. The introduction to this thesis acknowledged that the cannabis discourse often results in a binary debate that overemphasizes either the potential benefits or harms of cannabis consumption. The overarching thread throughout the paper, however, points to the fact that the perceived separateness from nature in the Western concept of self, contributes to the polarized dichotomy and that the adoption of an ecocentric view of self can provide a third option in the cannabis discourse. As the ecocentric view of 'self' can become conflated with 'Indigenous cultures' approaches to nature in general, respecting the diversity that each Indigenous nation and community brings to this discourse was cautioned in order to not fall victim to pan-Indigenization. The introduction also addressed the need to consider the approach to one's relationships to medicinal plants as medical science in its own right instead of relegating this worldview to the 'cultural' or 'traditional' domain.

The literature review further analyzed how substance use has long been discussed in relation to attachment theory, however, because the theory is rooted in a Euro-centric view of 'self' it has limited the applications for how attachment theory can be understood in relation to the natural world. Although promising research has come out of the field of attachment theory that decreases problematic use of substances when interpersonal human relationships are strengthened, cannabis and other substances are considered as only attachment 'objects'. As the ecocentric view of self is identified through kinship/in relationship to nature, cannabis achieves personhood and agency. With this lens of the ecocentric 'self' applied to the theory, therefore, cannabis is no longer considered an 'attachment object' but rather is an equal actor

in a reciprocal relationship. This poses both a challenge as well as an opportunity to harness the beneficial outcomes that have resulted from studying substance misuse in relation to attachment theory while enhancing what the 'self' and 'healthy attachment' can mean in relation to cannabis.

The manuscript further explores the gap in the literature on substance use and attachment theory by articulating how the ecocentric view of self can provide a third option that moves beyond the polarized discourse on cannabis' potential benefit or harms. The proposed alternative is rooted in how one relates to the plant. Instead of the current Western relationship to cannabis that separates humans from nature and commercializes the plant, the possibility of a familial, respectful relationship is introduced by way of ecocentricity. The manuscript concludes that making a relative out of the plant and reconceptualizing our attachment to it can fundamentally change the discourse on cannabis and reduce problematic use of it.

The notion of ecocentricity which incorporates kinship, personhood, agency and respect for the cannabis plant were introduced as core concepts in the manuscript. As such, the discussion of findings and future directions section, elaborated practical applications for how these concepts could produce legal, political and ideological shifts in the Canadian cannabis discourse. Concrete examples for legislating and harvesting cannabis were explored as opportunities that arise when adopting an ecocentric view of 'self'.

In summary, this thesis explored how the concept of the ecocentric 'self' when applied to one's relationship and attachment to cannabis, can profoundly alter the polarized debate on the plant. It points to the fact that cannabis as either a predominantly beneficial or harmful substance

is a cultural construct rooted in Western norms and it highlights the epistemological deficit resulting from a separation of humans from nature and natural medicines. In order to relate to cannabis as a medicine, one is required to question these Euro-centric norms played out in Western scientific research and cannabis culture that focus on the consumption of a commercialized product rather than a medicinal plant. In doing so, new and improved interactions with cannabis are possible.

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