EXAMINING THE EXPERIENCES OF POLITICALLY ACTIVE YOUTH IN

MI'KMA'KI WITH CLIMATE GRIEF

By

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Dalhousie University is located in Mi'kma'ki, the ancestral, contemporary, and unceded territory of the Mi'kmaq. We are all Treaty people.

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Abstract

Communities globally experience critical mental and physical health impacts due to the climate crisis. While these impacts may lead to clinical mental illness for some, the overall effects of grief or anxiety relating to the climate crisis are often reasonable responses to the challenges that communities are facing (Cunsolo et al., 2020). To this effect, the term climate grief refers to any psychological distress, cognitive dissonance, anxiety, and emotional turmoil that people/communities experience as a result of the climate crisis and ecological change (Albrecht, 2020; Askland & Bunn, 2018; Cunsolo & Ellis, 2018). Young people are not only going to experience the worst impacts of the climate crisis, but many have dedicated their lives to fighting the climate crisis through protests, strikes, rallies, education, careers, and politics and their constant and close engagement with the climate crisis intensifies their experiences of grief (Fisher, 2016). Furthermore, young people who are marginalized and face oppression due to racism, sexism, homophobia, transphobia, ableism, colonialism, classism, or xenophobia are more likely to be frontline activists facing environmental violence (Waldron, 2018) and have more complex experiences of climate grief. This research is taking place in Mi'kma'ki, the ancestral and contemporary lands of the Mi'kmaq (Mi'kma'ki, n.d.). The research population encompasses self-defined politically active youth ages 12-29. The purpose of my research is to engage politically active youth in Mi'kma'ki in reflection on climate grief, to identify connections between political activism and climate grief, and to use arts-based inquiry and intersectional analysis to explore their experiences.

Chapter 1 – Introduction

1.1 – Statement of the problem

The emotional and psychological responses to climate change and environmental loss are of increasing concern as the risks of the climate crisis heighten. Loss of livelihood, loss of homes, lack of safety, loss of meaningful natural beauty in their communities, and fear for the future often lead to mental health challenges, psychological trauma, and feelings of hopelessness (Cianconi et al., 2020; Cunsolo et al., 2018; Fisher, 2016). Youth are more at risk of adverse mental and physical health impacts due to the climate crisis, especially those who are heavily involved in work, education, or activism related to climate change. It is crucial to understand how politically active youth define, describe, and experience the psychological and mental impacts of the climate crisis to identify how we, as a society, and we, as people, can meaningfully support them in the face of the climate crisis.

Ecological grief, climate grief, ecological anxiety, climate anxiety, environmental melancholia, Anthropocene horror, climate trauma, climate illness, and solastalgia[1] are terms that refer how people experience ecological loss and destruction (G. Albrecht et al., 2007; G. A. Albrecht, 2020; Askland & Bunn, 2018; Clark, 2020; Clayton, 2020; Cunsolo et al., 2018; Kaplan, 2020; Panu, 2020; Stolorow, 2020; S. Taylor, 2020; Wardell, 2020). Marginalized communities are of higher risk for the adverse impacts of climate change both mentally and physically due to environmental racism, sexism, homophobia, transphobia, ableism, or xenophobia (Sanson et al., 2019; Waldron, 2018b). Additionally, Black and Indigenous communities are often displaced by new developments (industry, gentrified neighbourhoods) as a result of the colonial state (Waldron, 2018a), which induces unique experiences of climate grief.

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[1] **Solastalgia** is uniquely defined in relation to place and climate-induced migration as it is the psychological trauma or response as a result of loss of place (G. Albrecht et al., 2007).

Communities globally have long created specific vocabularies to express their experiences and emotions. They have also participated in rituals to collectively process emotions and heal, including grief, in the form of religion and community traditions involving art, dance, music, activities, and food (Nelson-Becker & Sangster, 2019) and personal rituals that aid in understanding the past, present, and future (Anderson, 2010). While rituals often aid in creating harmony in communities and maintaining social structure, they can also be an important tool in galvanizing action towards transformative social change (Baum et al., 2006; Geertz, 1973).

My research is a component of a larger national-level research project on climate grief that is looking at how communities describe and process their climate grief by identifying vocabularies and rituals. These vocabularies and rituals will be determined through integrating multiple knowledge systems and the artistic process including social science, natural science, ecology, fine arts, and education. This larger research project is a 2-year interdisciplinary research project led by Dr. Melanie Zurba at Dalhousie University and Prof. Erica Mendritzki of the Nova Scotia College of Art and Design with research team leads Dr. Lisa Binkley of Dalhousie University, Dr. David Busolo of the University of New Brunswick, Dr. Andrew Park of the University of Winnipeg, and Dr. Roberta Woodgate of the University of Manitoba. This research is funded by the New Frontiers in Research Grant. The climate grief research project is focused on understanding the experiences of diverse communities across Canada, specifically in the Atlantic Coast and the Boreal Forest ecoregions, with climate grief. My research focuses on the experiences of politically active youth in Mi'kma'ki with climate grief. Youth will face the worst effects of the climate crisis, and as such, are more likely to experience negative mental and physical health effects. In addition, numerous youth have become politically active to combat the climate crisis and are constantly faced with the realities of the climate crisis. Climate grief has

recently become a prevalent topic of discussion and engagement throughout the youth climate and social justice activism communities in Canada, yet there is little research exploring the depth of their experiences.

Youth have higher rates of depression and anxiety related to climate change than other age groups (Majeed & Lee, 2017) and are often spurred to become politically active by feelings of fear for their future and climate anxiety (Fisher, 2016). Children and youth are more likely to experience Post-Traumatic Stress Disorder (PTSD), anxiety, depression, phobias, panic, sleep disorders, cognitive defects, and intellectual disabilities as a result of the climate crisis (Sanson et al., 2019). The climate crisis will also likely disrupt family structure, community structure, and social cohesion leading to increased domestic violence, child abuse, conflict, disrupted parenting, education, and social engagement (Sanson et al., 2019). A recent global survey of youth found that the vast majority of young people are extremely worried about climate change (60%), are afraid, sad, anxious, angry, powerless, or helpless (>50%), find the prospect of the future to be frightening (77%), and feel that governments and leaders have failed to care for the planet and humanity (Marks et al., 2021). This recent global survey identified that the most prevalent cause of climate anxiety in young people is inadequate government action on the climate crisis, which causes youth to feel betrayed and abandoned by the people in power (Marks et al., 2021). Young people's experiences of the climate crisis yield anxiety, depression, and other serious mental health challenges, but they also manifest emotions like anger/bitterness, fear/anxiety, guilt/self-criticism, hopelessness/despair, resolve/determination, aggression/violence, and sorrow/hurt (Gelderman, 2021; Sanson et al., 2019).

Youth are more likely than older generations to change their personal behaviour and advocate for more political action in response to climate destruction (McDonald-Harker et al.,

2020). Youth political activism tends to involve collective action through social media digitally and in-person protests, marches, and demonstrations (Boulianne et al., 2020). Youth climate movements also focus on creating alternative futures that have eliminated social injustice and environmental destruction (Grosse, 2019). While there have been recent efforts to formally engage youth in the decision making on climate change, youth are often tokenized in the process without being given the opportunity to provide meaningful input (Spajic et al., 2019). Although climate justice movements have made coalitions with social justice movements like Black Lives Matter, Indigenous land sovereignty movements, 2SLGBTQIA+ rights movements, and migrant rights, the whiteness and privileged positions that which most climate justice activists hold often reinforce power hierarchies and lead to tokenizing the voices of marginalized communities (Adam, 2017). Youth today, especially marginalized youth who have faced systemic oppression, have had to mature quickly to face the existential crises humanity is facing, yet they are often not taken seriously by decision-makers (Grauer, 2020). It has become clear, however, that when youth are engaged meaningfully they are motivated to collectively fight against both social and environmental injustices (Morgan, 2020).

Despite the fact that many people experience climate grief due to ecological loss and changes to their lives, there are very few formal spaces and processes for people to work through these emotions (Mühlbacher, 2020). Climate grief is difficult to find space to process because climate destruction and government action are prominent throughout daily life and the grief is chronic, long term, and inescapable (Marks et al., 2021). Access to shared spaces of mourning, however, is crucial and the lack of such spaces often leads those plagued by climate grief to cope through numbing their pain, avoidance, blaming others, and disconnecting from themselves and their communities (Gelderman, 2021). Access to appropriate and welcoming spaces is even more

rare for members of marginalized communities experiencing the brunt of the climate crisis including youth, women, gender queer people, 2SLGTBQ+ people, racialized communities, newcomers, and disabled people (Mühlbacher, 2020). Spaces and programs that provide youth with an opportunity to contribute to the stewardship of land in their communities are examples of appropriate spaces that aid in alleviating feelings of helplessness associated with climate grief (Sanson et al., 2019). While the potential impacts of climate change on youth are well reported in the literature, little research has considered how politically engaged youth describe and engage with climate grief. The climate crisis will be a threat for generations to come, thus it is critical to understand youth responses to climate change and equip them with the tools and support to process their grief and remain resilient in the face of climate destruction.

1.2 – Research purpose and objectives

The purpose of this study is to understand how climate grief is expressed and experienced by politically active youth in Mi'kma'ki[2] through arts-based participatory methods and intersectional analysis. This study also aims to take a decolonized approach to inquiry, and one way in which this will be done is by limiting to the geographic scope to traditional Indigenous boundaries, rather than colonial borders. Anticolonial work is grounded in place-based connections and imaginary: Glenn Coulthard states that in Indigenous culture that:

"the importance of sharing, egalitarianism, respecting the freedom and autonomy of both individuals and groups, and recognizing the obligations that one has not only to other people, but to the natural world as a whole…serves as the ethical foundation from which many Indigenous people and communities continue to resist and critique the dual

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[2] This research is situated in Mi'kma'ki, the land of the Mi'kmaq. Mi'kma'ki encompasses the colonial provinces in so-called Canada of Nova Scotia, Prince Edward Island, the Gaspé peninsula, Newfoundland, and most of New Brunswick (*Mi'kma'ki*, n.d.)

imperatives of state sovereignty and capitalist accumulation that constitute our colonial

present" (Coulthard, 2010).

Researchers can resist colonialism by recovering traditional knowledge and upholding it to resist

its erasure and replacement by Western ways of knowing and thinking (Carlson, 2017). White

settler academics, like myself, have the responsibility of "making space, and pushing back

against colonial institutions, structures, practices, mentalities, and land theft" (Carlson, 2017).

Objectives

1) To identify what vocabularies and rituals politically active youth use to describe their

emotional responses to climate change.

2) To explore how learning processes and outcomes relating to climate grief affect the

motivations of politically active youth

3) To examine the impact of being politically active on feelings of climate grief

1.2.1 Researcher positionality

Understanding and acknowledging my positionality as a researcher is key to carrying out

effective and safe research. I hold an integrative worldview, described by the Institute for

Cultural Evolution as "primarily characterized by a self-reflexive attempt to bring together and

synthesize elements of other worldviews, or of domains that in other worldviews tend to be

viewed as mutually exclusive". I am a youth climate activist myself and a member of many

organizations and youth-led movements focussed on climate and social justice in so-called

Canada, thus I am a member of the youth climate activism community that I will be engaging

with for this research. I am also a member of the 2SLGBTQIA+ community and identify as

pansexual and as a non-binary person. I am a white settler on this land. I am also able-bodied and

come from a financially secure background and I acknowledge that I am conducting this research

from a place of privilege on stolen land. I was raised in Toronto, Ontario on the land of the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples. My family immigrated to so-called Canada over six generations ago and I have mixed-European ancestry including British, Scottish, Irish, German, and Jewish. I have two mothers who are lesbian and members of the 2SLGBTQIA+ community, and a younger brother. I was introduced to activism at a young age and attended my first Toronto Pride Parade as a baby. I spent a lot of time in the wilderness growing up and was brought up to value and appreciate the natural world, and to be aware of the losses that humans are causing it. I have had firsthand experience of climate grief, as a youth activist, and as someone who has observed the massive ecological changes occurring throughout my hometown of Toronto, and where I reside now in Mi'kma'ki. I was personally motivated to conduct this research because of my own experiences with climate grief. I have been aware of environmental and climate issues my whole life, having grown up in an environmentally and socially conscious household, and as such there was not a time that I was not concerned with the state of the planet. In addition, witnessing the impacts of the climate crisis and understanding its severity has brought me to tears on many occasions, kept me up at night, forced me to reconsider my plans for my future, and prevented me from taking part in activities that may have brought me joy. On some days, my climate grief makes it difficult to get out of bed and enter into the world that is destroying the planet and humanity. Through my own experience, as well as understanding and knowing about the experiences of my peers in the youth climate community and at school, I felt strongly that this research was needed to validate and communicate our experiences and work towards a climate resilient and equitable future.

I am familiar with many of my research participants because of my connections within the activism community and have friendships or acquaintance with most. I have also been in the public eye as a former political candidate for office and a prominent activist, which could influence my relationship with participants. I will be conducting this research as a settler on the unceded land of the Mi'kmaq in Kjipuktuk. Through my experience as a youth climate activist and frequent participant in protests, rallies, conferences, community meetings, and various community organizations throughout Mi'kma'ki, I have had the wonderful opportunity to meet and get to know many other youth and activists within this region. I have also built trust and relationships with other activists through this work. This work and my connections to the activism network have made it clear that personal relationships and communication go a long way to involving activists in research or campaigns. Almost all activists, including myself, have experienced burnout and many are chronically overcommitted and over-extended. This is a major factor in their experiences of climate grief, as is their willingness to participate in new endeavours, like research, even when their experiences are the most crucial to hear from in the context of research like this. My relationships and trust that I have built within activism networks may allow me to surpass some of these barriers to access the participants who are most in need of this research.

1.3 - Geographic Context/Study Area

Figure 1 Map of Mi'kma'ki, the land of the Mi'kmaq retrieved from Paul, 2000.

This research is situated in Mi'kma'ki, the land of the Mi'kmaq. Mi'kma'ki encompasses the colonial provinces in so-called Canada of Nova Scotia, Prince Edward Island, the Gaspé peninsula of Quebec, Newfoundland, and most of New Brunswick (*Mi'kma'ki*, n.d.). Mi'kma'ki is divided into seven districts based on the geographic features of the land including Unama'kik aq Ktaqmkuk ("foggy lands" and "land across the water" which includes Cape Breton Island and Newfoundland; Epekwitk aq Piktuk ("lying in the water" and "the explosive place") which includes Pictou County and Prince Edward Island; Eskikewa'kik ("skin-dresser's territory") which covers from Guysborough to Halifax County;Sipekni'katik ("wild potato area") encompassing Halifax, Lunenburg, Kings, Hants, and Colchester counties; Kespukwik ("last flow") encompassing Queens, Shelburne, Yarmouth, Digby, and Annapolis counties; Siknikt

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("drainage area") encompassing Cumberland County in Nova Scotia, Westmorland, Albert, Kent, Saint John, Kings, and Queens counties in New Brunswick; and Kespek ("last land") including land north of the Richibucto and parts of the Gaspé peninsula (*Mi'kma'ki*, n.d.).

The Mi'kmaw people have lived in Mi'kma'ki for over 11,000 years and all places within Mi'kma'ki hold current and historical significance for the Mi'kmaq and settlers alike (*Mi'kmaq History – Mi'kmaq History Month*, n.d.). The treaties signed between the Mi'kmaq and the British Crown were denoted the "Peace and Friendship treaties", the first of which was signed in 1725, in the effort to end hostilities and violence between colonists and the Mi'kmaq (Archives, 2020). Later, in 1752, another peace treaty was issued and signed calling for peace, an end to violence, and the protection of hunting, fishing, and trading rights for Mi'kmaw communities (Archives, 2020). Although peace treaties were signed and agreed upon by the British Crown and the Mi'kmaq, colonial violence remains prevalent and continues to threaten the health, safety, and survival of Indigenous peoples throughout this land. Mi'kmaw communities and activists continue to have to fight for their rights to clean drinking water, safe homes, traditional hunting and fishing rights, and sovereignty over their lands. Some recent fights have included the Stop Alton Gas movement, the Save Owls Head Park movement, the Moderate Livelihood Fisheries Movement, against police and colonial violence, and constant struggles for adequate mental and physical health care, action on the climate crisis, and acting to find and protect Missing and Murdered Indigenous Women and Girls.

The grassroots Mi'kmaw grandmothers and water protectors stood for eight years to resist the implementation of an Alton Gas pipeline by the Shubenacadie River, and succeeded (*Stop Alton Gas*, n.d.). They installed a treaty truckhouse (a place for gathering) along the Shubenacadie River as a physical site of their resistance to Alton Gas, advocating for their right

to fish, and highlighted the government's lack of consultation with Sipekne'katik First Nation (*Stop Alton Gas*, n.d.). Settlers across Mi'kma'ki stood with the grassroots grandmothers and Sipekne'katik First Nation to stop Alton Gas and many rallies, fundraisers, and events were held across the province to raise awareness and funds to support the Mi'kmaw grandmothers and water protectors to continue their work (Birrell, 2021).

The Mi'kmaq maintained their right to fish for food, social and ceremonial purposes, and livelihood throughout the treaties they signed with the Crown, however, those rights have not always been honoured (Mi'kmaq Rights Initiative, 2021). The Federal Government of so-called "Canada" and the Province of Nova Scotia typically only honour fishing licenses to Mi'kmaw communities for communal commercial fisheries that are owned and operated by the Band, and fishing licenses in which the fish cannot be sold, but a court case in the Supreme Court of Canada in R. v. Marshall ruled that the third type of fishery, that to maintain a moderate livelihood should be upheld (Mi'kmaq Rights Initiative, 2021). Although the Supreme Court of Canada ruled to enact fishing licenses for moderate livelihood fisheries, the federal government never amended the laws and Mi'kmaw communities are still prevented from fishing for a moderate livelihood without a license. As a result, many communities have begun to exercise their right to fish for a moderate livelihood and have been rising up in resistance to the federal government and their lack of action (Mi'kmaq Rights Initiative, 2021). Mi'kmaw communities have faced and continue to face environmental racism and the violence of colonialism. Their fight for their rights, sovereignty over their land, and autonomy are intimately intertwined with the fight for climate and environmental justice and are therefore integral to understanding the experiences of activists living in Mi'kma'ki.

1.4 Organization of thesis

This thesis is organized in seven chapters. The first three chapters provide the

background for the research, a scoping review of the relevant literature identifying key gaps, the

theoretical context, and the methods that were used in the field work collecting the data and its

analysis. Chapters four and five present results and discussion responding primarily to objectives

one and two and touching on results pertaining to objective three; and chapter six is a discussion

primarily focused on objective three. Chapter seven is the concluding chapter that summarizes

the research, highlights its contributions to the academy and the youth climate activism

community, identifies any limitations, and provides recommendations for future research.

Chapter 2 Literature Review:

Climate grief is a concept that transgresses the boundaries of numerous fields of literature. The fields of psychology, sociology, political science, philosophy, anthropology, health, environmental studies, and education all have relevant literature to these questions of how politically engaged youth experience climate grief. In this scoping review of the literature, I identify knowledge gaps in the understanding of how youth respond to climate change as well as trends in parallel methods and theories used in the fields of environmental education, social action research, and health which converge in their applications to youth, climate change, and identifying rituals and vocabularies used to describe climate change through art. I will begin with a review of the concepts of climate grief in the literature and youth political activism (major themes of the research), and then focus on the literature relating to methodology and applicable theory.

2.1 Climate Grief Definitions

Climate grief, eco-anxiety, ecological stress, eco-angst, climate despair, eco-nihilism, climate nihilism, climate trauma, ecological grief, environmental melancholia, climate anxiety, Anthropocene horror, and solastalgia while distinct, are all enhanced by and situated in emotional responses to the climate crisis. These emotional responses may be activated by various environmental stressors including exposure to extreme weather events, forced migration, rising sea levels, desertification, global pandemics, political instability, public or personal tragedies caused by the impacts of the climate crisis, or exposure and understanding of the state of climate predictions, current impacts, and rising inequities as a result (S. Taylor, 2020).

Climate anxiety refers to a rational and practical anxiety about the state of the world based and the evidence presented by climate science and does not imply a mental illness of the individual (Marks et al., 2021).

Ecological anxiety is defined as worry and concern over anticipated future losses and threats to life, whereas ecological grief refers to an emotional response to current losses of ecosystems and nature (Cunsolo et al., 2020). Anxiety is often-used to describe the emotions that people have in regards to climate change, but it is also a clinical term and is laden with medicalized connotations (Panu, 2020). Uncertainty, unpredictability, and uncontrollability are key factors in increasing levels of general anxiety, all of which are key components of the threats of the climate crisis (Panu, 2020). Anxiety is typically defined as "future-oriented and related to a threat of significant uncertainty" and can take many different forms including fear/worry because of uncertainty, anxiety because of unprocessed emotions, existential anxiety related to the human condition and life, and anxiety disorders or pathological medicalized anxiety (Panu, 2020). Anxiety serves two roles in psychological or emotional responses to the climate and ecological crises; the first being an adaptive role that spurs individuals and communities to take action to mitigate and adapt to the climate crisis, and the second being maladaptive in which individuals or communities become immobilized by fear and are unable to take action (S. Taylor, 2020).

Environmental stress is a more general term that refers to any emotional, psychological, or existential distress caused by current and likely future environmental/climate disruption (Wardell, 2020).

Eco-angst refers to despair and angst instigated by the exposure to depressing and catastrophic news reports, scientific discoveries, or media depictions of the ecological and climate crises (Wardell, 2020).

Climate despair refers to the despair relating to the existential threat of the climate crisis and the moral imperative to mitigate and adapt to the impacts and was coined in an effort to distance the discussion from mental illnesses (Wardell, 2020).

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Environmental melancholia is a constant and persistent feeling of being conflicted and overwhelmed about the state of the world which makes it difficult to proceed with social expectations of what it means to be human (Wardell, 2020).

Eco-nihilism and climate nihilism are the sentiment that nothing matters unless there is a radical philosophical and cosmological shift in worldview (Wardell, 2020).

Climate trauma identifies how the lived experience of individuals and communities in the Anthropocene and with the impacts of the climate crisis is trauma (Wardell, 2020).

Ecological grief refers to grief felt due to the loss of ecosystems and the biodiversity of more than human species within them. Ecological grief was coined in a study describing the psychological responses of the Inuit to the loss of sea ice and traditional lands in the arctic and the work of mourning in the face of massive ecological and social loss (Cunsolo et al., 2018). The pain of ecological grief is enhanced by the societal expectation that non-human beings and the land are not grieveable and that grief is only acceptable when applied to the loss of human kin or friends (Willox, 2012). Ecological grief can also result from anticipating loss and grieving that potential/likely future loss (Willox, 2012).

Solastalgia is more uniquely defined in relation to place and climate-induced migration as it is the psychological trauma or response as a result of loss of place (G. Albrecht et al., 2007). Albrecht describes solastalgia as "a form of homesickness one gets when one is still at home" and is derived from the concepts of nostalgia and solace (G. A. Albrecht, 2020). The suffix of "algia" refers to general feelings of distress, melancholia, and grief, whereas the prefix of "sol" refers to both solace and desolation (G. A. Albrecht, 2020). Solastalgia results when communities or individuals have a deep connection with and love for the wilderness and land

around them, and they feel the most pain when that connection is destroyed (G. A. Albrecht, 2020). For example, residents of New South Wales, Australia experienced solastalgia as a result of three mines that dramatically altered the ecology of the surrounding area and made it unrecognizable (Askland & Bunn, 2018).

Anthropocene horror is a more general sense or feeling of horror about the rapid and immense global environmental/climate change due to the prevalence of news coverage, scientific future modelling, and both direct and indirect threats everywhere in the world due to the climate crisis (Clark, 2020). Anthropocene horror does not refer to any particular event or impact on communities but rather ever-present feelings regarding the public threats like powerlessness, social malaise, social and political failure, (Clark, 2020). Anthropocene horror is so prevalent, that some people may be unaware that they are experiencing it as it may manifest as a general sense of worry or unease at the state of the world.

Eco-paralysis is the experience that there is not enough action or any possible action that one, or humanity, could take that could address the climate crisis and as such people become paralyzed and are unable to take action (Stone, 2021).

Experiences of climate grief can also lead to more severe mental illnesses and psychological responses like conflict avoidance, fatalism, fear, helplessness, and resignation (Clayton, 2020). There are many factors that may put individuals more at risk of experiencing serious mental health impacts including their geographic location, pre-existing disabilities, chronic illnesses, socioeconomic and demographic inequalities (Clayton, 2020). The mental health risks are especially important in regards to children and youth, those who are most concerned about the climate crisis, because they can experience changes in: behaviour development, memory, executive function, decision making, and scholastic abilities (Clayton,

2020). These mental health impacts can lead to higher rates of aggression, violence, higher incidences of mental health crises and can drastically influence how people relate to each other because of the loss of social identity and cohesion, increased hostility, violence, and intra- and interpersonal aggression (Clayton, 2020). A study of the mental health of young women in Nova Scotia in relation to the climate crisis found that most participants experienced hopelessness, avoided thinking about climate change, and exhibited fear and anxiety for the current and future impacts of the climate crisis (Stone, 2021). Many of the young women participants avoided thinking about the climate crisis in order to safeguard their mental health because they felt that the future was doomed, doubted that humanity could address the severity of the climate crisis, that it was too late to do so and that it is only going to get worse (Stone, 2021). BIPOC people and youth already suffer high rates of mental illness due to non-climate and non-environmental factors, such as exclusion, racism, intergenerational trauma due to colonialism, etc. Therefore, climate grief may compound or worsen these already-existing mental health issues (Lucente et al., 2021). Additionally, the COVID-19 pandemic has disproportionately impacted BIPOC youth mental health (Lucente et al., 2021), and as such many are already experiencing poor mental health. The climate crisis will compound the poor mental health of many BIPOC folk because they disproportionately experience adverse impacts of the climate crisis through higher rates of extreme weather events, air pollution, food insecurity, social inequalities, and voter suppression (Duc Bo Massey et al., 2021).

For many activists, grief due to loss like extinction of species, is one of their primary motivations for becoming involved with activism (Pike, 2016). Environmental activists feel the loss of non-human beings and are often in perpetual mourning because of the magnitude of the crisis leading to their activism (Pike, 2016). Marginalized communities, especially Indigenous

communities, experience this perpetual mourning to an even greater extent as they are more

vulnerable to the crisis (Cunsolo et al., 2020). They are also more likely to have a closer

connection to the world and the non-human beings living in it (Pike, 2016). Furthermore, studies

in queer ecology illuminate the fact that queer folks and other marginalized communities are

often drawn to environmental/climate activism because their experiences encourage them to be

empathetic (Mühlbacher, 2020). Although many at the margins are drawn to climate work, there

seems to be a lack of access to intersectional spaces to process their complex grief (Mühlbacher,

2020). Youth are naturally situated at the margins of society as they hold little political power,

and most politically active youth hold many intersecting marginalized identities, placing them

further at the margins. A recent global survey of climate anxiety in youth found that most

respondents felt hopeless and terrified about their futures and the future of the planet (Marks et

al., 2021). The current literature fails to examine how climate grief impacts politically active

youth specifically and does not determine whether there are mediums for youth to process their

climate grief. It also neglects to analyse climate grief from an intersectional perspective, leaving

out the potential impacts of systemic oppression and discrimination on feelings of grief.

2.2 - Youth political activism

Youth are at the forefront of social movements for the betterment of society, and the

climate crisis is no different. Youth are statistically and anecdotally more concerned about

climate change than their parents and older generations (Boulianne et al., 2020). Social media is

often an important tool in youth political movements that provides connection across boundaries

through online groups, hashtags, and online events (Boulianne et al., 2020) but it can also

enforce social norms and exclusion (Powers & Engstrom, 2020). Youth are challenging the

status quo and impacting political decisions in terms of the climate crisis, migrant justice, Black

Lives Matter, Indigenous rights and sovereignty, protests on gun violence, and numerous other

movements but they are often viewed by those in power as having no right to participate in discussions on those issues (Josefsson & Wall, 2020). Youth are often misperceived as apathetic and disengaged from politics, however, a referendum vote in Scotland that lowered the voting age to 16 found very high levels of voter turnout by younger youth (Breeze et al., 2017). While youth also hold many marginalized identities beyond their age, ageism is prevalent globally in decision-making and cultures that devalue youth insight, knowledge, and importance in considerations about their future (Josefsson & Wall, 2020).

For many youth, activism is their escape from despair and helps them manage their climate grief or anxiety about the present and future (Sanson et al., 2019). Climate grief is primarily based on a rational comprehension of climate science and is not unreasonable, illogical, or pathological, although it is often dismissed as such by adults or authority figures (Sanson et al., 2019). Although activism can be a solution to grief, it often leads to burnout and massive mental strain on youth activists (Sanson et al., 2019). Youth activist despair is exacerbated when they feel like the climate crisis is their burden as young people to solve alone (Nairn, 2019). When youth activists are not taken seriously and their actions are brushed off by parents, and adults in power, they are more likely to burnout because they feel responsible for solving climate change and guilty that they are unable to solve all the problems facing the world (Nairn, 2019). When youth join the climate movement, they are usually hopeful and idealistic but they end up having to leave because they become disillusioned and burnt out (Nairn, 2019). BIPOC activists, particularly those who are Black, experience burnout and activism fatigue to an even greater extent because of the longevity of theirs and their ancestors' engagement as activists through marches, protests, writing, resistance, and speeches for centuries, and the hurt that experiencing racism everyday causes them (Winters, 2020). Black activists are drained mentally,

physically, and emotionally due to the constant and persistent inequalities and atrocities that they face, the intergenerational trauma and racism, and the institutional systems that constantly cause them pain and death (Winters, 2020). Whether burnout is caused by micro and macroaggressions within society and activist spaces, or by the weight of the burden that is climate change, it is widespread and persistent and threatens the mental health and wellbeing of youth activists.

Self-care in the capitalistic, colonial, white supremacist, heteropatriarchal society in which we live in is often a form of radical resistance. The multiple intersecting crises that humanity is facing are threats to the health and wellbeing of all, especially BIPOC communities and activists, and other marginalized groups. Threats to the health and wellbeing of BIPOC activists needs both individual and community responses and care (Ahmed, 2021). BIPOC activists face systemic oppression and white supremacy in society at large, but also within social justice movements, which leaves them little time for introspection and personal contemplation, to no fault of their own (Ahmed, 2021). Activist self-care is radical political action, especially for BIPOC activists, because society and whiteness are constantly pushing back against it. Contemplative practices are some forms of radical self care which are practical and transformative because they incorporate spiritual, mental, and physical components and help people to clarify their feelings and thoughts to engage with themselves, their communities, and activism more thoughtfully, empathetically, and responsively, ultimately enhancing the effectiveness of their activism and the movements as a whole (Ahmed, 2021). For personal and system transformation, it is also necessary to create inclusive radical spaces that welcome all community members to participate in loving and nurturing their full and complete selves (Ahmed, 2021). While there is some literature on radical self-care to support activists, most of it

remains vague and activists/communities face many barriers to be able to carry out the necessary radical and contemplative self/community care to persist in a system built against them.

Movements like Black Lives Matter are largely youth driven, and the youth work to affirm that there is diversity under the identity label of Black (or any other group identifier) including various ethnicities, sexualities, gender identities, abilities, and socioeconomic statuses (Pender et al., 2019). Many BIPOC youth are and have always been at the forefront of climate and environmental justice movements, however, the media, those in power, and general society treat them far differently than their white peers. For example, at the United Nations Climate Change Conference, youth from the Fridays for Future, who were mainly white, held a protest to push for more aggressive action on climate change and were celebrated by attendees, praised for their dedication to the cause, whereas, at that same conference BIPOC youth held a similar protest and were met with disapproval, policing, their safety was threatened, and they were forcibly removed from the conference (Bullon-Casis, 2021). White youth are often valorized and provided special attention/lenient treatment for their actions as they are still viewed as children, whereas BIPOC youth are viewed and treated as adults (Bullon-Casis, 2021). In response to this mistreatment and idolization of white youth climate activists, one BIPOC youth expressed their frustration as "I've been doing this work for years, so have many of others in the Global South. This is racism. It's white Europeans getting attention for what we've been doing all along" (Bullon-Casis, 2021). Millennials and youth engaged in social movements tend to be the folks who are spearheading intentional inclusion and intersectionality in activism, but there is still a long way to go (Pender et al., 2019).

Intersectionality is a framework that considers the interplays of identities and power dynamics in the discrimination of gender, race, sexual orientation and acknowledges that no

social justice issue exists in isolation (Cho et al., 2013). Intersectional approaches to the climate crisis are crucial because "the same interlocking idealogue and behaviours that led to the COVID-19 pandemic, the climate crises, anti-Black racism, colonisation of Indigenous peoples, and gender discrimination display a human relationship with nature and each other that is immensely violent, exploitative, and destructive" (Daniel & Dolan, 2020). Furthermore, marginalized youth are more likely to be drawn towards political and civic engagement through an intersectional lens than privileged youth (Godfrey & Cherng, 2016) and political activism often mitigates some of the negatives effects of racial/ethnic and other forms of discrimination on the mental health of marginalized youth (Hope et al., 2018). While there is great interest in the literature and traditional/social media in youth activism related to climate change and social justice, the literature does not go far enough to critically examine the systemic factors that oppress youth and negatively impact their mental health. The literature also fails to examine the intersectionality of the youth climate movement with other youth-led social justice movements and does not indicate the overlap between the many movements.

The advent of social media as a key tool in youth organizing has created new grammars and vocabularies to describe political action. Social media has catalysed globalized connections between youth and has introduced the idea of "Glocal" movements, which work to ground global issues (like climate change) in local situations (O'Toole & Gale, 2010). Youth political activism has transformed traditional activism and created vocabularies that are more relatable to personal and interpersonal relationships in their everyday lives and are centered on individual and collective identities (O'Toole & Gale, 2010). Social media provides key connections for youth communities, especially for 2SLGBTQIA+ youth who are often isolated at home and school, through intimate storytelling through social media (Ridder & Bauwel, 2015). The concept of

intimate storytelling as a medium for fostering meaningful connections is grounded in a critical

humanist framework which recognizes personal narratives but also emphasizes their connection

to larger cultural processes (Ridder & Bauwel, 2015). Youth movements and the youth activists

within them have an especially powerful story to communicate because they are in a position of

moral authority as the inheritors of the world (Eide & Kunelius, 2021). Youth activism is very

focused on the climate science and integrating their personal and lived experiences of the climate

crisis and are thus able to reach a larger and more diverse audience than climate scientists alone

(Eide & Kunelius, 2021). Social media is a key focus in the literature on youth political

movements in its use to galvanize and connect youth across the globe behind critical issues and

has been examined as a medium for marginalized youth to connect when they otherwise might

be isolated. The literature, however, does not explore the use of social media to create

communities centered on climate justice or whether social media facilitates collaboration

between different climate and social justice movements or how language used in social media

translates to overarching vocabularies and rituals used by youth surrounding climate change and

activism.

2.3 - Background on Youth Activism in Mi'kma'ki
　　　　Youth in Mi'kma'ki have been pushing for action on the climate crisis for years. There is

a rich history that spans decades and continues on in the present. In the time of the first Earth

Day in Canada on April 22nd, 1970, many grassroots environmental movements led by the youth

of that time were prevalent. One particular movement was the vibrant back-to-the-land

movement on Prince Edward Island (MacEachern & O'Connor, 2016). The back-to-the-land

movement involved rejecting urban/suburban live in favour of relocating to rural and back

country locations to live in a more natural, land-based state (MacEachern & O'Connor, 2016).

PEI was an optimal location for many back-to-the-land participants and many children grew up

isolated in the woods or on their farms. The back-to-the-land movement created strong

communities between families opting into it and created communal spaces for care and support

through the challenges of returning to the land (MacEachern & O'Connor, 2016). In the similar

era of the 1970s, then teenager, currently MP and former leader of the Green Party of Canada,

Elizabeth May and many other local youth were involved in a grassroots movement advocating

against aerial insecticide spraying in forest on Cape Breton Island, Nova Scotia (Laski, 1983).

The energy of activism continued on, and a notable period where there was a resurgence was the

early 2010s during the "Idle No More" movement which brought numerous blockades and

actions to Atlantic Canada led by many women and youth (McMillan et al., 2013). The "Idle No

More" movement started as a protest against Bill C-45, an omnibus bill introduced by former

Canadian Prime Minister, Stephen Harper that neglected the rights and sovereignty of

Indigenous communities and allowed for little environmental assessment on the development of

projects (Blackburn, 2012). Idle No More continues to organize and respond to environmental

issues and Indigenous rights, often specifically supporting Indigenous Youth and protecting their

land.

Youth in Mi'kmaw and African Nova Scotian communities are often at the forefront of

environmental and climate justice movements, especially in Shelburne, Nova Scotia, where

youth have been at the forefront of the Black Lives Matter movement and the South End

Environmental Injustice Society (K. Johnson, 2021). African Nova Scotian youth are incredibly

active in their communities, one such example is Hope Blooms, a youth-led social enterprise in

the North End of Halifax in which youth learn to cultivate urban gardens and grow organic fruits

and vegetables that are distributed to those in need in the community ("Organic Urban

Agriculture Program for Youth | Halifax, NS," n.d.). Youth in Mi'kma'ki have also been leading

the calls for changes to policing and defunding the police from the 2SLGBTQIA+, Black/African Nova Scotian, Mi'kmaw, disabled, and newcomer communities (Farahbakhsh, 2021). Many, if not most, of the youth in Mi'kma'ki at the forefront of the climate movement are also members of the 2SLGBTQIA+ community and are often faced with othering due to their identities and actions (Barraclough, 2021).

Youth from Potlotek First Nation who are involved with the Bras D'Or Lakes Collaborative Environmental Planning Initiative are also working with elders to implement and ensure Two-Eyed Seeing in Environmental and Climate work (CBC News, 2022). Two-Eyed Seeing is a concept coined by Elder Albert Marshall and Murdena Marshall along with Cape Breton University Professor Cheryl Bartlett collaborated on how to integrate the knowledge of Western Science and Indigenous Traditional Ecological Knowledge to most effectively manage and mitigate the ecological and climate crises (Institute for Integrative Science & Health, 2004).

Youth involved in iMatter Youth Halifax pushed the Halifax Regional council to adopt a Climate Inheritance Resolution committing to ensuring a liveable Halifax for current and future generations and taking the action that is necessary to get there (Cooke, 2018). The youth of iMatter were then heavily involved in the development of HalifACT 2050: Halifax's climate action plan and sat on the development committee. Youth engagement and activism on the climate crisis in Mi'kma'ki does not stop at the municipal level. The Halifax branch of the Our Time Movement in 2019 of youth that pushed for a Green New Deal for Canada organized a town hall for over 250 Halifax residents to give their input on what a Green New Deal for Canada could look like, campaigned to elect climate champions in the 2019 federal election, and hosted multiple events/fundraisers in support of Mi'kmaw water protectors (*Our Time - Halifax | Facebook*, n.d.). The year of 2019 was especially active for youth across Mi'kma'ki. The

Thinkers Lodge in Pugwash, NS and the Centre for Local Prosperity held a Youth Retreat on

Climate Change, organized by local youth leaders from across the region, that brought together

youth concerned about climate change from all areas of Mi'kma'ki ("2019 Youth Retreat on

Climate Change," 2019). The retreat culminated in a tree planting and commitment by

participants to push for systemic change and decolonization to ensure a liveable future for all and

centered Indigenous youth who led the attendees through multiple ceremonies. Later in 2019, the

School Strike 4 Climate Halifax (a proponent of the global climate strike movement), organized

one of the largest strikes/mobilizations in the history of Nova Scotia in which over 10,000 people

marched to demand action on climate change in Halifax, and across Mi'kma'ki (CBC News,

2019). The School Strike 4 Climate Halifax, Nova Scotia Youth for Climate Action (located

along the South Shore of Nova Scotia), and many other climate strike groups continue to

organize and hold strikes across Mi'kma'ki to advocate for action on the climate crisis, as well as

other issues of injustice.

Most recently, during the 2021 Nova Scotia provincial election, many youth were

engaged as candidates, volunteers, campaign managers, and advocates for the election of

candidates concerned about the climate crisis. For example, the Green Party of Nova Scotia

fielded 33% candidates under the age of thirty, had youth organize and write their platform, and

had many youth in leadership roles as campaign managers, official agents, and other lead

volunteer roles (Willner-Fraser, 2021). Many young people are also at the forefront of the New

Brunswick political parties, including the leader of the NBNDP Mackenzie Thompson.

Additionally, many of the Forbes top 30 under 30 sustainability leaders and the Starfish

Canada's top 25 under 25 environmentalists are from Mi'kma'ki (Vasil & Robinson, 2021).

Youth in Mi'kma'ki are very politically active and engaged from politics to non-profit

organizing, to leading community programs and outreach, and as such are in a unique position in their experience of the climate crisis.

2.4 - Background on status of youth in Mi'kma'ki

The youth of Mi'kma'ki are facing countless crises and barriers to safety, a high quality of life, and wellbeing including poverty, houselessness, the impacts of the climate crisis, rapidly rising tuition rates, lack of COVID-19 safety in schools, lack of a living wage, unemployment or precarious employment, and pervasive discrimination for many. These crises exacerbate youth experiences of climate grief. Many youth face multiple social and economic disadvantages which not only leave youth vulnerable to the impacts of the climate crisis, but are also increased by the climate crisis. Youth activists are often fighting for their right to survive and thrive in the face of the climate crisis and for their survival in the face of the social and economic crises they face. Nova Scotia, in particular has the highest rate in Atlantic Canada and third-highest nation-wide child poverty rate, with very little reduction over the years (Frank et al., 2021). Nearly one in four children are living in poverty in Nova Scotia, and children who are visible minorities are much more likely to be living in poverty compared to non-visible minorities (Frank et al., 2021). Additionally, close to one third of people of age of employment living with disabilities live in poverty, leading to many who are forced into inescapable cycles of poverty (Frank et al., 2021). A major factor impacting the poverty rates in this region is the lack of a living wage. All of the provinces in Mi'kma'ki have minimum wages well below the liveable wages for the area, often over ten dollars below the calculated livable wage, leaving many forced to work multiple jobs, unsafe jobs, or be forced out of their homes (Saulnier, 2021). These low wages and lack of protections for workers disproportionately impact youth in Mi'kma'ki, especially those who are already living in poverty, and it lands many on the streets (Saulnier, 2021). Nova Scotia, and much of Mi'kma'ki, is facing a far-reaching housing crisis leaving many, especially youth, and

those who are marginalized, without a roof over their head leading to increased levels of stress, morbidity, mortality, social exclusion, illness, and disease (Housing for All Working Group, 2021). The COVID-19 pandemic has only exacerbated the housing crisis. Youth who are 2SLGBTQIA+, BIPOC, or disabled are more likely to experience houselessness because of landlord discrimination, violence from roommates, landlords, or neighbours, and job discrimination leaving them with little funds for housing (Housing for All Working Group, 2021).

Many youth have faced increased mental illness and mental health challenges as a result of the COVID-19 pandemic, particularly along the domains of depression, anxiety, irritability, and hyperactivity. Studies have shown that close to 70% of children and adolescents in Canada have experience a deterioration in their mental health over the course of the pandemic (Cost et al., 2021). Features of the COVID-19 pandemic emergency measures that have adversely impacts youth mental health have been the closure of schools, recreation centres, the cancellation of organized activities, and the disruption of social ties and community spaces (Cost et al., 2021). Overall, quality of life for young people in Mi'kma'ki has decreased over recent years and is unliveable for many, forcing youth to leave this part of the country, leave their communities, their homes, in search of better job prospects and more available housing. Youth in Mi'kma'ki are facing numerous systemic barriers and discrimination that are decreasing their quality of life and drastically impacting their mental and physical health. These decreases in quality of life inform their engagement in the climate crisis and experiences of climate grief.

2.5 - Visions of the Future

Many young people are reconsidering their career, familial, travel, and reproductive plans in the face of the global climate crisis. A study of young Americans found that over 60% of respondents were highly concerned about the carbon footprint and environmental impact of having children and that 97% of respondents were extremely concerned about the quality of life that potential children would have because of the realities of the climate crisis (Schneider-Mayerson & Leong, 2020). Most respondents had a negative view of the future due to climate change and felt that it would be immoral or wrong to bring children into a climate disrupted world in which they would face destruction, insecurity, and lack of safety (Schneider-Mayerson & Leong, 2020). Some participants who had already had children felt guilty for having done so and regretted having children because of their feelings of hopelessness and despair about an apocalyptic, dying world in the climate changed present and future (Schneider-Mayerson & Leong, 2020). Most participants in a study of Nova Scotian young women's mental health related to climate change had reservations about birthing children because of the uncertainty as to whether there would be a safe planet for their children and worried that they would be judged by their peers, their own guilt, and society should they have children (Stone, 2021).

A dying world and apocalypse is constantly foretold in all forms of media from novels, social media, documentaries, films, to public discourse (Nairn, 2019). Youth are faced with conflicting social expectations regarding their futures. Parents, teachers, and authority/mentor figures in their lives encourage them to make personal choices that best represent them and have the highest possibility of success and simultaneously delegitimize their concerns that their future will be unliveable (Threadgold, 2012). Many youth have a dissonant view of the future in which they view the future as apocalyptic and unliveable but also believe that they will be able to achieve success in their careers (Threadgold, 2012). The impacts of the climate crisis are still

long in the future for many, and the attitudes of adults/authority figures exacerbate those feelings particularly because "this sense of political powerlessness seems likely to continue whilst young people's rights are continually abused, they are treated as scapegoats and blamed for all manner of things in the omnipresent media moral panics about them, and they are constantly talked *about* rather that *to* or *with*" (Threadgold, 2012).

For many, it is much easier to imagine the end of the world rather than to imagine and build a care-based, ecofeminist, anti-racist, gender-inclusive, post-capitalist, multispecies, and anti/decolonial future but it is possible to do so through reckoning with the horrors of the past so as to open ours minds and imagine possible better futures (Di Chiro, 2021). To imagine these just futures, people must embody environmental justice and situate themselves in their physical place in the world including knowledge of the history of the land, learning from the Indigenous peoples, communities, and non-human relatives and from there supporting resistance of colonial trauma and ecological collapse (Di Chiro, 2021). To decolonize/Indigenize societal relationship to the land and each other it is necessary to hold and view the brutal crimes that were and are being committed against the land and Indigenous peoples, take responsibility for it, and build a reciprocal, healing relationship with the land and Indigenous peoples (Di Chiro, 2021).

The arts also play a major role in imagining better futures. This is a critical juncture in time in the recovery from the COVID-19 pandemic in which many have become aware of the systemic injustices and oppression in society and may refuse the return to a status quo (Hess, 2021). Musiking (different methods of engaging with music through listening, performance, or creating) provides the opportunity for people to imagine the future, build relationships with each other, and inspire social change, including addressing white supremacy, colonialism, heteropatriarchy, ableism, and all societal oppression (Hess, 2021). Musicking is differentiated

from solely making music as it allows educators and learners to experience and understand music in the socio-cultural context in which it exists (Odendaal et al., 2014). Music has a unique potential to foster existing social habits while also catalysing transformative experiences towards new social habits and relationships, and thus can be crucial in end-of-world times (Odendaal et al., 2014). Feeling the pain of the "dying world", the historical and present trauma and violence that dominant colonial society has committed upon Indigenous peoples, the land, and all marginalized peoples is necessary to be able to conceptualize futures in which injustice is eliminated.

Apocalyptic images, stories, and narratives painting the climate crisis and other current socioeconomic crises as the end of the world are narratives rooted in white supremacy and colonialism, and many BIPOC scholars and youth aim to counter those narratives (Davidson & da Silva, 2021; Mitchell & Chaudhury, 2020). Many argue that the concerns that humanity is facing the end of the world are primarily rooted in fear for the loss of white supremacy, and ignore the fact that most BIPOC communities have been existing in a state of apocalypse for centuries (Koch, 2021; Mitchell & Chaudhury, 2020; Stuchul et al., 2021). The environmental and climate injustices that are deeply rooted in capitalist and colonial efforts through the dispossession of Indigenous people's land, plantation slave labour, economics, mass incarceration, and the continuation of segregation make the power of whiteness and colonialism in present and future narratives clear (Di Chiro, 2021). Apocalyptic futures narratives reinforce racist and colonial assumptions (Gram-Hanssen et al., 2021) because the Anthropocene has emerged from colonial status and domination, racist violence, genocide, and it is heavily rooted in fears of the "other". These fears of the "other" often refer particularly to fears of racialized folks, "taking over" white institutions and countries through higher birth rates, higher numbers of

climate refugees, and higher political instability (Davidson & da Silva, 2021). Given that the climate crisis is a product of colonization, the mitigation and adaptation to the crisis must be based in decolonization (Gram-Hanssen et al., 2021).

The current future narratives also rely on the assumption that there is only one possible future, and one universal experience of that possible future which negates the experiences and knowledge of Indigenous peoples and other BIPOC folks globally (Mitchell & Chaudhury, 2020). The narratives of "saving humanity" and "saving the planet" are reminiscent of the narratives of colonization and often literally sacrifice BIPOC lives for the "good" of humanity, placing BIPOC folks as inferior to their white counterparts in an effort to maintain "rational life", "knowledge", and "civilized society" (Mitchell & Chaudhury, 2020). While the literature on BIPOC futures and the racist, colonial nature of white supremacist visions of the end of the world is vast, this discussion has not permeated public discourse and media in the way that apocalyptic visions have, and as such there are still gaps in the understandings of BIPOC visions and understandings of the future.

Cli-Fi or Climate Fiction is prolific in mainstream media consumption whether through films or novels that illustrate dystopian climate-disrupted futures (Kaplan, 2020). The proliferation of Cli-Fi is illustrative of rising social anxieties and anticipation of the catastrophic and apocalyptic impacts of the climate crisis and can create an experience of pre-traumatic stress (Kaplan, 2020). Earlier dystopian Cli-Fi emphasized the possibility of a technological future in which technological solutions succeeded at mitigating the climate crisis, but newer dystopian Cli-Fi illustrates that technology is not the sole solution to surviving the climate crisis and reaching a utopic future, but that the root causes of the climate crisis and injustice also need to be addressed (Hawkes, 2018). Environmental/climate documentaries are also prevalent and often

feature gut-wrenching or heart-breaking imagery with the goal of shocking and scaring the audience into concern for and action on the climate crisis (Craps & Olsen, 2020).

In contrast to white colonial narratives of the future that include end of the world apocalyptic sentiments requiring a saviour (usually a white male), BIPOC visions of the future emphasize the plural nature of futures and envision the creation of solidarity, coalitions between groups and community, and the strengthening of community across race, gender, sexuality, species, generations, and temporality in the effort to eliminate the oppressive power structures of whiteness and colonialism (Mitchell & Chaudhury, 2020). These visions require a plural reality and future to encompass the multiple worlds that exist and comes about through struggling and refusing settler-colonial practices, being in relation with one another through radical sovereignty, and eliminating the false separation of humans from non-human beings (Jules & Scherrer, 2021). Building relations with one another and strengthening communities is possible through radical hospitality, fostering friendships, caring for the needs of the community, offering food and shelter to strangers, and hosting/accepting the otherness of the "other" (Stuchul et al., 2021). In caring and providing for one another, people unlearn capitalism and contribute to creating a different world in which we turn towards each other and the land, which frames growing food as growing power, healing, building skills, and sharing with one another (Daniel & Dolan, 2020; Stuchul et al., 2021). This radical hospitality in BIPOC communities was observed and experienced throughout the coronavirus pandemic, and models how communities might respond to the impacts of the climate crisis (Stuchul et al., 2021).

A collective, decolonized future requires that people enact and live in "right relations": "the obligation to live up to the responsibilities involved when taking part in a relationship to humans, other species, the land, and the climate" (Gram-Hanssen et al., 2021). Being in "right

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relations" involves listening deeply, self-reflection, creating space for other beings, and being in action which is a continuous infinite process and requires the participants to be affected and altered by the process (Gram-Hanssen et al., 2021). BIPOC future visions also require acknowledging and understanding historical narratives and redefining those historical narratives to be ones of resilience and resistance (Doyle, 2020; Schumann et al., 2021). The descriptions and illustrations of BIPOC visions for the future are vast and inspiring, however, most of the literature does not focus on BIPOC youth visions for the future, which remains a clear gap. There are many discussions of futures ideas and visions of various groups, whether that be youth, BIPOC communities, Queer communities, or others which sometimes miss the intersectionality of identity, as individuals belong to more than one group and thus is it difficult to understand the experience and visions of BIPOC youth for the future.

2.6 - Rituals & Storytelling

Rituals are both individual and communal processes. In mourning, each individual has their own unique experience of the loss or tragedy but there is also a shared experience of grief within the group or community who has lost someone or something (Willox, 2012). Rituals can be gatherings of mourning like funerals, memorials, protests, vigils, eulogies, obituaries, and are often long-term processes that are repeated over time (Willox, 2012). Grief and mourning rituals can be transformative experiences that help people and communities to regain environmental consciousness and reconcile their love for the world (Craps & Olsen, 2020). These rituals can help people find hope in the face of massive tragedy and crisis (Craps & Olsen, 2020). Cafes, peer support groups, online support groups, and community discussions around grief, specifically climate grief, can help people in their mourning by validating and normalizing their experiences (Wardell, 2020). Communal rituals for processing climate grief are particularly important because the systems of capitalism and neoliberalism have led to a shared sentiment of being

alone at the end of the world and collective trauma (Wardell, 2020). To process one's own trauma, one must also address and come to terms with the trauma of others, this is explained well by Stolorow : "In order to tackle the overwhelming perils of climate change, we must include in our dwelling on earth an emotional dwelling with one another that renders shared apocalyptic anxiety more tolerable" (Stolorow, 2020).

Storytelling orally, through writings, plays, and visual art has served as ritual and a form of resistance throughout history and is capable of reproducing different ways of seeing and acting in the world fostering empathy and social action (Gladwin, 2017). Storytelling arts-based engagement is often used with communities as a form of ritual to stimulate action on climate change. Art installations and experiences have the ability to increase awareness about environmental issues, foster understanding of the issues through embodied experiences, and provide opportunities for transformative learning through art creation (Inwood & Kennedy, 2020). Collective art experiences, in particular, also allow for participants to build connections with each other and become more open and understanding of each other's experiences (Inwood & Kennedy, 2020). One example of arts-based community action is a community knitting project based in Scotland which created artwork in response to changes in arctic tern migration patterns, which were a result of increased sea surface temperatures (Burke et al., 2018). Burke et al. (2018) examined how the artwork altered their perception of the climate crisis and found that it increased participants' concern and comprehension. Another study focused on the use of a print making project of migratory birds to encourage creative collaboration, sharing of ideas and expertise, and action among teachers at the Ontario Institute of Studies in Education (OISE) and was investigated through surveys and semi-structured interviews with the teachers involved with the art creation (Inwood & Kennedy, 2020). Arts-based activities have also been carried out in

conjunction with scientific conferences on climate change and one specific study explored the

use of art-based activities during a stakeholder engagement conference on the Iberian Peninsula

(Galafassi et al., 2018). The study aimed to deepen the understanding of the science, provide an

immersive aesthetical and artistic experience with an opportunity for reflection, and allow for

collaborative discussion through a grounded theory approach with participatory and collaborative

knowledge creation (Galafassi et al., 2018).

The literature on arts-based community actions related to climate change primarily

engages with the general public, rather than those who are already engaged with climate change

and environmental work. Most studies are focused on the ability of art-based methods to educate

about environmental issues and reflect on individual impacts on the environment, rather than

reflecting on emotions relating to the climate crisis. Art created collectively through workshops

can serve as a method to develop connection and collective understanding within a group and

create a safe space for openness and sharing (Woodgate et al., 2017; Zurba & Berkes, 2014).

While it can be inferred that arts-based methodologies would be appropriate to aid communities

in processing climate grief, there is little literature which explores this directly.

2.7 Arts-Based Methods

The arts foster transformative change and help people to comprehend the complexities of

humanity and the planet. The arts and humanities are crucial in education to build the capacity in

students to understand and act meaningfully in the world as they foster necessary skills and

emotional capacities like improvisation, intuition, spontaneity, lateral thought, imagination, co-

operation, trust, inclusion, openness, risk-taking, provocation, deconstruction and more that are

key in building new worlds (Eernstman & Wals, 2013). The arts facilitate learning and

understanding of the world through relationships, intersections, networks, emergences, and

systems rather than rational and linear ideas which is necessary to respond to the crises of

COVID-19, climate change, colonialism, globalization, digitization, and social injustices

(Maggs, 2021). In addition, the arts are the main source of creative and innovative thinking

needed for discovering meaningful solutions to the climate crisis and healing from climate grief,

particularly because art allows people to embrace uncertainty and fuzziness to create powerful

pieces (Eernstman & Wals, 2013). Art is also open-ended and allows for multiple

understandings, ideas, and connections which is supportive of large-scale systemic change

(Kagan, 2012). Art is capable of facilitating cultural change and bridging the gap between

climate science and social change because it creates meaning making through embodied,

sensory, and presentational forms of engagement (Yakamovich, 2019).

The arts have been incorporated in the environmental and sustainability education fields

grounded in storytelling, exploration, and personal identity transformation. A study focused on

the civic engagement of young people given education in sustainability in Australia used the

theory of action competence to examine the relationship between sustainability education and

meaningful engagement and participation by youth in their community, civil society, and the

political sphere (Henderson & Tudball, 2016). This study engaged the learners and equipped

them with the skills to take action to defend their rights through co-created curriculum

(Henderson & Tudball, 2016). A similar school-based example took place with an interracial

anti-racist youth activist group in which students led sit-ins in the school to advocate for action

on social justice issues and through those demonstrations that resisted the hierarchy within the

school, valued multiple knowledge systems and perspectives, and supported participants to have

difficult conversations around justice issues (Rombalski, 2020). These demonstrations allowed

the student participants to disrupt the oppressive systems and structures within their schools, the

same ones that have caused and continue to cause the environmental and climate crises, and it allowed them to develop anti-racist new worlds within their communities (Rombalski, 2020). Another study focused on the use of visual arts practice at a high school in Portugal through multiple facets including *in art* by including arts-based resources for education on climate change, *through art* by having an 11th grade class read climate fiction and create art as reflection, and *with art* by engaging a class of 11th grade students in a 30-day challenge to make an environmentally conscious change in their personal lives into art (Bentz, 2020). The art created by students following their participatory engagement was then analysed through a holistic interpretive lens and intuitive inquiry (Bentz, 2020). The artistic engagement aided in providing education on climate change centered on building creative imagination, reflexive perspectives, understanding socio-ecological complexity, resistance to political structures and systems, and motivation for direct action (Bentz & O'Brien, 2019). These studies focused on using participatory and arts-based methods to provide students with opportunities to build their skills for empathy, compassion, civic and political engagement, and action for justice.

Many of the studies focused on the use of arts-based methods in environmental education also applied the transformative sustainability learning theory (a subset of transformative learning theory focused on sustainability) in a program called "Science, Camera, Action" (see Figure 1), which focuses on the "Head, Hands, and Heart" model that works to engage learners through cognitive, affective, and behavioural engagement (Trott, 2020). Transformative sustainability learning theory is also applicable to transdisciplinary learning that works to encourage art and science integration through the incorporation of cross-disciplinary environmental action projects in school curricula (Trott et al., 2020). The arts and humanities specifically help to provide transformative education by teaching youth the necessary life skills to face the global challenges

of inequality and climate change by employing embodied pedagogies that support the development of self-awareness, emotional regulation, and affective empathy (Robbie & Warren, 2020). These embodied pedagogies based in theater, performance, and dance use the theories of informed naivete and grounded theory to encourage the development of transformative awareness and innate understanding of each other and the world (Robbie & Warren, 2020). Another method for facilitating transformative learning is by engaging students in projects and activities that solves real-world events and authentic challenges facing society with a focus on emancipatory learning (Pranjali Upadhyay & Han, 2021). An emancipatory focus encourages students to engaged in a deeper and more comprehensive understanding and vision of the world and then take action and advocate for change, the goal is to empower the youth, especially youth of colour, those in poverty, and those who are otherwise marginalized (Pranjali Upadhyay & Han, 2021). Many marginalized youth are alienated in discussions of the climate crisis because educators neglect to discuss the climate and environmental injustices that communities are presently facing, and teach climate change as disconnected from their lives when it is truly integral to their experiences (Pranjali Upadhyay & Han, 2021).

While there is substantial literature on teaching young people through arts-based methods to understand climate change and motivate them to act, these learning theories have not yet been applied to youth activists. The literature illustrates youth participants as blank-slates who begin the study as either apathetic to climate change or ignorant, but does not discuss the high likelihood that many of the students involved were already concerned about the climate crisis and therefore does not discuss the potential uses of these theories and methods in helping youth to cope with climate grief. The existing literature provides key grounding for using an arts-based

approach to understand and facilitate transformative learning and also highlights a major gap that this research could help fill.
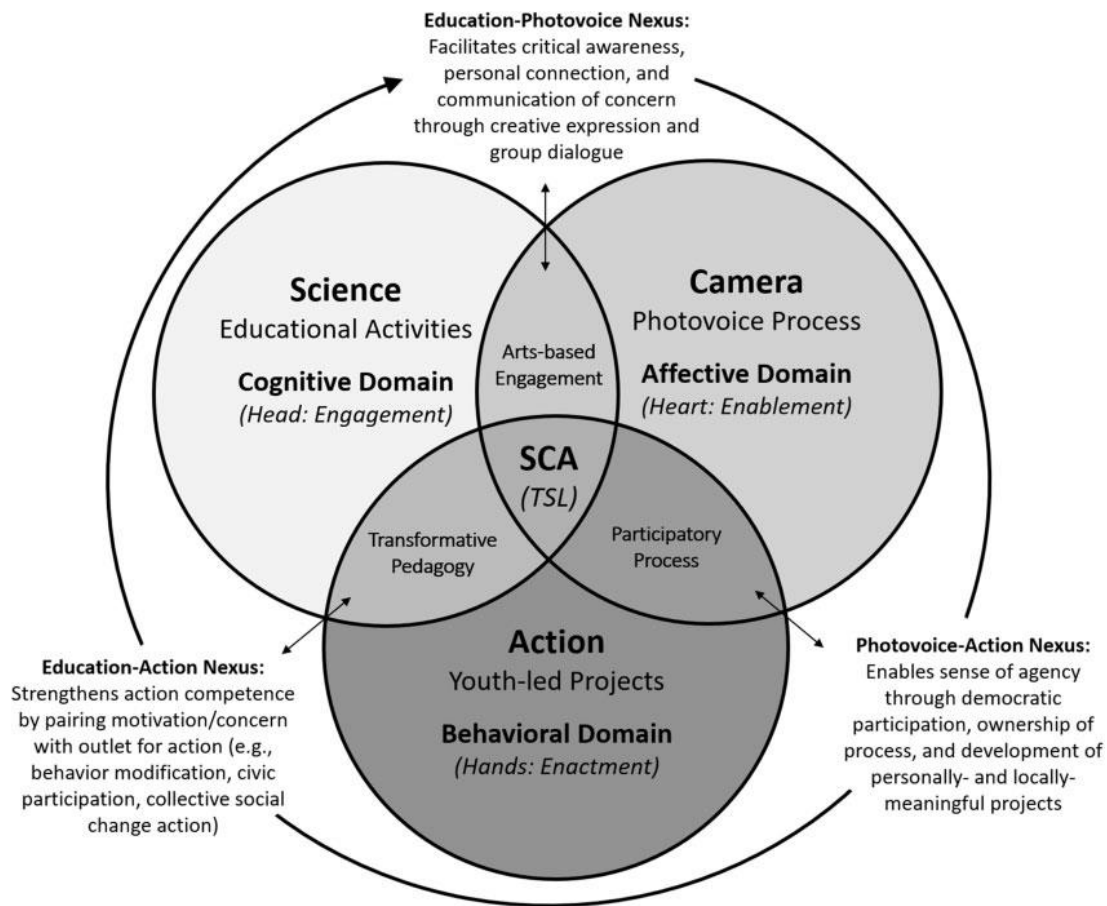
Figure 2 *Towards facilitating children's constructive climate change engagement, the primary components of the Science, Camera, Action! (SCA) program integrated transformative pedagogy with arts-based methods (Trott et al., 2020)*

2.7.1 Poetry as Method

Poetry has been used as a form of healing ritual for centuries because of its ability to effectively capture the lived experience of individuals and delve into the complexities and context of their existence and process/respond to trauma that they have experienced (Apol, 2017; Szto et al., 2005). Poetry resonates with many people and it allows for emotion to be expressed through subtle tones and textures leading to deep portrayals of the human condition (Szto et al., 2005). It is also a way for people to communicate emotions that they might not otherwise say

because it provides an accessible medium for taking risks and learning about oneself and relationships with others and the world (Cahnmann, 2003). Poetry helps youth and students to use and develop their own voices and creates a clear and fresh method to communicate the complexity and richness of individual and group experiences (Cahnmann, 2003). It can also evoke the reader or listener's empathy by bringing them to share the experience of the poet. Poetry is best suited for communicating lived experiences in which there is a sense of frailty and mortality in the face of the human condition (existential angst and threats) (Apol, 2017). Although the literature makes it clear that poetry is a very effective tool to aid in the exploration of complex emotions and the communication of lived experiences to others, there has been little research done on the use of poetry to explore feelings of climate grief.

Poetry has been used in research with youth in many different contexts. One study used poetry in an exploration of the experiences and perceptions of youth with disabilities in which the poetry provided a more accessible and effective medium for the youth to tell their own stories and engage audiences through intellect and emotion (Hodges et al., 2014). The youth with disabilities were led through a collective poetry workshop in which they shared their own personal experiences and listened to others which fostered a shared sense of identity and agency through writing and performing their own poetry (Hodges et al., 2014). Follow-up interviews with the youth participants found that they felt the poetry had allowed them to become more open with the people in their lives and that it broke down the barriers between the disabled youth and others, leading to greater understandings and transformation of behaviour (Hodges et al., 2014).

Poetry can also serve as a method to empower youth by providing them with a tool to critically question society and challenge their conditions (Call-Cummings et al., 2020). It also

serves as a call-to-action to audiences to listen to their lived experiences and make a change for the better (Call-Cummings et al., 2020). Poetry can be used to promote social justice as it can provide unique insight into the lives of others through evocative data and instigate critical discussion of issues through interpreting poetry (Foster, 2012). A study done with refugee youth in South Africa used poetry and narrative methods to explore their experiences and help increase a sense of hope and agency among the youth using a critical reflexive methodological framework (Norton & Sliep, 2019). The refugee youth were from marginalized and impoverished communities facing a lot of discrimination and violence, and the sharing of stories through poetry was used to promote a sense of wellbeing and inspire collective action by exploring their lived experience with trauma and creating a safe space for them to connect and share through five participatory poetry workshops (Norton & Sliep, 2019). The youth participants found that the poetry and sharing of life stories was empowering and allowed those outside of their experience to understand them better and that the collective poetry created a strong group identity and collective action efforts (Norton & Sliep, 2019). Another study focused on the use of spoken word poetry, freestyle rapping, and having youth participants conduct research to support youth participants to take action (Yeom et al., 2020). This study took place in a school setting and hoped to take youth suggestions and ideas for curriculum development and teaching focused on culturally relevant anti-racist topics. The use of spoken word poetry and rapping allowed intergenerational participants to explore topics and ideas that they wouldn't otherwise while also removing the power hierarchy barriers between students, teachers, and staff (Yeom et al., 2020). The literature makes it clear that poetry can serve as a way to connect youth participants and help them reflect and communicate their lived experiences to each other and a broader audience.

2.8 Theoretical Context
2.8.1 Intersectionality Framework

Intersectionality was first introduced by Kimberle Crenshaw in 1990 in the context of the intersectional identities of women of colour who experience both male violence against women (misogyny, physical abuse, and rape) and anti-black racial violence (Crenshaw, 1990). Crenshaw emphasized that both anti-racist and feminist discourses tend to ignore the compounding effects of multiple marginalized identities on the experience of individuals who might experience violence and discrimination on account of their sex and race (Crenshaw, 1990). While intersectionality initially began as a theory for understanding the compounding discrimination and violence that people of multiple marginalized identities (sexuality, gender, sex, race, socioeconomic class, (dis)ability, language, etc) experienced, it is often applied as a lens through which research is conducted.

Intersectionality can be used as a frame of analysis in research and teaching, and provides a lens through which to examine specific phenomena or contexts (Cho et al., 2013). It is often used in examining grassroots activism and how advocacy strategies are developed that are not isolated to one issue or concern (Cho et al., 2013). Intersectionality is also a method of analysing power relationships and identifying systemic inequalities and can contribute to the analysis of individual experiences in relation to society (Cho et al., 2013). The impacts of the climate crisis will be experienced differently by individuals and communities depending on their race, class, gender, ethnicity, age, (dis)ability, and sexuality and the compounding effects of these identities that construct their position in society will define how vulnerable they are to climate change (Osborne, 2015). Furthermore, applying a lens of intersectionality to research encourages the use of alternative methods that work to deconstruct the power hierarchies between researchers, institutions, and participants and towards methodologies focused on justice (Osborne, 2015).

Intersectionality is intricately connected not only to the analysis of climate grief, but also to exploring individual and collective experiences of youth activists in relation to climate grief and systemic oppression.

2.8.2 Transformative Learning Theory

Transformative learning theory originated in the field of adult education and was first introduced by Jack Mezirow in 1978 (Anand et al., 2020). This theory was initially based in adult education because of its voluntary, self-directed, experiential, and collaborative nature (E. W. Taylor & Cranton, 2012). Mezirow first identified transformative learning through a grounded theory approach to adult education that explored how adult women in higher education experienced fundamental change and made meaning of their new found knowledge and education (Anand et al., 2020). It focused on examining how a person's worldview changes significantly, what constitutes a transformative learning experience, and what activities evoke transformation (Anand et al., 2020) and has continued to develop since its conception.

Mezirow identified that transformative learning results from a change in a person's frame of reference – which constitutes the frame in which they view and understand the world through associations, concepts, values, feelings, pre-conditioned responses, and assumptions – to be more inclusive, self-reflective, and integrative of diverse experiences (Mezirow, 1997). Frames of reference have two components the first being habits of mind which are more broad, abstract, and habitual ways of thinking, feeling, and acting defined by the societal, cultural, and political norms; the second being points of view which are how habits of mind are expressed by individual value judgements, attitudes towards ideas and issues, and feelings (Mezirow, 1997). There are six components that of one's habit of mind: 1) epistemic – the way in which we learn (styles, preferences) 2) sociolinguistic – social norms, cultural expectations, how we use

language and imagery to communicate and are deep and unconsciously absorbed 3) psychological – how people see themselves, self-concept, needs, inhibitions, anxieties, fears that may have its roots in childhood and upbringing (e.g. if one's parents had high, unattainable expectations of them as a child they might feel guilt and motivation over never being able to achieve enough) 4) moral-ethical – encompasses conscience and morality, the justness of one's actions, how they respond to injustices in the world 5) philosophical – worldview, philosophy, religious or spiritual connections and values 6) aesthetic – values, attitudes, tastes, judgements, and standards about beauty, all of which are interdependent and interrelated (Cranton, 2016).

Transformative learning requires that both communicative and instrumental learning occur. Communicative learning is driven by communications with other people, understanding social cues and identities, building relationships with others, understanding different perspectives around issues so as to be able to determine one's own view and position (Zurba et al., 2021). Instrumental learning is gained through building technical knowledge and skills that help the learners to become more effective at achieving their goals and objectives (Zurba et al., 2021). A key feature of transformative learning is that it refers to long-term behavioural changes (Hoggan et al., 2017) that transform the deeply ingrained habits of mind through communicative and instrumental learning (Mezirow, 1997). Transformative learning is "triggered by an experience that cannot be accommodated by our frame of reference – either experience is rejected or the frame of reference must change" (Anand et al., 2020).

A key piece of transformative learning is self-reflection to understand one's frame of reference and critically reflect on the associated assumptions and this transformative self-reflection is often stimulated by reading a book, hearing a different point of view, engaging in specific problem solving, assessing one's own ideas and beliefs (Mezirow, 1997). Another major

component of facilitating transformative learning is engaging in discourse as learning is understood to be a social process, discourse is one of the most effective ways to support meaningful learning. Mezirow, however, points out that for discourse to be effective in facilitating transformative learning there must be a situation in which the participants "have all the necessary and full information available to them, are free from coercion, have equal opportunity to assume the various roles of discourse (advance beliefs, challenge, defend, explain, assess evidence and judge arguments), become critically reflective of assumptions, are empathetic and open to other perspectives, are willing to listen and search for common ground or synthesis of different points of view, make a tentative best judgement to guide actions" (Mezirow, 1997).

Transformative learning is not a linear learning process but a ten-step process has been described in the literature in which the learners undergo 1) A disorienting dilemma (something that does not fit within their frame of reference) 2) Self-examination of their beliefs and views 3) critical assessment of their assumptions 4) Recognition of "shared" nature of human experience 5) Exploration of options for new ways of being and acting in the world 6) Planning that course of action 7) Acquiring the knowledge and skills to carry out that course of action 8) Provisional trying on of new roles and ways of being in the world 9) building competence in those roles and self confidence 10) Reintegration into society (Anand et al., 2020). Transformation may be spurred by a single major disrupting event, but it may also happen slowly and over time as a gradual cumulative process with exposure to new perspectives and information (Cranton, 2016). Transformative learning is often though to occur through voluntary and self-directly learning that could be stimulated by life changes such as a loss of a job, a change in lifestyle, a move to a different place or community, or other major life events (Cranton, 2016).

Transformative learning theory is based on constructivist assumptions (that realities are constructed by individual experiences) and has roots in humanism and critical social theory (E. W. Taylor & Cranton, 2012). Consequently, transformative learning theory has historically been rooted in Western perspectives and assumptions and has been criticized for its lack of intersectionality as it is promoted as separate and isolated from the context and privileges that society is composed of and the patriarchal, colonial, and capitalist values of individuality, rationality, and autonomy (Anand et al., 2020).Additionally, traditional transformative learning is missing a comprehensive theory of social change and fails to address the social power inequities and dynamics that influence learning (Anand et al., 2020). Other critiques are centered on the cartesian and rational nature of transformative learning theory and that it does not consider the impacts of symbols, intuition, and images in learning (Cranton, 2016).

The typical process of transformative learning models the Western scientific method in which the meaning is understood to exist within oneself and requires examining, questioning, validating, and revising to reach a transformed position (Cranton, 2016). As a result of these criticisms, many alternative ideas of the concept of transformative learning have been developed to encompass these varied experiences of transformative learning including psychoanalytic, psychodevelopmental , social-emancipatory, neurobiological, cultural-spiritual, race-centric, and planetary view (Cranton, 2016). Hoggan (2016) defined transformative learning as referring to "processes that result in significant and irreversible changes in the way a person experiences, conceptualizes, & interacts with the world." Hoggan described four main types of transformative learning theories present in the literature:

 1) perspective transformation resulting in changes to individuals' mechanisms for

 meaning making spurred by a "disorienting dilemma" or catalytic event that causes a

crisis of self as the world no longer makes sense to the individual (Mezirow's transformative learning theory)

2) psychoanalytic approach introduced by Carl Jung focused on the expansion of the individual's eco-consciousness and a non-critical introspective process

3) psychodevelopmental approach focused on increasing the cognitive capacity of individuals, refining their sense of self and transforming the way they make sense of the world

4) social emancipatory approach garnering the aim of individuals developing critical consciousness and perceiving themselves as agents to enact change in the world for justice explained as "to be an active subject involves constantly reflecting and acting to make the world a more equitable, better place" (Hoggan, 2016).

There are three types of knowledge that are negotiated in the process of transformative learning: technical knowledge in which the reality of the world is an objective and observable phenomenon, practical knowledge which forms the language and communicative practice of social knowledge and shared interpretation in which shared understandings with others can form the basis of new understandings of the world and emancipatory knowledge which is gained through critical self-reflection and questioning both our individual selves and the social systems in which we exist (Cranton, 2016). Meaningful transformative learning must engage with all three forms of knowledge: technical, practical, and emancipatory in order to truly change a person's perspective and worldview (Cranton, 2016).

Transformative learning theory is not only about individual transformation, but also larger social and systemic change (E. W. Taylor & Cranton, 2012). It involves an expansion of

both collective and individual consciousness and how personal perspective transformation is carried out within the context of larger society and social contexts (Cranton, 2016). In many cases, action for social and systemic change is crucial for transformative learning to occur as it helps learners overcome barriers, gain relevant skills, and embody the learning process (Moyer et al., 2016). Transformative learning theory would therefore be applicable to studies looking at both individual experiences, and collective action on a social level, and could provide a unique lens to explore the lives/emotions of activists.

Transformative learning theory has been applied to many varied investigations with adults, as well as youth, learners. Transformative learning theory is traditionally a learning theory in the field of adult education with the focus on learning that is independent of cognitive development and traditional formal schooling. A study that looked at the impact of a radical humanities program for economically disadvantaged learners, for example, found that the participants described the change they experienced as connected to self-reflective meaning-making processes, interrelated and communal growth, appreciation of diversity, emerging sense of self-as-learner, and renewed aspirations for the future (Hyland-Russell & Syrnyk, 2015). The radical humanities program applied a social-emancipatory approach of transformative learning to their program and aimed to foster a tight-knit community among students (Hyland-Russell & Syrnyk, 2015). Although transformative learning theory started in the field of adult education, it has been applied to research with youth as well. For example, a study that integrated arts-based methods at an art high-school in Portugal employed transformative learning theory and had youth adopt one sustainable behaviour for 30 days, participate in frequent reflection on that change and discussion with their peers (Bentz & O'Brien, 2019). The program introduced by Bentz & O'Brien named Art for Change used an experiential and action-oriented program to help

students reflect critically on climate change and their actions, learn about climate change, and become empowered to take action (Bentz & O'Brien, 2019). Other research examined the "disorienting dilemma" that youth entrepreneurs experienced to spur them to start their own businesses and found that the transformation that youth entrepreneurs experienced directed their efficacy as an entrepreneur (Nyamunda John & Van Der Westhuizen Thea, 2018).

Transformative learning often has a center role in the development and lives of activists. Many activists are drawn to environmental or social justice work because of an emotional calling that often results from initial feels of being overwhelmed and exhausted in the face of the crises (Kovan & Dirkx, 2003). Participating in social movements as well as undertaking individual internal work to understand how their choice of activism and vocation connects to their personal identity and sense of self are crucial components of the transformative learning that environmental activists undergo (Kovan & Dirkx, 2003). Transformative learning theory is a versatile and nuanced theory that can be applied to behaviour change and learning at numerous different stages. While it has been used as a lens through which to examine youth transformative learning as a result of specific programs, there does not seem to be much literature using it as a lens to understand the journeys of youth who are already activists fighting climate change, and what transformations they underwent to be spurred into climate action.

2.8.3 Social Movement Learning Theory
While learning theories, like transformative learning theory, have focused on the affinity towards action of individual learners, they do not account for the power of collective learning. Social movement learning is defined as any learning that happens by people who are a part of social movements and any learning that occurs by the general public by exposure to a social movement, both of which are often informal or accidental learning (D. B. Hall & Turray, 2006).

Social movement learning happens before, during, and after organising within and outside of a movement (Kuk & Tarlau, 2020). Social movement learning theory originated in the adult education field, and made the assumption that social movements were primarily populated by adults and those with mature and developed identities (Kilgore, 1999). Social movement learning theory considers the individual learning that people in social movements experience through collective action and shared identity through the lenses of how individuals join collective action as a result of their individual transformations, and how collective action spurs individual transformation (Kilgore, 1999). It is understood that when people are engaged in a collective struggle or fight that they figure out what they need to learn to be successful and undergo that learning (D. B. Hall & Turray, 2006).

The most powerful and transformative social movement learning occurs within people who are indirectly connected to and impacted by the social movements like friends and family of activists, coverage in the mass media, art installations or public events (D. B. Hall & Turray, 2006). Social movements unearth and highlight the existing power inequities within society and disrupt the dominant meaning-making systems within everyday society and as such effectively communicate different ways of knowing, understanding, and being in the world to the public and communities (D. B. Hall & Turray, 2006). Collective action leads to public learning through informal learning (through conversations with others, experiences in actions) and more formal and organized education activities (conferences, workshops, teach-ins) (B. Hall, n.d.). Additionally, social movement learning theory is rooted in critiques of and resistance to the colonial and capitalist systems of society (B. Hall, n.d.). Social movements can stimulate changes in the interpretative frames in which individuals and communities see the world and they challenge the status quo (D. B. Hall & Turray, 2006). The theory rests on understanding

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how individual differences in meaning making, identity, and communities drive learning within the movements and emphasizes the inclusion of social, economic, and political factors in analysis of collective social action (Kilgore, 1999).

A key component of social movement learning is that the work is voluntary and the informal learning often emerges through advances in social action because social movements highlight alternative forms of organization, they link spiritual realm to the political, they highlight the powers and capabilities of small groups of ordinary people, and they show how expertise can be brought into social movements to strengthen them (D. B. Hall & Turray, 2006). Social movements often use imagery and local storytelling or proverbs to connect with the public and each other and facilitate learning, often in the form of rituals and the sharing of local history, spirituality, and narratives of resistance (Langdon et al., 2014). As social movements evolve and transform over the course of time, those narratives and imagery that they use in communication also transform and can stimulate learning on many different issues and narratives.

Examining the forms of learning that occur within and outside of prominent social movements differs between different classes of society and communities; for instance in a study of the social movements in the era of the South African Apartheid the white, wealthy activists conducted more formal opportunities for learning like workshops, retreats, and book clubs whereas the Black and more working class organizers held more informal and public facing sites for learning like rallies, funerals, demonstrations, leaflets, and speeches (D. B. Hall & Turray, 2006). Social movements can unearth and lay bare the social inequities and power dynamics of systemic oppression, but they often also perpetuate those same injustices within.

A prominent criticism and tension within the scholarly literature on social movement learning theory is the that between the "old" social movements – focused on class division,

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worker's rights, the labour movement, and socialism and "new" social movements- which are focused on identity politics and issues of personal injustices and inequities within the system (Langdon et al., 2014). Activists and the public who are engaged by and within "new" social movements are likely exposed to many different social issues, and often experience more learning within the social movement (Zielińska et al., 2011). Another key aspect of social movement learning is collective knowledge creation which encourages the group to learn from one another and the community outside of the group to learn as well (Zielińska et al., 2011). This knowledge creation may take place in the form of creating more ethical and moral values, creating moral identities, and participating in a new profound way of knowing and being in the world (Sandlin & Walther, 2009).

For individuals within a social movement, learning must also encompass critical self-reflection and learning of their own identity: "personal identity cannot be separated from a person's experience of life, not from his or her social commitment" (Sandlin & Walther, 2009). Therefore, for a collective identity of a group to from, individuals must understand their own position within society and their identity and there must be a subculture that is in direct opposition to their movement and their collective names, narratives, symbols, verbal styles, and rituals; the individuals within the movement must share a sense of solidarity or group conscience in which they are willing to stick together and stick up for each other; individuals must have a collective conscious that can connect to and dedicate themselves to shared frameworks of action, thought, and change (Sandlin & Walther, 2009). These collective identities and collective solutions must also be based on everyday life experience of the marginalized and powerless and seek to uplift grassroots voices (Kuk & Tarlau, 2020). Social movement learning is critical for

decolonizing and Indigenizing colonial society as social movements can act in anti-colonial ways that challenge the power and euro-centric focus of colonial states (Kuk & Tarlau, 2020).

Scholars have also applied social movement learning theory to youth movements. Social movement learning has observed to happen in youth activism groups through: "collective problem solving, youth-adult interaction, exploration of alternative frames for identity, and bridges to academic and civic institutions" (Kirshner, 2007). These collective youth spaces allow for unique experiences of education and development as they provide youth with the opportunity to contribute to action on a cause that they are interested in and enables them to gain skills and accomplish goals collectively that they could not achieve alone (Kirshner, 2007). Studies have also shown that social movement learning happens through social media campaigns and education, which are used extensively by youth organizers. A study of how learning on the #OccupyWallStreet movement was facilitated through twitter expressed the unique capability of social media, particularly twitter, to provide multiple accessible forms of education and engagement with social movements (Gleason, 2013). This study on Occupy Wall Street identified that the processes of creating posts, tagging others, sharing, reading, and watching encourages learners to become more informed and engaged citizens and can lead to mass mobilization and education (Gleason, 2013). Although the algorithms of social media often lead to people being biased towards their own pre-existing opinions, campaigns and movements that are centered around a hashtag have the potential to expose learners to many different perspectives and ideas and allow them to be real-time collaborative participants in their learning and the movement itself (Gleason, 2013). Social media presents the opportunity for non-institutionalized, first-person experiences and versions of social and cultural reality to be shared and understood that would not have been communicated otherwise and it allows for a more

participatory and diverse collaborative culture (Simões et al., 2021). For instance, social media provides an unprecedented level of access for feminist campaigns to facilitate social movement learning, but there is also an increase in misogyny and toxic masculinity through the use of social media (Simões et al., 2021). Social media and the internet provide the opportunity for constant, rapid, and varied social movement learning to occur through both formal (organized webinars, workshops, etc) and informal (shared posts, Facebook or Instagram live videos, YouTube, tweets) means.

Traditional news media, on the other hand, frames social issues and issues of injustice within the settler-colonial narratives of the state's institution and often delegitimizes activism by marginalized communities (Walker & Walter, 2018). The traditional news media frames activists within the harmful stereotypes that exist like framing Indigenous protestors during Standing Rock protests as violent and uncivilized (Walker & Walter, 2018). While the digital environmental and accessibility of social media can dramatically increase the reaches of activist campaigns, it also provides the same opportunity to those who are against the social justice movements (Simões et al., 2021). Social movement learning theory focuses on the power of participating in collective action on learning and individual growth and its impact on those external to the movement as well. Although connected to transformative learning theory, social movement learning theory provides a more holistic and comprehensive lens through which to examine the learning of individuals and groups in relation to their activism and the systemic challenges that they face.

Social movement learning theory has been applied to studies on multiple components of the environmental and climate justice movements. Klutzz & Walter explored and described the learning that occurs in the climate justice movement, explaining that learning takes places on

multiples levels: unorganized, organized, individual, and collective learning (Kluttz & Walter, 2018). They found that learning focused on power and place and that social movement learning stimulates comprehension of systemic issues including patriarchy, heteronormativity, white supremacy, and decolonization in the context of climate justice by learning from others in the movement (Kluttz & Walter, 2018). Additionally, they described systemic oppression as a factor in catalyzing learning in social movements as it provokes conscientization, transformative learning, identity change, and activism (Kluttz & Walter, 2018). Social movement learning theory has also been explored through investigations of specific place-based environmental movements like the activism in 1993 that protested clearcutting in the Clayoquot Sound Rainforest in British Columbia (Walter, 2007). More than 10,000 people led road blockades protesting the clear-cutting of old-growth forest in Clayoquot Sound, and close to 1000 protesters were arrested through the summer of 1993, these protests not only transformed the individual protesters, but also inspired similar protests and movements outside of Clayoquot Sound (Walter, 2007). The study of Clayoquot Sound also described the role the protests played in stimulating social change and challenging the dominant capitalist and colonial society of Canada and the connected, collective nature of the movement across the environmental, peace, and feminist movements (Walter, 2007). The protestors were radicalized and deepened their understanding of systemic oppression through their participation in the movement as they learned about the ecological destruction of the forests and their ecological importance, corporate control and disinterest in protecting the environment, injustices in the legal and democratic system, and the dehumanization of incarcerated people as well as experiencing the power of grassroots activism through non-violent direct action (Walter, 2007).

Chapter 3 – Methods

This chapter describes the overarching research approach of the critical reflexivity

methodological framework, intersectionality and the application of transformative and social

movement learning theories. It then explains the types of research used in this study and grounds

the methods in the literature. The chapter then details the recruitment process and describes the

participants, details the methods used, and the analysis that was completed, ending with a

discussion of key methodological challenges that arose throughout this research.

3.1 Introduction to approach, critical reflexivity, research paradigm and type
3.1.1 Introduction to approach

This research employed arts-based participatory methods and intersectional analysis. One

component of the research was to understand how participants became politically active through

their individual learning experiences (transformative learning theory) and their learning

experiences in social movements (social movement learning theory). This research took a

qualitative methods approach using semi-structured interviews, a poetry workshop followed by a

focus group, and individual art submissions and interviews. Transformative learning theory was

used to understand the perspective transformation and personal turning points from knowing

about the climate crisis to acting on the climate crisis of youth participants. It was then applied to

understand their upbringing and personal life experience that formulated their frame of reference

and the events or experiences that led to a change in that frame of reference. For some

participants, the events that stimulated their transformative shift in their frame of reference might

have been social movement protests, rallies, conferences, or other communications, and thus

social movement learning theory was applied to understand how their engagement in, and

knowledge of social movements and activism, influenced their transformative learning. Social

movement learning theory was also used to understand how being members of these social

movements led to further learning on other proximal issues of social injustice and how the

connections and relationships that participants hold within the climate movement contributed to

their understanding of social justice and climate justice issues. Both of these theories of learning

were also applied through an intersectional lens to understand how participant's identities and

life experiences influenced their perspective shift and how they learned from social movements

and colleagues.

3.1.2 – Critical reflexivity

For this research, I followed the critical reflexive methodological framework: a constant,

dynamic, and complex process that begins with a critical examination of one's positionality as a

researcher in the context of race, class, gender, sexual orientation, and (dis)ability (Mao et al.,

2016). Critical reflexivity is a framework in which the researcher must integrate and interrogate

their positional and social location in respect to their participants, the world, and their research

(Mao et al., 2016). It is an ongoing and relational process in which researchers must actively and

continuously engage so as to identify and work to mitigate biases and assumptions, inequitable

power dynamics, and the socio-cultural and political contexts in which the research is taking

place (Mao et al., 2016; Subramani, 2019). Reflexivity goes beyond simple reflection because it

forces researchers to become aware of what we do not know and the consequences of what we

know and do not know, why and how we know and do not know those things, and to uncover the

limitations, blind spots, and silences of ourselves as researchers (Raven, 2006). Critical

reflexivity is a necessary component of research because traditional Western research

motivations and methodologies were developed through racializing, colonizing, language

domination, upbringing and class of the researcher, and capitalism (Mao et al., 2016). Research

does not happen outside of society and life experience, thus, the humanity that the researcher and

that participants bring into the research process is laden with pre-determined assumptions and

prejudices on issues in society (Subramani, 2019). Incorporating a critical theoretical and

methodological perspective into research makes it possible to identify and highlight the social

institutions and power difference/dynamics that form the meanings and experiences that people

live with and understand one's role as a researcher and experiences of the participants through

the reality of everyday experiences and societal influences (Subramani, 2019). Theory facilitates

critical reflexivity because engaging theories provides researchers with tools to aid in thinking

and critical analysis throughout the process of their research and to incorporate visions and

understandings of the world outside of their own (Raven, 2006). Critical reflexivity is an open

ended and ever-evolving process (Raven, 2006). Mao et al. envision critical reflexivity as a

spiralling process that centers the personal experience of the researcher as the starting point and

at the core of the research that is then interrogated and referred back to throughout all the stages

of research (Mao et al., 2016). This spiralling model (Figure 2) includes asking the following

questions of one's research and oneself throughout the research process:
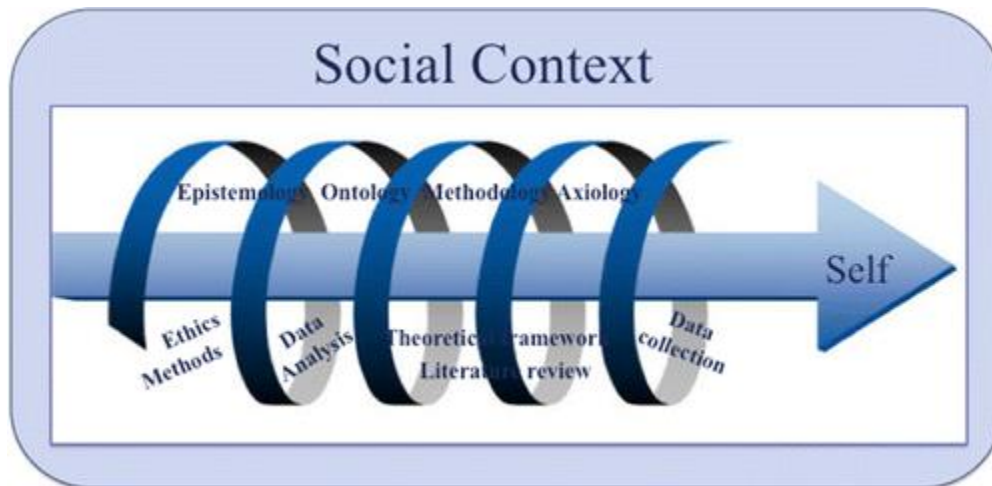
Figure 3 *Critical reflexivity model from Mao et al. 2016 illustrated how throughout the research process that the researcher must spiral back to their positionality and personal experience through various lenses to conduct the research.*

1) What are our assumptions about the world, about knowing, about being, and about

   learning?

2) What do we know?

3) What have we forgotten?

4) What do we need to learn or relearn?

5) What is the context within which, and in relation to which, ourselves and our research are

   embedded? (Mao et al., 2016)

Critical reflexivity can also be undertaken through collective community reflexivity like

meeting with peers or colleagues to discuss the challenges one is encountering in research (Mao

et al., 2016). Reflexivity is a social and relational process in which all involved in the research

are full collaborative, mutual, co-constituted, and negotiated participants (Mao et al., 2016). A

health study used a critical reflexive methodological framework as a holistic approach to health

promotion using narrative and sharing of stories to explore the lived experiences of participants

(Norton, L. & Sliep, Y., 2018). This model (Figure 3) is crucial for helping students and youth to

connect to their lived experience within its social and historical context by linking their personal experiences to larger societal issues and structures of oppression by telling their stories (Norton, L. & Sliep, Y., 2018). As shown in figure 3, this framework encompasses many intersecting components primarily focused on creating a dialogical (safe) space for participants to process their lived experiences and take action to improve their wellbeing through sharing their stories, identifying their values, gaining a sense of agency, and acting or performing to better their condition and society (Norton, L. & Sliep, Y., 2018). Reflexivity is a necessary component of empowering radical consciousness and leading to emancipation and social justice for the researchers and their participants. Critical reflexivity should be engaged throughout the planning process for the research, carrying out fieldwork, and importantly also throughout the writing process as writing often facilitates deeper critical reflexivity and provides the opportunity to communicate one's positionality as a researcher and investigate how it influences and improves the research (Smith S, 2006). Traditionally, many pieces of academic writing have aimed to distance the researcher from their research topic and write from a passive, distant point of view and even if researchers engage in reflexivity in earlier stages of the research process it is often abandoned once they reach the writing stage (Smith S, 2006). Examining and exploring the role of the researcher and the experience of the researcher, however, can reveal tensions and dilemmas within the research context and create a more reciprocal research space between the researcher and participants in which participants feel heard by the researcher and comfortable (Smith S, 2006). Critical reflexivity is a necessary methodology to facilitate intersectional analysis and emancipatory learning research.

Narrative paradigm in reflexivity framework
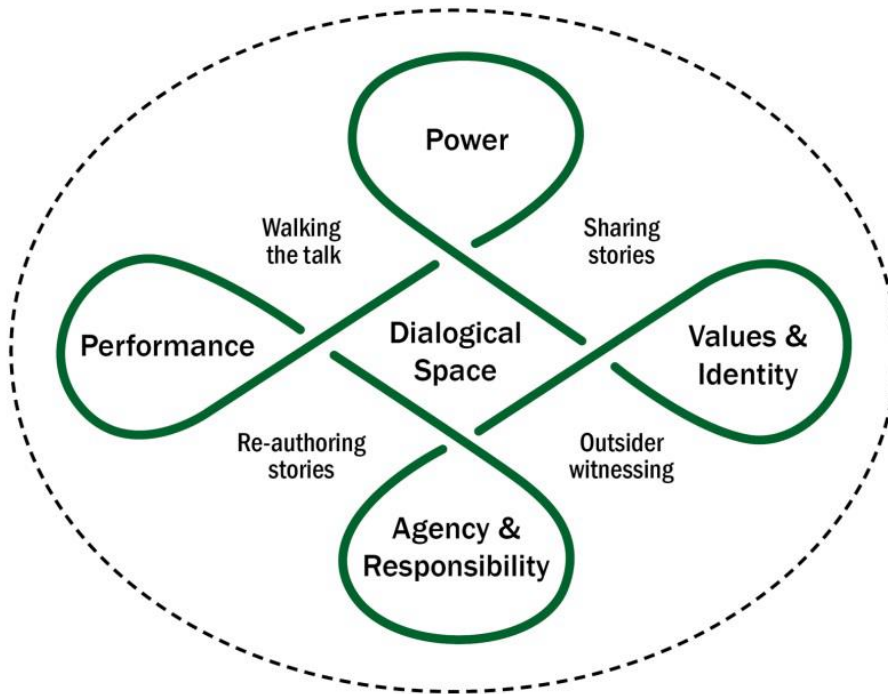
Figure 4 *Narrative paradigm in reflexivity framework (Source: Sliep 2016; Sliep and Norton 2016).*

I applied the critical reflexivity methodological framework throughout all the stages of this research. In developing the objectives and proposal for this research, I examined my own positionality and my experience as a youth climate activist as I entered the research. I critically reflected on my motivations for conducting this research and for the focus on politically active youth with climate grief. One of the first steps was to reflect on my upbringing and identities clearly and critically, I examined the potential for unequal power dynamics within the researcher-participant relationship because of my position as a researcher, my whiteness, my financial and ability privilege, and my education status. Additionally, I consciously worked to ensure that the framing of my research was relevant to all politically active youth, and not only

those who may have similar experiences to myself. Throughout my review of the literature, I explored many different disciplines and searched terms to reach literature that expanded my worldview and conception of the issues of climate grief and activism. In my extensive review of the literature, I considered many articles that did not fit within the realm of the assumptions I had on this research topic based on my personal and professional experiences with climate grief. Part of my process of critical reflexivity was also grounded in my own transformative learning experiences which I will delve into later in the results and discussion chapter on learning processes. I also participated in group reflexivity through the School for Resource and Environmental Studies Master of Environmental Studies weekly seminar in which I presented challenges and updates on my research and had discussion with my peers, including answering challenging questions that inspired further reflexivity. In addition, as a student supervised by Dr. Melanie Zurba, I had the opportunity to participate in bi-weekly lab meetings with all of her students and staff to discuss research and hold reflexive discussion.

3.1.3 Research Paradigm and type

Intersectionality was used as a research paradigm in the development and implementation of the critical reflexive research framework, specifically in the recruitment and selection of research participants to ensure that they represented diverse identities and the analysis of results (Hancock, 2007). Furthermore, questions and activities for the research were designed to explore the experiences of participants with climate grief in the context of their privileges and/or marginalized identities within society (e.g. a racialized participant will likely have a different experience than a white participant with climate grief) (Osborne, 2015). This study also employed a constructivist-interpretivist paradigmatic research approach. Constructivist and interpretivist research paradigms focus on understanding and exploring human experiences and operate on the belief that reality is socially constructed by individual experiences with the

environment around them, society, and others (Mackenzie & Knipe, 2006). Given that this research is focused on exploring the experiences of politically active youth with climate grief, a constructivist-interpretivist approach is appropriate as it prevents imposing meanings or assumptions about reality on participants' experiences.

3.2 - Participants

Twenty politically active youth participants aged 12-29 from across Mi'kma'ki were recruited using both snowball and purposive sampling methods (Naderifar et al., 2017) through direct outreach to youth climate movements, organizations, youth social justice movements, individuals, and networks and targeted diverse voices from all geographic regions, the 2SLGBTQIA+, Indigenous, Black, racialized, newcomer, lower-income, and disabled communities. Participants were asked to participate in a semi-structured individual interview of up to one hour to explore their personal experiences with climate grief and had the option to participate in a group poetry workshop to guide them through writing poetry to reflect on their experiences with climate grief, followed by a focus group, as well as the opportunity to submit individual pieces of art of any medium that illustrated their experiences with climate grief, followed by an individual semi-structured interview.

Participants were sought out through my networks and known organizations through purposive sampling, and some participants were recruited through snowball methods and were recommended to participate by other participants. Given that the youth climate justice movement is a grassroots movement, participants of interest for this study were difficult to reach as they are not easily identifiable through pre-existing organizations, and as such, the only way to reach them may be through other activists or my personal networks as a youth climate activist (Naderifar et al., 2017). The primary method of recruitment was through social media posts that were either on my personal profiles, shared on organizational pages, or posted in community

groups. Recruitment also took place through direct outreach to known parties within the youth activism community through word of mouth by other participants and connections, or direct outreach by me. Outreach was based on my awareness of the youth activist network and ethical protocols were followed by making it clear that there was no requirement to participate. I reached out to all groups that I knew of in the area, and to contacts who I know are active in many areas of the movements to get as far a reach as possible.

Many politically active youth and activists are wary of institutions and researchers and may not respond to more public recruitment notices for research such as this and are more likely to respond through word of mouth. I used my relationships and trust that I've built within the community networks to reach more youth and those who have diverse experiences of climate grief. This was especially important in reaching youth of marginalized identities who may have even less trust in academic institutions and researchers, but who have complex and important experiences of climate grief to be considered in this research. Many participants were people with whom I had worked with in the past or continue to work with in the present, some who I knew well as friends, others whom I was acquainted with, and some who I had heard of. Some participants found the call for participants through public-facing social media and were unknown to me prior. Furthermore, this research will be working with participants of vulnerable identities (based on age, race, sexual orientation, gender identity, socio-economic status, and physical and mental abilities), and thus individuals may distrust the research process and institution and be more difficult to reach directly (Ellard-Gray et al., 2015).

Youth participants had to have been involved in some form of political activism related to climate change to be eligible to participate. Additionally, participants were given the option to self-identify as a member of an equity-seeking group based on gender, sexuality, race, ethnicity,

language spoken, (dis)ability, and an explanation of what constitutes equity-seeking group was provided. Participant selection depended on geographic location (to get a diverse representation across Mi'kma'ki of urban/rural/different ecosystems), political action experience, and identity (see Table 1 for a breakdown of the demographics of participants). The participants who were not comfortable with their name being used in this research are referred to by an alias and others were referred to by their first name.

Table 1 Participant life experiences and identities.

Alias or First Name	Identity	Location	Age
Sarah	Sarah is a white cis-female member of the 2SLGBTQIA+ community	Kjipuktuk (Halifax)	26
Sophia	Sophia is a white cis-female	Timberlea	18
Amanda	Amanda is a white cis-female	Kjipuktuk	26
Hailie	Hailie is a white cis-female member of the 2SLGBTQIA+ community	Piktuk (Pictou County)	25
Ricky	Ricky is a white cis-male member of the 2SLGBTQIA+ community	Prince Edward Island and New Brunswick	26
Tanya	Tanya is a Mi'kmaw woman	Potlotek First Nation	28
Cole	Cole is a white nonbinary member of the 2SLGBTQIA+ community	We'kwampekitk (Truro)	19
Kyle	Kyle is a cis-male newcomer to Canada and a person of colour	Kjipuktuk	23
Jo	Jo is a nonbinary person of colour who is a newcomer to Canada and a member of the 2SLGBTQIA+ community	Kjipuktuk	21
Dylan	Dylan is a white disabled cis-male who is a member of the 2SLGBTQIA+ community	Punamu'kwat'jk (Dartmouth)	25
Bailey	Bailey is a non-binary person of colour who is a newcomer to Canada and a member of the 2SLGBTQIA+ community	Kjipuktuk	25
Shreetee	Shreetee is a person of colour who is a newcomer to Canada and a member of the 2SLGBTQIA+ community	Kjipuktuk	22
Beth	Beth is a white cis-female who is a newcomer to Canada and a member of the 2SLGBTQIA+ community	Kjipuktuk	22
Mackenzie	Mackenzie is a white cis-female	Esoqwatik (Wolfville Area)	22

Choyce	Choyce is a white disabled cis-female member of the 2SLGBTQIA+ community	Prince Edward Island	26
Sasha	Sasha is a white cis-female who is a member of the 2SLGBTQIA+ community	Kjipuktuk	19
Cameron	Cameron is a white straight cis-man	Kjipuktuk	23
Rena	Rena is a Métis woman who is a member of the 2SLGBTQIA+ community	Kjipuktuk	23
Cadence	Cadence is a white cis-woman	Pakwesk (Pugwash)	17
Nadia	Nadia is a Black cis-female newcomer to Canada	Kjipuktuk	Unknown

3.3 - Interviews

The first component of the methods were semi-structured interviews with participants in which a semi-structured guide was used during the interviews that focused on exploring the deep learning experiences that politically active youth underwent to become politically active (Bernard, 2006). All twenty youth participants underwent individual semi-structured interviews. Semi-structured interviews were the most relevant form of interviews for this research because they allowed for the participants to direct the conversations towards their experiences relevant to climate grief with some guidance from myself as the interviewer. The semi-structured guide allowed for me to direct the participants through discussion relevant to the objectives of my research, but also allowed me to pivot and ask pertinent questions as they came up relevant to the information that they shared (Leavy, 2020). Semi-structured interviewing also fosters a more conversational style of interview that can help to put participants at ease and lower the pressure and expectations of the interview situation, often making participants more comfortable with being open and sharing their experiences (Leavy, 2020).

The questions in the interviews explored the possible pivotal and catalytic moments in their experiences that led to their political action, the incremental transformation they may have undergone, as well as their experience as members of the youth climate (and other justice)

movements (Kluttz & Walter, 2018) through the lenses of transformative and social movement learning theories. The questions explored how they first learned about the climate crisis, what their upbringing was like, what led them to becoming politically active around the climate crisis, what their engagement with social movements and the climate movement has been, and the types of activities they use to process the climate crisis. Through these questions, I aimed to understand their learning processes before becoming politically active, through being politically active, and how their connections to their communities and the movement have influenced their experiences of climate grief as well as their understanding of the climate crisis and the interconnected issues of social injustice.

I took an anti-oppressive and intersectional approach in the interviews to foster a safe space for participants to describe their experiences with climate grief, as well as how their personal identities connected to their experiences of climate grief. Anti-oppressive interviewing takes a participatory, emancipatory, and action-oriented approach to research and focuses on levelling the power dynamic between the researcher and participants (Strier, 2006). I have actively participated in numerous anti-oppression trainings and am continuously learning how to be better as a researcher and person working within this field to carry out anti-oppressive work. As such, the interviews were amenable to the direction that participants wanted to take them in and I, as the researcher, focused on listening as much as possible, and only directed the interviews as needed.

The interviews took place virtually through Microsoft Teams and were up to an hour for each participant. The interviews were recorded and transcribed through Microsoft Teams. I took detailed notes throughout the interview and reflected on my experience and things I had noticed during a researcher following the interviews. I purposefully reflected on my position as the

researcher and with the associated power that I hold as a result of my position as a researcher and my identities and how those informed the tone and content of the interviews in the course of working to mitigate those power dynamics and provide the safest space possible for participants. Throughout interviewing, I was constantly navigating my status as both an insider and outsider researcher to the experiences of my participants and worked to acknowledge the experiences I shared and did not share with participants (Dwyer & Buckle, 2009).

Youth participants chose which components of the research they participate in and could choose to be interviewed and not participate in the other components. The semi-structured interviews provided ample opportunity for youth to speak freely on their experiences with climate grief and also focused on asking questions that stimulated critical self-reflection on their experiences in preparation for the art-based component of the research.

The interview transcripts were collected through the Microsoft Teams transcription function and then reviewed for errors alongside the recordings of interviews prior to coding. For each interview, I used deductive codes to identify the types of learning, turning points, and components of participants' worldview to identify the process of transformative learning. I also used deductive codes to broadly identify the vocabularies and rituals that participants used to describe and define climate grief. Beyond those initial deductive codes, the rest of the data were inductively coded through themes that arose out of the data. Many inductive codes were subcodes of the deductive codes, where others were their own code. The frequency of code words, nodes, and main themes were used to define the direction of the results of all three objectives. The interview and focus group question guides were not used to identify themes for analysis. See Appendix II: tables 2-5 for a breakdown of the main codes and subcodes used during analysis and whether they were inductive or deductive codes. The coding was done using

NVivo 12 Pro qualitative data analysis and management software. Through NVivo, I analysed the interview transcripts, the poetry workshop and focus group transcripts, the poems of participants, and the art-submission interviews of participants. Poetry written by research participants was used as complementary data to the interviews and I conducted inductive content thematic analysis of the emotions described, the events or imagery, and symbolism to identify vocabularies used to describe climate grief (Cahnmann, 2003).

The thematic analysis of the interviews focused on identifying aspects of transformative learning like the "disorienting dilemma" stimulating change, the events that contributed to their shift into activism, and the types of experiences that contributed to their shift to activism and climate grief (Hoggan, 2016). A major focus in transformative learning is the necessity of self-reflection following an initial disruptive disorienting dilemma (Mezirow, 1997). The analysis highlighted how the disorienting dilemma shifted the participant's views, what that dilemma led to, and how they became politically active. The pieces of transformative learning theory that contributed to this exploration were: their upbringing and original frame of reference, how others in their lives contributed to and influenced their learning (e.g. parents, teachers, other activists, friends, seeing someone in need), how did that new knowledge affect their identity and way of being in the world, and what did those experiences lead them to do, and what sorts of skills they gained to become politically active. The analysis identified what types of technical knowledge the participants learned through their transformation like the science behind the climate crisis, the practical knowledge they gained like to engage with social movements and form a new understanding of the world based on exposure to diverse opinions and views, and emancipatory knowledge they gained in terms of how their identity and ways of being in the world connect to

the larger social systems and the privilege or lack of privilege they hold in different areas (Cranton, 2016)

The analysis also focused on what types and forms of work the participants did in the activism movement, professionally, or in their personal lives to combat the climate crisis and how that connected to their worldview and their transformative moments. After understanding how the participants were led into political action, I looked at how that political engagement facilitated a deeper understanding about other social justice and systemic injustice issues, and how learning from the experiences of others within the movement helped them expand their frame of reference and gain technical, practical, and emancipatory knowledge (Cranton, 2016). This analysis also highlighted the ways in which participants of diverse experiences and identities experienced climate grief different, and how their learning processes differed. I emphasized the societal factors that contributed to their experience, and how the different types of learning were different between people of different identities. The last piece of deductive coding focus relating to transformative learning theory was how people's identities and sense of self were tied to their activism and their climate grief.

The interviews were also analyzed through the lens of social movement learning theory to understand how awareness of social movements, specifically the climate movement, influenced participants' engagement and knowledge of the climate crisis and social issues, what they have learned by being involved in social movements from others in the movement, participating in rallies, conferences, protests, events, how the climate movement shapes their personal experience and identity, and whether social movements played a major role in their personal perspective transformation. The analysis also worked to understand how their political

activism and learning about social justice and activism has affected their relationships with family, friends, and others in their lives and whether it has changed how they relate to the world.

3.4 - Poetry Workshop & Focus Group
3.4.1 Poetry workshop

The participants for the poetry workshop and focus group were the same as the participants who were interviewed, however, participants had the option of not participating in the poetry workshop & focus group and only being interviewed. Both the poetry workshop and the focus group took place virtually through Microsoft Teams. Six participants, including myself, took part in the poetry workshop. I participated in the prompts as well as observed the participants throughout the workshop and I only shared my responses to the prompts if there was no participation from other attendees so as not to take up too much space and disrupt the power dynamic as the researcher. I conducted participant observations as an *observer as participant* in which "The *observer as participant* stance enables the researcher to participate in the group activities as desired, yet the main role of the researcher in this stance is to collect data, and the group being studied is aware of the researcher's observation activities" (Kawulich, 2005). My participation supported the goal of fostering a safe, reciprocal space for participants, but my poetry was not included as data for analysis in the results of this study.

The poetry workshop titled "Unearth: A Poetry Workshop on Climate Grief" was facilitated by a local poet/facilitator involved in the climate/social justice movement for all research participants in which they will write poetry collectively and independently, reflecting on their emotions relating to climate grief. I worked with the poet, Katie Feltmate, to develop the outline and programming for the two-hour poetry workshop. The workshop was held on Microsoft Teams on October 6th, 2021, where Katie guided the participants through prompts in three major sections:

1) Open Waters: "A warm-up to allow participants to wet their feet and become familiar with the context they will be writing about. It contains several free writing and journaling exercises designed to trigger stream of consciousness writing, offering flexibility, accessibility, and creative license"

2) Tides of Change in which "participants will be challenged to dig deeper as they begin to 'unearth' the profound impacts of climate grief and the climate crisis"

3) Building Resilience in which "participants will move away from the depths of climate grief and into a mindset of empowerment with a focus on healing, resilience, and action" (Appendix I) to guide them to write their own poetry reflecting their experiences with climate grief.

It was crucial that the poet had facilitation experience, as much of the literature attributes the success of poetic methods to the competence of the facilitator leading the methods (Norton & Sliep, 2019). Katie had facilitated multiple poetry workshops guiding youth through prompts to write about their experiences as refugees, and with the planet. Additionally, Katie writes her own poetry about climate grief, nature, and the COVID-19 pandemic and is incredibly passionate about work on the climate crisis.

Poetry allows for reflection that leads to transformative change that empowers both the researcher and the participants and pairs well with qualitative data collection to provide unique insights to the lived experiences of participants (figure 2) (Fernández-Giménez et al., 2019; H. Johnson et al., 2020). Reflection is a key component of the transformative and social movement learning processes, and is key in understanding participants' lived experiences (Kilgore, 1999; Mezirow, 1997) The poetry workshop led by Katie allowed participants to reflect on their experiences with climate grief and how they arrived at that place through many facets. Poetry

can also create a collaborative space between the researcher and the community that allows for transformative change which empowers both the participants and the researcher (H. Johnson et al., 2020).

The poetry created by the youth was used to identify what types of vocabulary and phrases they use to describe their feelings of climate grief, and the types of imagery or experiences described in their poetry. Most participants did not have to have any prior experience with poetry, and the facilitator guided the participants and helped them to form their thoughts and ideas into poetry throughout the workshop. There was also time for discussion during the poetry workshop about the poetry and the process, what they found challenging or easy, and the types of emotions that the reflection was bringing up. Throughout the poetry workshop, I participated and undertook participant observation to identify how the participants are working together during the workshop, the types of conversations that the poetry and collective activities spark, and the connections (or lack thereof) that are being formed through the collective activities, these observations considered both my external observations of the participants, and my personal reflections on my experience in the workshop (Pretzlik, 1994). Participant observation was informed by social movement learning theory and provided ab informative way to experience and observe collective behaviour, and as such, I employed critical reflexivity on how the collective experience promoted learning personally (as a youth climate activist myself) (Mao et al., 2016), and observed the process of learning of participants during the group workshop (Balsiger & Lambelet, 2014). The poetry and other art pieces were used as data to inform the identification of vocabularies used to describe climate grief but primarily served as a tool for youth to reflect on their own experiences and connect with each other in a safe space.

3.4.2 Focus group

The poetry workshop was then directly followed by an hour-long focus group with workshop participants that delved into their experience in the poetry workshop, whether it contributed to their learning as a group about each other and climate grief, and whether it stimulated individual transformation through the lens of social movement learning theory. I guided the participants through some pre-prepared questions that specifically focused on learning related to their shared group experiences in the poetry workshop and shared understandings of climate grief (rooted in social movement learning theory and how learning occurs collectively) (Gibbs, 1997). For example, to understand how participating in the group workshop and hearing other people's experiences influenced their understanding of climate grief I asked:

What did you learn from the other people in the group?

      a. Do you feel that you have a better understanding of each other's experiences?

      b. Do you think it is important to understand other people's experiences?

      c. Do you feel more supported and understood after this poetry workshop?

While the focus group was moderated, it was also designed in a flexible manner that allows for the participants to determine the direction. The participants responded directly to the prepared questions I asked them, but they also brought up their thoughts and ideas coming out of the workshop throughout the focus group. The focus group transcript and poetry were also used to identify the vocabulary that youth use to describe climate grief and what sorts of activities/rituals they may partake in to process their climate grief.

The focus group transcripts were analysed thematically for the group experiences of learning and connection throughout the poetry workshop through the lens of social movement learning, and identified aspects like shared definitions, new thoughts stimulated by the process of

the group workshop and hearing other's experiences, and their expressions of climate grief (Kluttz & Walter, 2018). The poetry workshop and focus group were also observed and analysed through the lens of social movement learning theory to identify how participants related to one another through the poetry workshop and whether they learned from each other's experiences. Specifically, the analysis highlighted any changes in perception of climate grief and the climate crisis that participants experienced by being involved in the poetry workshop. The poetry workshop also served as a tool for collective identity formation and shared experiences, which is key in social movement learning. It also provided the opportunity for critical reflection on their experiences of climate grief and could have also contributed to personal perspective change.

The research field notes taken during participant observation in the poetry workshop were reviewed and reflected upon throughout the coding process to remind me of important sections of the interviews (Kawulich, 2005). The coded themes were analysed to produce a description of how politically active youth participants in Mi'kma'ki experience climate grief and what their learning processes both as individuals, and as members of collective activist movements are, contributing to the understanding of transformative and social movement learning processes in the literature. Additionally, the results will describe the experiences of youth activists based on their diverse identities and discuss the different ways in which climate grief was expressed in relation to individual and collective identities through the lens of intersectionality. A comparative analysis of the interview themes and poetry was completed to produce key terms (based on frequency of occurrence of the coded terms) (Linneberg & Korsgaard, 2019) and descriptions used by politically active youth research participants to describe their emotional relationship to the climate crisis.

3.5 - Individual Art Submissions

Some participants chose to participate in an arts-based exploration of their experiences with climate grief through their own chosen artistic means. Participants were given the option to participate in the arts-based component of this research through the poetry workshop and/or submitting an art piece of their own creation in any medium, followed by a short semi-structured interview. They were asked to submit a piece, or multiple pieces, of art that they created responding to their experiences of climate grief and then participated in a short semi-structured interview to explain what their art meant and what the process of using art to reflect on their experiences were like.

They were invited to submit any previously created art, or to develop new art pieces and be reimbursed for their materials. These individual submissions allowed participants the opportunity to reflect on and express their experiences of climate grief in the fashion that felt the most meaningful to them. It also allowed them to reflect personally and individually on their experience through artistic means, rather than through a group workshop. This approach supported participants to reflect on their personal journey and experience of climate grief and to have the chance to express it. These individual art submissions provided me with the opportunity to explore participants' experiences in even greater depth, as well as the way that they chose to express and communicate their grief through art. It also strengthened the use of artistic process and reflection in this research to help people process and communicate their climate grief. Three different participants submitted artwork based on their experiences with climate grief, two submitted pieces of visual art, and one submitted a poem as they were unable to participate in the group poetry workshop. I then undertook short semi-structured interviews with them about their artwork, what the artwork represents, and how it connects to their experience of climate grief (Zurba & Berkes, 2014).

The artwork itself was not coded, but the transcripts of the interviews with artists were analyzed inductively to identify what the process of using art to reflect on their experiences of climate grief was like, the types of terms and imagery they used to describe the art pieces, and what the ritual of art creation did to aid in their processing of climate grief.

3.6 - Challenges & Limitations

Qualitative researchers often struggle to articulate their positionality and relationship to the communities that they are studying. Researchers are often described as either insiders, outsiders, or somewhere in between in relationship to their participants (Crean, 2018). Insider researchers are those who are either members of the community of interest or have prior/personal knowledge of it (Greene, 2014). Outsider researchers are removed from the experiences of the community that they are studying (Crean, 2018). Insider researchers can engage with participants more easily and effectively, gather a richer data set, and more easily gain/maintain trust with the community (Kerstetter, 2012). Outsider researchers are defined as more able to maintain objectivity, reduce bias, and maintain transparency as a 'neutral' observer (Dincer, 2019). Researchers are often defined as either complete insiders or complete outsiders to their participants; however, many qualitative researchers describe insider/outsider status as something that shifts frequently during research at all stages of qualitative research (Wilkinson & Kitzinger, 2013). There are many strategies to navigate the benefits and challenges of insider/outsider status, but one is to apply critical reflexivity on the influence of the researcher's status on the research (Dincer, 2019). An insider position can also work to improve the situation of the participants through the research, direct action with the community, and push for relevant environmental and social action, fostering research as a political act for social change (Malone, 1999).

In examining the experiences of politically active youth in Mi'kma'ki with climate grief, I am also examining myself. "Youth" in the context of this research is defined as ages 12-29, and as I am a politically active 24-year-old in Mi'kma'ki with experience of climate grief, I am within the community. Many of my participants had prior knowledge of me either as an acquaintance, a colleague, a friend, or from my public profile as a politician and activist. I am a non-binary, pansexual, femme-presenting, white, able-bodied, educated, and financially privileged person. The fact that I shared the same age range with participants made it undoubtedly easier to connect and relate to participants, make them feel heard, and access groups for recruitment. While I share my position of age in society with all my participants, there are also many positions and experiences that we do not share, making me both an insider and an outsider. The prior knowledge and connections that I have with some participants also brings an added level of complexity to navigating my insider/outsider status. As a result, I faced challenges due to my insider/outsider status and positionality throughout the stages of research design, recruitment, semi-structured interviews, and in developing the poetry workshop and focus group.

My employment of the critical reflexivity framework was key throughout this research process and in navigating my role as an insider and outsider researcher. In the research design and proposal stage, many of my ideas for the development of research methods came from my own experience as a politically active youth participating in poetry workshops at conferences. My motivations for conducting this research were also based in my own experiences of climate grief and my ties to other politically active youth. As aforementioned, my insider status was key in the recruitment and access of the local networks of politically active youth, but my outsider status to some groups within the movement also led to barriers of access to participants. For instance, many youth who are experiencing the worst impacts of environmental racism and the

climate crisis who may be members of the African Nova Scotian community, Mi'kmaq, newcomers, or disabled may not be as connected to the existing networks of politically active youth that I have access to.

Throughout the interview stage, my personal relationships or working relationships with participants affected the tone and openness of the interviews. In some cases, it meant that I was able to receive more in-depth and open responses from participants because of their higher level of comfort with me, but in others, it meant that participants may have held back either because they did not want to offend me, or they told me what they thought I wanted to hear, or they may not have been comfortable with me because of my role as a researcher and an older youth activist. When I worked with the poet Katie to develop the poetry workshop, I drew on my years of personal experience as an activist, my experience participated in other poetry workshops, and my knowledge of other youths' experiences of climate grief to inform how we developed the prompts and the structure of the workshop. I had access to this insider knowledge of other workshops within the movement, however, I did not have access to any of the concerns or negative feedback of those other workshops and was only able to draw on my own positive experiences. Since feedback is not publicly available for those other workshops, it was difficult to know if there were areas that could have been improved to make participants more comfortable.

The major limitations of this study are that it took place entirely remotely through virtual conferencing software, that it was conducted on a short timeline, and that there was only the opportunity for one poetry/artistic workshop to be held. Although digital software makes fieldwork convenient and more accessible to researchers and many participants, it also changes the dynamic. Many do not feel as comfortable discussing challenging topics virtually, and it is

much more difficult to build rapport between the researcher and the participants without the opportunity for small talk, body language, or any other physical connections. Additionally, the digital nature of this research introduced the risk of network disruptions and often interviews were interrupted by unstable internet connections, disruptive background noises, or computer malfunctions.

While it was clear from the beginning, given that this is a master's thesis, that the timeline would be short, it felt that with a topic as deep and crucial as climate grief, that I was only beginning to scratch the surface of the experiences of politically active youth. The limited timeline most impacted the art-based participatory engagement of this research. All participants provided very positive feedback of their experience in the poetry workshop, but most expressed a desire for additional workshops, potentially with other forms of art. To effectively observe and make claims as to the social movement learning and transformative learning that took place through the arts-based engagement in this research, having multiple workshops would have increased the efficacy.

Delimitations are also incredibly important to consider, one main delimitation is that the geographical scope of this research is limited to Mi'kma'ki. The scope of this research has also been limited to youth aged 12-29 to allow a wide range of youth who experience climate grief and art politically active to participate without excluding those who may typically be excluded. Since the methods for this research were also very time consuming the quality and depth of inquiry was prioritised over quantity, however, this may lead to generalizations as to how politically engaged youth as a whole respond to climate grief from a small sample of participants.

3.8 – Employing Critical Reflexivity

I employed critical reflexivity throughout the engagement with participants as well. During the interviews, I aimed to create a reciprocal and safe space in which participants felt comfortable sharing the depth of their experiences, they felt listened to and that they had the space to share anything they felt, and in which they felt like they were co-creating knowledge. Reciprocity and relationality between the researcher and participants are key components of employing critical reflexivity in research. To foster this, I shared my own experience of climate grief with participants near the end of the interviews. Doing so at the end made sure that they had adequate time and space to share their experience unimpeded by mine, but it also meant that I could express my empathy and solidarity with their grief and show that they were not alone. Following one-on-one semi-structured interviews with participants, I entered my reflections in an audio journal. These journal entries primarily reflected on my experience as a peer and colleague of my participants, the tensions that came up throughout the interview process in which I shared prior experiences with participants and/or knowledge of them and their experiences, how I navigated those tensions, and the varying power dynamics that were visible. The poetry workshop and focus group encouraged critical reflexivity from myself, as the researcher, as well as from participants. To build on that reciprocity and relationality between myself and participants, I participated in the poetry workshop. Although I had prior relationships with some participants, I wanted to build those relationships to foster a collaborative and open space within the research where they would feel comfortable in contributing. To do so, I aimed to eliminate some of the power dynamics by levelling myself with participants within the poetry workshop. Through critical reflexivity, my efforts aimed to build that relationship while also acknowledging my role as a privileged researcher within the group.

Chapters 4-6 Results and Discussion

The next three chapters are presented as combined results and discussion drawing on each of the three objectives:

1) To identify what vocabularies and rituals politically active youth use to describe their emotional responses to climate change.

2) To explore how learning processes and outcomes relating to climate grief affect the motivations of politically active youth

3) To examine the impact of being politically active on feelings of climate grief

Chapter 4 presents the results fulfilling objective 1; chapter 5 presents the results fulfilling objective 2, and chapter 6 presents discussion and refers back to results from chapter 4 and 5 fulfilling objective 3. Results and discussion relevant to objective 3: the impact of being politically active on feelings of climate grief will be presented throughout all three results and discussion chapters but will primarily be discussed in chapter 6. The subsections of each chapter were derived from the major themes/high-level codes (both deductive and inductive) relevant to the corresponding objective. The presentation and order of the results is rooted in the logical progression and relevance of the data to explaining the results for each objective. Chapter 5 delves the deepest into the theoretical learning frameworks of transformative learning theory and social movement learning theory, but the theory is engaged throughout all the discussion in these three chapters as the major themes in all three chapters can be explained by and contribute to the theoretical frameworks.

The three results chapters were ordered so as to provide the necessary information and results to understand the following chapters as they build upon each other. For instance, chapter

4 details the vocabularies that the participants use to define and describe climate grief, as well as the rituals that they use and view as effective for processing climate grief; chapter 5 delves into the learning processes and progression of understanding that the participants underwent that led them to becoming politically active; and chapter 6 explores how their activism alleviates and contributes to their experiences of climate grief. The progression and structure of these chapters was determined with the goal of understanding the entirety and complexity of participants' experiences and how the intersections of their identities contribute to their experiences of climate grief.

Chapter 4 – Results and Discussion: Vocabularies and Rituals of Climate Grief used and Proposed by Politically Active Youth

4.1 Introduction

This chapter presents first the vocabulary that participants use to define and describe climate grief and focuses on two main themes in the tone and focus of the vocabulary that the participants used bringing in quotes from semi-structured interviews, poetry that participants wrote during the poetry workshop, and individual visual art submissions. The second part of the chapter focuses on the types of activities and rituals that the participants already use and participate in to help manage and process their climate grief, as well as their hopes for future rituals or community activities that could help them process their grief. Although this chapter is not specifically focused on the learning processes of participants, the rituals described and experiences the participants shared illustrated the processes of both transformative and social movement learning and I make those connections throughout this chapter. In the discussion of rituals, I share a story and ritual from a participant that represents a possible way that rituals can be integrated into educational community-based events to encourage transformative and social movement learning as well as comfort participants in processing their grief. Throughout the discussion of rituals, I also reference some of the themes of the vocabularies presented as they are connected to the rituals described. All artwork and poetry included in this chapter was formatted in the way that participants shared them with me, some of the poetry is formatted differently because of the artistic choice of the authors.

4.2 Vocabularies

Youth vocabularies of climate grief, particularly of politically active youth, are not well defined. Participants shared different emotions that arose for them in the context of climate grief and those emotions were tied to how they defined climate grief. Figure 5 illustrates the top emotions and phrases that participants used to describe their experiences of climate grief. Participants described deep, gutting emotions that seemed to touch them to their core. Many touched on the injustices within society that contribute to their experiences and the experiences of others with climate grief. Climate grief is often described as a very embodied experience affecting their physical and mental states.

"I was in grade three and we had to do a project on an animal that we really liked and mine at the time were polar bears and then I started learning about the big hole in the ozone layer and the ice caps were melting and I got really sad about this, I even remember crying when I had to present it and I had to stop my presentation" (Tanya)

Sadness

"I'm so angry. This doesn't have to be this way, there's all these big elites and capitalism digging there own graves and I'm infuriated a lot. The people who are going to feel it the most are the people that have contributed to the problem the least" (Hailie)

Anger

"How do you fight a system that you live in? We are in a capitalist colonialist patriarchal system and you're trying to fight it, but at the same time you are living in it. We're still buying stuff and we're still participating in capitlism" (Shreetee)

Frustration

"There are times where you lose hope, when you try to push for something and then you have government push back and they just don't get it when it makes so much sense to you that our climate is changing and we need to do something about it. That why would you not listen? Why aren't you doing this?" (Nadia)

Hopelessness

"I felt like this is crazy. I had no idea it was happening at all and it just made me thinking like, oh, the world is so much more complex than I knew about and there were so many things happening that I had no clue and it made me feel worried that I'm so small and that I can't change the world as I thought I could when I was younger" (Cadence)

Overwhelm

"If it ever gets bad enough and you know it's crumbling around the very end I'll just take myself out, I'm just going to live my life to the best of my ability and if it comes down to it and I die by the climate crisis then that's what happens. Or if it gets bad enough, I'll just do myself in, I know that's so awful but this is straight up apocalypse" (Hailie)

Apocalypse

Being too much

"I generally grew up a lot faster than others, I've always been very concerned from an early age as soon as I started learning about the many, many problems facing the world and I think about the things we need to make the world better every single day of my life. It has made me feel a lot older than and am and then made me feel like it's a lot harder to fit in with other people my age" (Sophia)

Figure 5 *Top vocabularies used by participants to describe climate grief and associated quotes from participants the blank hexagons represent the structures of society that contribute to the experiences that politically active youth have regarding climate grief*

Mental health concerns and experiences of mental illness were prevalent in the responses from participants, many discussed their experiences with depression, anxiety, suicidal ideations, and trauma from witnessing the impacts of the climate crisis. Choyce, a queer disabled woman explained that:

"the climate crisis has certainly become a big part of my depression. It's definitely weighed on me a lot. There was probably a peak [of engagement in climate] and a couple of valleys where I felt that anxiety. And then as I realized that I really didn't know what I was doing or how I'm going to make this work. My depression got worse."

While many youth experiencing climate grief feel emotions relating to anxiety and depression, and some experience those to a clinical degree, it has also become crucial to not solely pathologize experiences of climate grief (Marks et al., 2021). Experiences of mental illness do not take place in a vacuum and are a product of societal factors like discrimination, systemic oppression, capitalism, work, poverty, and the stresses of familial life (Alim et al., 2021). Often, facing injustice and inadequate access to resources leads to mental illness, and that mental illness cannot be solved solely through individual mental health treatment. Climate grief and other forms of grief relating to the environment have been described as healthy fears, and those that should not be an individual mental health burden to be solved (Cunsolo et al., 2020). While some people who experience climate grief do benefit from and need mental health treatment, others need action on the climate crisis, systemic change, and community spaces to connect with like-minded others and share in the communal experience of the climate crisis (Marks et al., 2021). The COVID-19 pandemic serves as an example as to how our society and communities respond in the face of immediate global emergencies. A study from Sick Kids hospital on the mental health of youth throughout the pandemic illustrates a devastating picture of grief, anxiety, and

depression and links those mental health impacts to the loss of social time, activities, and face-time at schools (Cost et al., 2021). This study illustrated that social connections and activity are critical for young people to maintain positive mental well-being in the face of a global crisis. Community solutions and spaces are not necessarily spaces opportunities that should be facilitated by mental health practitioners, but should be relevant to youth experiences and needs (Marks et al., 2021).

4.2.1 Bleak and apocalyptic vocabulary

Participant responses in interviews and the poetry and visual art that they created portray a bleak and apocalyptic experience of the present and the future. One participant, Amanda, wrote in the poetry workshop:

My brain is on fire and the planet is dying.

I can't breathe for worry but some can't breathe for smog.

Living is expensive and barely sustainable but it is not going to get better.

I dread the heat and what is coming.

I am trying to get people to care but the right ones don't.

The people who care are ignored by the people who can make change,

So they continue making money by burning coal and clearing forests.

Another participant, Shreetee, described climate grief in this poem from the poetry workshop:

Climate Grief

Feels like barbed wire wrapped around my heart,

Always there, always hurting.

Looks like half of the world on fire and half of it is under water,

Smells like the rotten flesh of the fish washed ashore because of warming ocean,

And

Sounds like the screams of people demanding change

against a system that does not want to hear them and does not want to change.

One participant, Beth, described her experiences of climate grief through the poetry workshop and wrote:

Climate grief sounds like roars through empty woods

Climate grief feels like sobs wracking through an empty landscape, desolate of life.

Climate grief looks like standing amid the rubble; once a home, now a carcass

Climate grief smells like burnt plastic permeating my lungs.

Climate grief tastes like sulfur caressing the hollows until I can no longer intake food, for it rots my core.

In addition, Sophia wrote a poem outside of the poetry workshop as an individual art submission (without using the prompts provided to participants in the poetry workshop) that focused on bleak and apocalyptic imagery as well:

what an absurdity

we seem to live in the long-term.

trained to close our eyes and dream of the future

while the moment passes right by.

while mother earth's screams go unnoticed.

it's not like it's a someday event.

it's here, right now.

she flings hurricanes at our shores

and ignites forest fires to fill our skies with smoke,

emergency flares

desperately trying to get you all to listen.

and you just idly wonder whether the drought will ever end,

or if the temperatures will stop being so drastic

or if the ice will halt its melting

but of course those couldn't be because of a rapidly changing climate.

what an absurdity.

that's an issue you have to pass on to your children,

not something that happens within your life time.

but what about my lifetime?

after your excuses have grown as thin as the ozone layer

and your words don't stop the roaring winds and poison air,

what is left?

a wreckage of a planet you promised was just a far-off nightmare

that now fills our everyday lives.

something you said we didn't need to worry about,

even though we told you

and the scientists told you

and all the sane people in the world told you it wasn't a fucking joke.

it was the present, not the future, because of the past.

because of *your* past.

the one you threw at us whether we wanted it or not.

and yet you laughed it off in press conferences,

in your thousand-dollar suits made from modern slave labour

and gallons of water

and filaments of plastic that will exist for millennia to come.

because you didn't care.

you didn't dare to.

not when caring would mean acknowledging the fact

that you messed up royally and left us to deal with the shattered remains,

trying to eke out some semblance of a life

in the midst of an apocalypse that happened far before its time,

if only you'd done something.

and you can't protest and say you didn't know better,

because you did.

because we screamed at you alongside mother earth

thousands of us

from the city streets, shoes sticking to the steaming pavement

and swore we'd never forgive you for your sins

and we won't

but we'll all be dead before it matters much,

so you're safe in the end anyway.

not like us.

not as we watch islands sink

and fields turn to dust

and millions of people migrate across broken continents

desperate for the safety we were promised would always be there.

not unless you do something.

now.

to stave it off a little bit longer until it's our time

until we wear the suits and call the shots

and work for something more important than money.

we're not asking for magic or a miracle or forever

or for you to even try to permanently fix this.

we've been let down too many times to expect that.

just a little bit more time

so that we at least get the chance

to try to save the world.

An individual art submission by the participant, Sasha, included as figure 6 below, portrays the contrast and cognitive dissonance of the current reality of society and life on planet Earth compared to the potential for destruction and loss if things continue as they are. The artwork also displays the fine line that Sasha feels society is walking between thriving and death and shows that while the government and decision makers speak about protecting nature and acting on the climate crisis, that their actions are doing the opposite and leading to the deaths of people and non-human beings across the planet. This artwork builds on the vocabulary theme of the threat of apocalypse and death and showing that we, as a society, are very close to destruction and death.

Another piece of art by Sasha, shown in figure 7, focuses on that disconnect between appreciation of nature and disregard for how the climate crisis and human activity impacts the

environment. It illustrates the potential for more pandemics and increased viral strains from human consumption of animals and destruction of habitats across the planet. The art emphasizes the interconnection between humanity and nature and how human actions towards nature will reflect on our lives and society. Both pieces of art communicate a sense of apocalypse and destruction and how those can devastate humanity. They also, however, include an element of hope, reflecting the necessary relationship between humanity and nature and that there is potential to remain on the side of flourishing along with the planet and embracing the interconnected nature of all existence. These art pieces communicate resiliency and that desire to build strong relationships with each other and the planet, and that there is potential through love and reciprocity with Mother Earth to repair the climate crisis (Wall Kimmerer, 2013).

Figure 6 *Individual art submission by Sasha Chilibeck.*
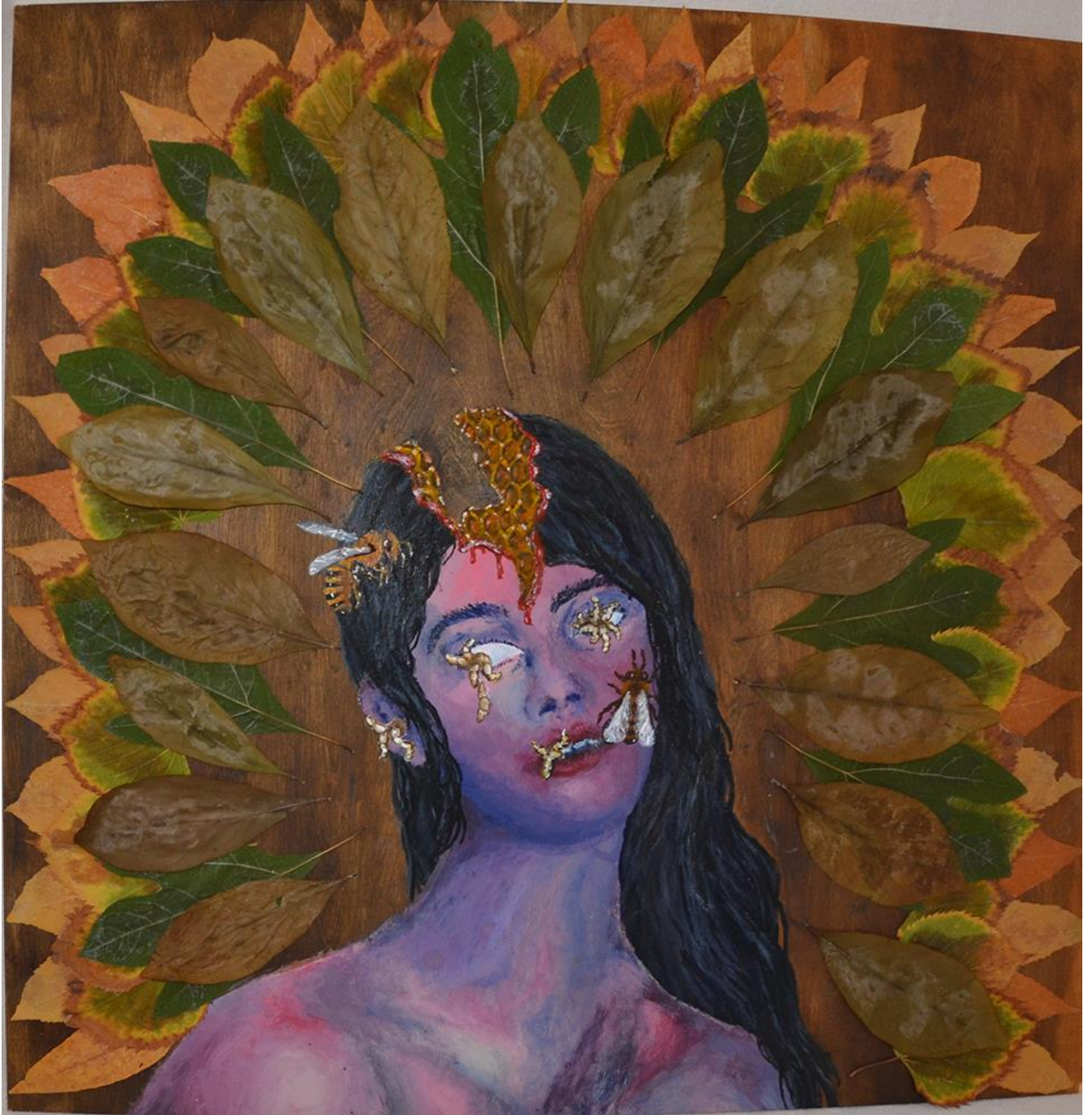
Figure 7 Artwork submitted by Sasha Chilibeck.

4.2.2 Vocabulary of community-based climate justice and visions of hope

While many participants described a devastating picture of turmoil and apocalypse, many also described a possible future of justice and community. Nadia, through the poetry workshop wrote:

I feel the injustice has gone on for too long

The land we live on, the air we breathe, the water that sustains us polluted

I feel tired of anger

BUT

I feel I must continue to fight

The fight for our future

The fight to heal our Earth

I know I am not alone

Around this fight a community has grown

For that I feel hope.

Beth wrote through the poetry workshop:

Justice is equality, but more so equity.

A voice ignored finally heard, respect.

Voices raised from the depths of despair,

United in song, a chorus of hope, one of healing.

A harmony.

The lamented listened to.

No longer to fear the obstacle but feel the drive.

Another participant, Shreetee, also described what a climate just world might look like:

Climate justice looks like

clean drinking water for all,

no more violence or unjust arrests for simply existing and,

exerting our rights for a better future.

Climate justice looks like

People over profit,

Love over money,

Care and reciprocity over economic growth,

Climate justice looks like centering the needs of the people

over the needs of a system that solely exists to cause harm

Climate justice is radical love and kindness above all and,

a better future for the souls who exist already and the ones who have yet to exist.

The vocabularies used by participants had two main realms: those associated with the devastating doom and potential apocalypse of the climate crisis and injustice, and those to describe the potential for change, growth, and community resilience through hope and solidarity. It is common for activists and those involved in the environmental and climate justice fields to hold their grief and despair at the state of the world in hand with their hope and motivation (Park et al., 2020). This resilience and determination to continue working with community towards a better, sustainable, and more equitable future through the despair of climate grief is reminiscent of the persistence of communities who have experienced and continue to experience apocalyptic conditions but continue to fight for justice (Davidson & da Silva, 2021). The participants who communicated their hope and desire through their poetry for community, love, and kindness were primarily participants who are marginalized by racialization, queer oppression, and gender

discrimination. It is pertinent that the youth who carry hope in their hearts for a just future are

those who are at the most systemic disadvantage in society. The white and more privileged

participants tended to focus solely on the devastation and apocalyptic potential of the climate

crisis and feel that there is no hope or potential for change to be found. The end-of-the world

dialogue is often centered around the end of the conveniences and privileges for the white,

financially stable society and fails to acknowledge that marginalized communities have been

experiencing different apocalypses for hundreds of years. For example, Black (slavery, pervasive

racism, police brutality, murders, incarceration), Indigenous (colonialism, missing and murdered

Indigenous women, lack of clean drinking water, medical racism, police violence), Queer (AIDs

crisis, pervasive serial killers, police violence, domestic and sexual abuse), and disabled

(eugenics past and present, forced sterilization) communities (Davidson & da Silva, 2021). The

vocabularies that youth participants use are also centered on justice and connect to the many

other social justice issues that are connected to the climate crisis as well as relationships with the

land and other people.

4.3 Rituals for processing climate grief
4.3.1 Community care and community-based rituals

The rituals that participants described follow their visions brought forth in the

vocabularies for climate justice and hope. Access to a like-minded community, community

spaces, and community care were the most prevalent descriptions of rituals to process their

climate grief, and many expressed concerns that they did not have accessible spaces where they

could discuss their experiences of climate grief and feel heard and listened to.

One participant, Jo, explained that having access to a like minded community

> *"Gives me more hope for sure, because you're not just going through that grief alone, like at least you have a community that knows what's up. There is a community of mutual understanding."*

Another participant, Dylan, explained that he doesn't feel like he has access to such a space:

> *"Most people I talk to, I talk to through a screen and that ends up being the people I already knew, the people that I was already friends with. And lovely people, but to find a space where I can just vent these frustrations as opposed to inserting myself into say, a group chat and ranting where I feel like I'm taking up somebody's time and they're like OK, what do I do with this? A dedicated space for this kind of stuff in a dedicated community where I can really talk these feelings through, I don't really feel like I have access to that right now."*

Community spaces and social connections within social and climate justice movements are not only crucial to help people process their climate grief, but also are key in fostering long-term social movement learning. The disconnect that many who are in this field of work and these organizing spaces feel from their friends, family, and communities limits their ability to learn about themselves and their positionality in society with respect to the issues that they are working on, which may enhance their experiences of climate grief (Sandlin & Walther, 2009). People may end up feeling stuck in their despair and experiences of climate grief, as well as their position in the movement and society, again increasing their feelings of grief and despair at the state of the world (Zielińska et al., 2011). Without those spaces to feel supported by others in the movement, feel accepted and loved, and feel like they are contributing meaningfully, people could become burnt out or disempowered (Zielińska et al., 2011). Social connections are often what encourage people to become and remain politically active and continue to learn about

themselves and the issues facing the world. One participant, Mackenzie, only became concerned about the climate crisis and involved because of her friends:

> *"I have a friend who start talking about his anxiety more and stuff that I never would talk to him about and I never fully understood where his anxiety was coming from and then I'd listen to him talk with all my friends and there's three of them who are really interested in big corporations and what they're doing to the world. And like I always knew it was a bad thing that was happening and then with them I started understanding because he was getting a lot of world anxiety like climate anxiety so then I started looking into it more because he was a really good friend and I was just like whoa, this is actually bad, we are literally destroying everything"*

Mackenzie's experience witnessing her friend's climate anxiety and the discussions between her group of friends led her to come to terms with the climate crisis herself and identify her own climate grief. Her experience also led her to the turning point of becoming truly aware of the issue and started her on the steps of transformative learning. She described changing her own behaviours in terms of recycling and driving and encouraging her family members and roommates to do the same, as well as her start to comprehending the enormity and the complexity of the climate crisis. Access to like-minded groups of individuals seems to be key not only in helping politically active youth process their climate grief, but also for encouraging transformative and social movement learning and bringing new people into the movement.

For these community spaces to effectively aid in the processing of climate grief, they must also be safe spaces where people's diverse lived experiences are acknowledged and accepted, and there is no tolerance for discrimination. A Métis participant, Rena, originally from Saskatchewan explained that she:

"Definitely didn't appreciate feeling really at home somewhere before I moved away

from Saskatchewan. It just wasn't something that I thought about, but now that I've left

and I don't get to go back very often, it's harder that I thought it would be. I just felt a lot

more connected there and I had a much better understanding of my place in the world

which was about the community there and feeling more connected to everything."

Everyone experiences climate grief differently and has different needs in the context of community groups and spaces. Social movements and spaces can help create collective identities and help individuals build those connections within the community where they feel that they can contribute meaningfully and that they have a network of people who care about them and whom they care about (Mühlbacher, 2020). Spaces that are particularly cognizant of the lived experiences of marginalized people, however, are lacking and were identified as a need for politically active youth to effectively process their climate grief (Mühlbacher, 2020).

Participants with access to community explained that having that access to a like-minded community and a close-knit group of friends is a lifeline that helps them feel safe and secure and to feel at home. As the climate crisis continues to cause destruction and devastation, more people are going to lose their sense of place and home and having access to a tight-knit community will be key for building resiliency through those events (G. A. Albrecht, 2020). Rena explained that she used to have access to a strong and caring community in Saskatchewan in which they:

"Always had someone that you could ask for help if you needed it and not feel like you

were pressuring them or anything because you know that you would do the same thing

for them which was really nice and made it easier to know how to give back to the

community as well because you knew which groups were actually doing good work and

who was going to benefit from the work you were doing."

It seems to be very challenging to build the strong community networks that Rena describes, and Nadia, another participant, expressed the challenges that she has experience as a Black newcomer to Canada in accessing both white activist spaces, and the Black community as an outsider to both:

> *"I definitely see myself existing in the movement a bit differently from how my white colleagues might see themselves within the movement. We haven't been listened to and I find I spend lots of time with community in conversation about that. As someone who didn't grow up in these communities, I take those [interactions] as learning opportunities and I think it helps me position myself and still just not lose myself as being part of a movement that has historically been very white."*

In Nadia's experience, learning from the Black Nova Scotian community fosters her learning of the historical and present environmental injustices and racism the communities face (Waldron, 2018a) and her learning and definition of her own identity and positionality within society and the climate movement (Walker & Walter, 2018). Nadia also describes the importance of maintaining her identity through her work in the environmental movement and ensuring that her approach to environmental work is grounded in the needs and experiences of the marginalized communities in the region.

4.3.2 Tangible activities as rituals to process climate grief

Tangible activities were some of the other key rituals that participants described for processing their climate grief (figure 8). The focus was on activities that have the potential to draw people out of their situation in the moment and bring them into the present through activities that lead to some form of obvious positive impact on the environment or community

and/or obvious impact on the individual. Kyle, a newcomer person of colour from the Bahamas, described a specific project that he led:

> *"With the tree project there were 500 or 600 thousand planted in Haiti and they have a lot of deforestation which caused a lot of mud slides and other issues, so being able to plant those trees there was a good thing. But what really made that whole project worthwhile is that we got a lot of feedback from people in different community groups and they were telling people about the importance of trees and how they were excited about the project and were getting other people to plant trees and getting their friends and their community members involved. It was just nice to see that the work was able to translate into something tangible for people as well as some value."*

Kyle explained that being able to clearly see the impact that his work had on the environment of Haiti and the community helped him feel more comfortable with himself and the state of the world and fueled him to continue in his work. This example also shows the power of social movement learning, the project and impact on the community grew exponentially when the participants shared their experience and knowledge with others in their community and it gave all involved something to come together to contribute to and to be proud of.

Other participants explained that taking part in personal or group activities to reflect on their experiences and work through their emotions in a tangible way are effective like artistic practices or writing, drawing, painting, musicking, connecting with nature through walking, gardening, hiking, or camping or becoming more self-sustaining through baking their own bread, making food with local produce, and making sustainable choices in their everyday lives like shopping zero waste or second hand. Many of these personal choices of tangible activities that helped participants process their climate grief are clear behavioural changes that stemmed from

transformative learning (Cranton, 2016). These activities not only help people to situate themselves within the context of society and the climate crisis through critical self-reflection, but also take that to the next step and apply their reflection and learning to choices in their everyday lives (Cranton, 2016). In all of these tangible activities, there are some key factors that arose: connection to community, connection to land and sense of place, and connection to oneself and one's emotions and wellbeing.

We live in a time of disconnection, especially in the aftermath of the COVID-19 pandemic where in-person and face-to-face interactions are rare, spontaneous or informal socializing is unlikely, and close interactions are fraught with fear (Cost et al., 2021). Shreetee, a queer person of colour and a newcomer to Canada expressed their frustration at the disconnected messages they received during their undergraduate in environmental studies where:

> *"I feel sometimes there is a disconnect in some of my classes in terms of how humans are [described] as kind of an external factor to the environment when it's like, no, we are all a part of the environment."*

It seems to be clear that to process climate grief and maintain lifelong learning, that these youth participants have clearly identified the need to connect with like-minded others in the community and foster community care, connect with the land they live on and nature, and connect with themselves through reflection.
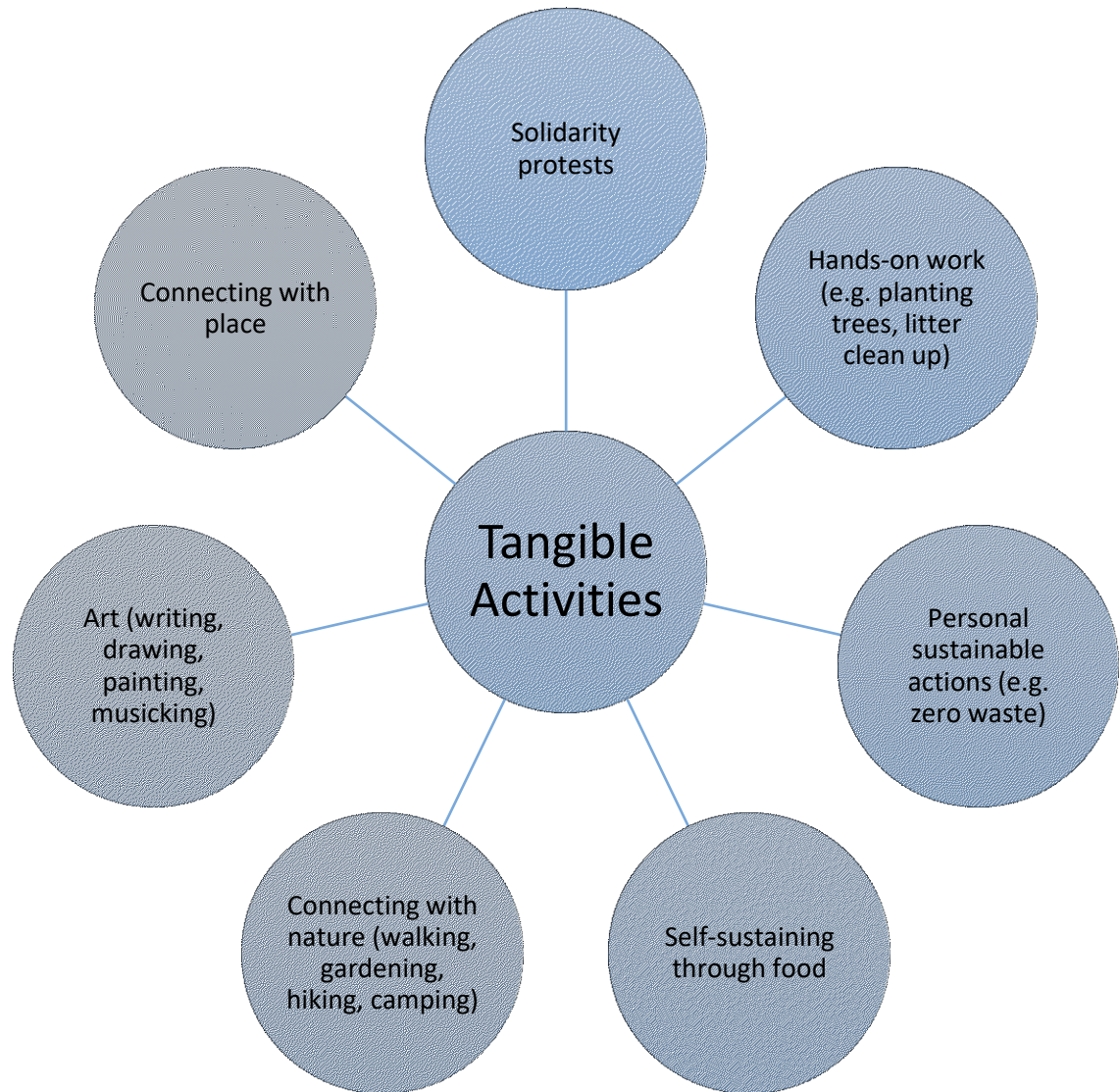
Figure 8 *Types of tangible activities participants described that help them to process climate grief.*

One participant, Bailey, who is a newcomer to Canada, a person of colour, and a member of the 2SLGBTQIA+ community shared an art piece (Figure 9) that they created with a group of their friends and international student peers following a workshop they held on the history of Africville with African Nova Scotian elders. Bailey explained that many international students arrive in Canada and know very little about the history of the land and colonial state and that they are often very isolated from each other and the broader society in so-called Canada. They and some friends who are also newcomers to Canada organized a workshop with former

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residents of Africville in Africville to learn about the history and the experiences of those former residents. Bailey explained that:

> *"We have to kind of identify our common enemy. It's white supremacy. That moment kind of like made us have a better, clearer sense of where we have to head to because we had mixed race folks, white folks, other racialized folks, and former residents from Africville talking at the same time but we were also talking about the bigger picture. Kind of hopeful and we became like a collective and I'm hoping that this group will lead to something that we can mobilize later on."*

Figure 9 was a collaborative painting piece that the participants in the workshop on Africville created to reflect on what they learned in the workshop. The participants all worked on the paper at the same time and painted their own reflections as well as ideas together as a group. Bailey explained that the houses on the bottom left were meant to represent Africville and show the fractures that were created through the community. They also explained that there is a mix of dark, turbulent depictions in the painting that are kind of creeping towards the community but at the same time there is positive energy and community that is rising up in the colourful flowers to counter that turbulent energy. That positive energy represents the possibility to mitigate the harm to communities and address issues of injustice at their root cause. The bottom left of the piece also shows a big wave that both causes destruction but can also bring about rebirth and justice, turning something that is really dark into a better and more equitable future. The overarching sentiment of the group painting represented their efforts as new settlers and newcomers to the land to understand the history of what has happened and been done before and try to really do the work to not repeat the violence of the past and to help dismantle the system that allows it to happen.

The experience of learning and reflecting through art that this group, Ripples 2 Waves, had is a phenomenal example of a ritual that helped the group process their experiences of grief and learning about the violent past of the city they now live in, but also of social movement learning and transformative learning. The collaborative painting served as a tangible way for the group to work through everything that they learned in the workshop, to discuss with their peers the new information that they learned, and to consider how they can apply that information towards building a better present and future in so-called Canada. Through the workshop with Africville residents, they learned about the dark history of the land they newly came to, as well as the resistance of the Africville community. This encouraged re-orienting themselves within the context of Kjipuktuk and Africville, understanding their positionality as new settlers, and their responsibility towards dismantling the colonial system. This group embarked on this learning experience in an effort to also form more of a group identity and collective consciousness as international students, and to understand their position within the local context. Rituals to process climate grief and grief about injustice also lead to learning experiences in which people learn from their peers and others in their community, and they work to understand their own position within society and agency to create change.

Figure 9 *Africville learning reflection of Ripples 2 Waves.*

While the future may look bleak to many and these politically active youth are familiar

with the fear and despair in the face of current and future apocalypse, there is also room for hope

and a desire for a better world. Hopelessless, powerlessness, anger, fear, sadness, despair are all

felt strongly by these activists, however, that has not stopped them from continuing to act on the

climate crisis or from learning about the issues plaguing this world. For many, their grief and

concern has led them to a place of greater understanding of other's experiences of oppression

and injustice. Through their involvement in the climate justice movement, they have been able to

witness and experience times of joy and connection from small "wins" to community consolation

events after "losses" in which protesters shared food, stories, and music. These experiences with others, with the wonders of the planet that which we live on, and the power of community have given many a sense of hope that things can be different and a desire to get there. While these identified vocabularies and rituals are limited given the specific sample population for this research, it seems clear that politically active youth in Mi'kma'ki have experienced many different forms of climate grief, different ideas and dreams about climate justice, and many possibilities of rituals to help them work through their grief.

Chapter 5 – The Motivations, Inspirations, and Experiences of Climate Grief of Politically Active Youth through the lens of Transformative and Social Movement Learning Theories

5.1 Introduction

This chapter describes and presents the learning journey that the participants underwent to become politically active. In this chapter I am only discussing learning that was transformative learning, i.e., learning that resulted in a change of behaviour (Mezirow, 1997). Given that all participants in this research are already politically active and taking action to change their behaviour or advocate for political and large-scale public changes to push for climate justice, it is my understanding that they have all undergone transformative learning experiences in order to become politically active. My goal in this chapter is to explain and uncover what those transformative learning experiences were and what role witnessing and being involved in the respective social movements played in their motivations to becoming politically active.

I start the chapter with a discussion of how participants were introduced to the climate crisis, what role their upbringing and schooling had in their initial views and conceptions, and what habits of mind they had prior to becoming politically active that composed their frame of reference. I then explore what impacts of the climate crisis participants have experienced themselves, what contributed to their instrumental learning about the climate crisis in terms of scientific understanding and how to become politically active – specifically what role social and traditional news media took in their learning process, and what their turning point or "disorienting dilemma" was that pushed them into becoming politically active to understand some of the foundations of their transformative learning experience. I then proceed to discuss the role that learning from others, specifically within social movements, but also their peers and families motivated them and stimulated their learning which draws on the communicative learning that must occur to facilitate social movement and transformative learning.

The main sections of this chapter are focused on understanding the learning experiences that participants had outside of this research in their respective lives and positionalities, but the last few sections explore how participating in this research itself also contributed to their social movement and transformative learning. In this latter half of the chapter I use the poetry workshop and focus group as an example to explore both social movement and transformative learning experiences, I map out the role of learning in the participants political action and well as within this research, and I reflect on the role of intersectionality in determining how youth experienced their learning, how it was facilitated, and how their positionality connects to their learning experiences and climate grief.

5.2 Introductions to the climate crisis

To understand the process by which participants' understandings and perspectives on the climate crisis changed and led them towards taking political action, it is necessary to understand the aspects that form their habits of mind and frame of references. For many, their introduction to the climate crisis involved instrumental learning in which they began to understand the science behind climate change, the impacts to humans, nonhuman species, and the world around them. Their introductions also involved communicative learning, as many were introduced to the issues through conversations with parents, peers, teachers, or mentors. Understanding participants as people in their entirety means exploring how they became aware of the climate crisis, their upbringing, peer influences, school, how they view themselves in relation to the climate crisis and resulting movements for climate and social justice, and how that connects to their work as politically active youth and their experiences of climate grief.

Traditional and informal methods of schooling and education were key to how participants were initially introduced to the climate crisis. Participants referenced being introduced to the

concepts of the climate crisis through formal school, initially framed as "Global Warming." For some participants this was at the early stage of elementary school (grades two or three), whereas for others it was as they matured in their high school years. Although the climate crisis did not seem to be a primary focus of their educational experiences, Choyce explained that:

"Growing up in elementary school, middle, high school, there was always that little bit of information that I would get here and there about the world that they tried to protect me from in terms of age and things they weren't telling me at age three that the world is terrible and we're all going to die."

This seemed to ring true across many experiences, participants described feeling like the urgency and the severity of the problems were not communicated to them, but it was taught as another scientific concept for students to learn and understand, rather than to do something about. They felt disconnected from global warming and the climate crisis when first learning it and many felt that there was a certain type of person who got involved in environmental issues, and those were people interested in the sciences. This assumption that the only people involved in environmental work were those interested in science arose out of the discussions and education on the climate crisis that centered on the scientific evidence of the impacts of climate change like warming waters, coastal erosion, invasive species as individual, separate instances, rather than considering and understanding the entire system. The scientific knowledge and understanding of how global warming was happening and the impacts it has on ecosystems and species was integrating technical knowledge – one of the three types of knowledge key in transformative learning and fostering instrumental learning (Anand et al., 2020).

Although participants described their initial impersonal and disconnected education on the climate crisis as difficult to connect to and understand the severity of, it did provide a key

background for reframing their habits of mind through technical knowledge and instrumental learning. Once participants started realizing the severity of the climate crisis, that foundational technical knowledge and instrumental learning seemed to always be available in the back of their minds and their memories needed to be jogged by events or learning new information. Mackenzie described her reactions to understanding the severity of the climate crisis and reflecting back on what she was taught as a child that:

> *"no kid really thinks about that, they're just like, oh, this is happening but then you start reading more about it and you're like oh fuck, this is really bad."*

Other participants gathered that initial technical knowledge through popular science education like television and documentary series on the National Geographic and Discovery Channels, the Blue Planet Series, and other educational science channels. These series primarily focused on the vast wonders of the planet and animal kingdoms and fostered a love and appreciation of the natural world in participants. This early love of nature was key in fostering their passion and concern for the planet, but it also made it more challenging to accept the severity of the crisis, and some described their initial reactions to learning about climate change as thinking it must be science fiction, not real because it was so bad.

The traditional school education, as well as more popular science communication focused on fostering a technical understanding of the Earth's systems and the nonhuman beings living on this planet, but they also centered around individual actions. Numerous participants explained that the first actions that they took on environmental and climate issues were small individual actions around their homes like recycling, turning off the water while brushing their teeth, turning off the lights when they left rooms and encouraging their friends and family members to do the same. While individual actions are important, their initial understanding was that the

environmental and climate issues facing the world could be managed and solved with a few everyday easy actions. Many participants were encouraged through school science projects and popular media to monitor their family's energy and water usage and waste sorting, and many explained that they quickly became sticklers for ensuring it was done correctly and felt a lot of guilt when themselves or their family members did not carry through on those individual behaviours perfectly.

Participants felt like they were not truly environmentalists because they were not able to achieve that level of personal purity and perfection. This theme of not feeling like they were "good" enough or the "right" type of person to contribute to environmental and climate work came up throughout interviews with participants. Many participants were only initially introduced to environmental work because they were first excelling in their academic studies or student leaders or were labelled as "gifted" by their educators and parents which gave them privileged access to environmental learning experiences to enrich their education that others did not. Environmentalism has long been viewed as the activism of the privileged and movements for pure environmental issues have historically and often continue to be led by white, educated, upper-middle class activists (Crampton, 2012). Some areas of the environmental movement have been very disconnected from the everyday experiences of people and communities, especially communities facing injustice and marginalization, and the movement has even been overtly unwelcoming and racist (Crampton, 2012). Nadia grew up in Zimbabwe where there were a lot of protected areas that were run by white people. She explained:

> *"it was like don't pick this fruit, don't do that, just leave nature untouched, and that was in conflict with me being a black girl growing up. We've got our own ways of relationships with the land so what I was learning in school and what I might see my family, my aunts, and stuff*

doing were different" her understanding started with "we're not going to touch anything we're going to leave everything alone. Just leave it. Then I decided to study this in undergrad, and I knew that it's not just about leaving things alone but also finding value in people's traditional knowledge as well."

The experiences of these youth participants, now very engaged and involved youth in environmental and climate issues, of feeling like they were unable to participate in the environmental work because they weren't the "right" type of person not only hindered their learning but also is a discredit to the centuries of work that grassroots marginalized communities, especially Black and Indigenous communities, have done to advance environmental and climate justice. There is ample evidence of similar phenomenons across various study populations within the literature, for example, a study of teenage girls in Toronto who are concerned and care about the climate crisis and issues of injustice but don't identify as "activists" found that many, especially the newcomer and racialized girls, felt they could not be "true" activists while also caring for their family and loved ones and upholding their responsibility of care (Benigno, 2021). The teen girls were most motivated by connections, care, relationships, key in facilitating communicative learning, not profit or fame but they felt that if they were not personally striking every day from school, speaking out in public, or being interviewed in major news media that they were not true activists, when really that is playing into the neoliberal and capitalist assumptions of what it means to be successful as an activist (Benigno, 2021).

Neoliberalism values exceptional individuals and emphasizes the importance of individual actions and success over interpersonal relationships and genuine care and concern for the world and each other (Benigno, 2021). The teenage girls explained that the barriers they face to being "true" activists were that they felt like they were too young or they didn't have a thick enough

skin to withstand the personal attacks that politicized activists experience from friends, family and peers, they felt helpless and powerlessness and that nothing they could do would ever make an impact on the enormity and pervasiveness of the issues in society, and that they just were not old enough or experienced enough to be viewed as activists (Benigno, 2021). Although the teenage girls desired societal and systemic change, their views on what makes a true activist, and in turn what made them not activists, were rooted in neoliberal and capitalist images of what it means to be an activist (Benigno, 2021). However, this is not a phenomenon or experience unique to young people.

A study of climate justice activists who also have day jobs outside of the activist field found that many who are involved in climate justice movements face barriers and de-legitimizing factors from their personal interactions and relationships within their friend, family, neighbourhoods, and career circles (Bond et al., 2020). Many climate justice activists worry that their personal and work relationships might change if people recognize them as an activist or become aware of their political and moral views, and they worry about the stigma and assumptions associated with someone being an "activist" (Bond et al., 2020). This fear of recognition and activism negatively impacting their social and career prospects leads many activists to having two very separate personas, their persona that they have in their daily lives at work and home, and that which they employ when participating in protests and organizing to avoid funny looks, side comments, or being classified or labelled as too much and too radical (Bond et al., 2020).

The experiences of the participants in my research, the teenage girls in the study in Toronto, and the activists in Bond's research make it clear that neoliberal society has created a stereotype and image of what an activist looks like, and that many feel they don't fit within that or feel that

there are negative connotations associated with the label that hurts their social relations. Thus, becoming politically active and acquiring both practical and emancipatory knowledge necessary to undergo transformative learning must also require a reframing of oneself and understanding what it means personally for each individual to be an "activist". For many, this reframing is helped by finding likeminded groups of peers in which they can develop that practical knowledge, learn from others in the movement, and develop shared understandings of what it means to be an activist and to contribute to solving the climate crisis.

Friendships and relationships of collaboration and respect with their peers were also key in participants being introduced to the severity of the climate crisis and the work being done to combat it. Friends, family, and peer reactions to the issues around the climate crisis and the concern of the participants on the issues influenced the level that which they became involved. Some participants grew up with parents or caregivers who were very environmentally focused and ensured that they were installing solar panels, if possible, on their homes, taking non-car transportation, eating locally and vegan or vegetarian, and voting for environmental candidates. Others were inspired to learn more about the climate crisis because their friends were very involved in organizing climate strikes and events and that spurred them to learn more about the movement and issues through social movement learning (D. B. Hall & Turray, 2006), or they learned to empathize with their friends' experiences of grief. Although friend and familial relationships were sometimes key in inspiring participants to learn more about the issues and become involved, some dynamics discouraged their engagement. Many participants described having to be different with different groups of friends of family as well, where some of their friend/community groups are aligned with environmental views and others would laugh at them and joke about it when it isn't something that should be joked about. Both circumstances of

engaging with those personal relationships have the potential to spur critical self-reflection towards one's place within society and in relation to the climate crisis.

5.1.1 Gaining knowledge of the climate crisis through experiencing the impacts personally

Personally experiencing the impacts of the climate crisis is perhaps the greatest motivator and call to action possible for many. Although devastating, grief rendering, and challenging to process, witnessing the impacts firsthand helps make the crisis feel more real and tangible and therefore something that is more urgent to act on. The primary participants who described experiencing various impacts of the climate crisis were newcomers to Canada or had lived in other countries besides Canada where they had witnessed the impacts. Canada, including Mi'kma'ki, is experiencing the impacts of the climate crisis, but it is not as obvious as other parts of the world. Others remembered abnormal weather events or patterns in the places they were from and only connected them to the climate crisis once they already knew more about it. For instance, Bailey, a newcomer from Japan remembered living through extreme weather in Japan that would be connected to global warming that they started to notice around age thirteen but didn't connect to the climate crisis until they were a bit older and realized how little was being done to combat the crisis.

Not only are the impacts of the climate more readily visible in some other parts of the world, but the public perception and attitudes differ as well. Ricky, who is from Prince Edward Island but lived in China for a few years in a very polluted city explained that:

"in China, there's not really anybody who denies that it's a problem. I don't think they really have the privilege to deny that the climate crisis is very real when it's so in your face. Whereas in North America, you might find some people that are on the fence, so they think it's a hoax. You don't find anybody like that in China."

Participants noted that moving to Canada made them realize that they had witnessed much more severe effects of the climate crisis in comparison and also identified that the countries that are experiencing the worst impacts of the climate crisis often receive waste from countries like Canada in the Global North. Beth, who moved from Australia to Canada described the differences in the impacts and resources available in that:

> *"As a child growing up in Australia and for the seven years while I was there, we were in a drought. So, you know, already as a young child, I had to be quite familiar with water conservation and lakes drying up that I used to go swim in or just even my parents watering the garden at certain times of the day. It really became something I cared about was probably transitioning from Australia to Canada and moving where there is a vast amount of water and certain resources that Canadians take for granted. Also growing up in Australia with lots of bushfires."*

This firsthand experience of the impacts in Australia is further evident through the poetry that Beth wrote reflecting on the impacts of the climate crisis, the societal implications and connections, and her climate grief:

There we sit, as sea levels rise, as violence ensues around us.

Long has there been political instability, a fight for survival.

Time, privilege, knowledge evaporating.

No longer the same experience.

The air we breathe suffocates us but we aim to support through instability, soil degradation and manifestation of ally ship.

Rising temperatures increase as BIPOC voices are raised.

The wealth and health distributions make us choke, the loss of life unbearable but still we stand side by side in support.

To determine survival,

To overcome loss of life,

We must avoid a slow demise,

See beauty through Mother Nature's eyes.

Our future sways from community to violence

From collaboration to corruption.

Here we wait with bated breaths for the present to unravel before us.

     For others like Jo and Shreetee, the countries that they grew up in are countries in the Global South that are already feeling a lot of the effects of the climate crisis. Shreetee explained that the rainy and dry seasons in Mauritius seem to be different every year and that they are constantly facing drought, flooding, and storm surges. For these participants, realizing that they were already experiencing or were bound to be at risk of experiencing intensified impacts of the climate crisis was scary and gut wrenching. Jo said:

> "*I'm from Hong Kong and I'm from a place where the climate is very different and I have the awareness that different countries will get hit faster than others. That is very fear striking.*"

Although the descriptions of personal experiences of the climate crisis were numerous from newcomers to Canada and were central to their experiences of climate grief, participants who were born in Canada also described witnessing the impacts. Rena described really understanding the impacts when her

> "*family took a road trip up north and we went about 10 years ago and even then the impact of climate change was a lot more tangible because the permafrost was starting to melt. There are lots of concerns about people's houses basically sinking into the ground and all sorts of infrastructure challenges that are already happening in a much more tangible way that where I lived.*"

Rena had to leave her home region to really come to terms with the rate at which the climate crisis was progressing within Canada but hadn't yet identified those impacts where she lived. Similarly to the participants who newly came to Canada, going somewhere outside of their normal range gave them the perspective to recognize the effects of the crisis and compare.

Cadence, who lives and grew up in a small town in rural Nova Scotia said that once she learned about the climate crisis and the science behind the causal mechanisms and effects that she started to recognize some of the changes in her area as impacts of climate change. Cadence shared that she feels:

> "*like the weather from even now to when I was little is so different. There's way less snow now as well, I started to notice that a long time ago because I've always skied and every year*

there's less and less snow. Also ticks, when I was little I used to play outside every day and I never had ticks and now I literally go outside for a five minute walk and I have like four ticks on me, which would definitely be attributed to our changing climate."

While newcomers to Canada and those born in Canada have both witnessed and identified the impacts of climate change on this land and others, there was an overarching sentiment that they are fairly safe from the worst impacts living in Mi'kma'ki where the effects have not reached extremes. Understanding how the global, complex, and systemic issue of the climate crisis impacts oneself on a daily and personal level in local communities is key in comprehending the extent of the issue and galvanizing action, however, traditional news media tends to distance the viewers or readers from the crisis and makes it seem like it is an issue happening elsewhere to other beings or other countries which can discourage action and engagement on the issues (Boulianne et al., 2020). Social media, in turn, can be used to personalize the climate crisis and make it more relevant to lived experiences.

5.3 Social movement and transformative learning about the climate crisis through social and traditional news media
5.3.1 The role of social media in learning and climate grief
Social media is prolific throughout Western modern society and has become an important and often misused tool for public education and engagement, but it has also been key in the rise of youth activism across the globe. Youth are very present on social media, and it is often their first point of contact with issues they are learning about, organizations and movements they are becoming a part of, and relationships they build with likeminded communities. While there are a lot of positives in the use of social media to raise awareness, build connections, and grow movements, it can also threaten the mental health and wellbeing of its users through the constant bombardment with terrifying and upsetting news content, the culture of trolling, shaming, and

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cancel culture, and the disconnect and isolation that is created when social connection is primarily intangible and through a phone screen (Kuk & Tarlau, 2020).

The educational role of social media has been key in the experiences of many participants, especially those who are just starting out in engaging with the climate crisis and associated issues of injustice, but also for those who live in more rural areas and might not have as much access to physical spaces and events. Although all of the social media sites play major roles in communication of climate change, TikTok is rapidly gaining popularity, especially among younger users. TikToks are able to be integrated to other social media sites like Instagram and Facebook easily, so they are very relevant to the lives of young people in the digital landscape. TikTok plays a popular role in communication and education on the climate crisis, particularly with younger youth and is unique in that is allows creators to have many layers to their messages and integrate a lot of different components (Hautea et al., 2021). TikTok combines personal and political thoughts and feelings and connects users through shared sentiments and memes that encourage familiarity and bonding (Hautea et al., 2021). There are many TikTok videos discussing the climate crisis, some that have gone viral, and most encourage users to take action on the climate crisis, many are educational about the science or impacts of climate change, or celebrating the Earth and what could be lost, as well as negative videos critiquing the lack of action on the climate crisis by generations past, especially Boomers (Hautea et al., 2021).

Participants explained that following their early, foundational experiences with the climate crisis at a very base level in elementary or high school, they began to learn about the climate crisis in more detail through internet articles and following authorities on climate science like the Intergovernmental Panel on Climate Change, local environmental organizations, and leaders and activists within the environmental space to stay up to date on relevant environment and climate

issues and learn more. Social media creates many opportunities for collective learning and connecting with other users worldwide through shared goals and ideals about the world solidarity through the use of hashtags, community forums or groups, and resharing others' posts (Gleason, 2013). Additionally, the participants within my research gained much of their technical knowledge through following authorities on climate change science and policy. By following other leaders and activists in the movement they were also able to be exposed to different life experiences like those of Indigenous peoples, and Black communities with the effects of environmental racism and the climate crisis.

Social media also gives people the opportunity to share what they have learned with others within their social circles and keep pushing forward the domino effect of social movement learning as more and more people learn from the work of people within the movements and are inspired to learn because those that they care about and respect are sharing the information. Hailie, who lives in rural Nova Scotia and shares a lot of information on her social media shared that she has:

> *"had a lot of different people over the years message me and thank me for sharing things because they had no idea. They thank me for educating them on the issue."*

Although Hailie is very supportive of social media as a tool for education and galvanizing people into action, she also spoke about the importance that the activism does not end there. Sharing some informational articles on social media is not enough to combat the enormity of the climate crisis and systemic issues of injustice at hand (Cabrera et al., 2017). She mentioned that social media has allowed her to take that next step by connecting to grassroots networks of activists working on specific issues, and making her aware of protests, sit-ins, and events happening on different issues.

Many participants, like Hailie, spoke of the positive effects of using social media to encourage learning and inspire change, but others felt that social media enhanced their experiences of climate grief and made them want to turn away from the seemingly endless "end of the world" scenarios. Amanda explained that for her:

"Emotionally, I don't think they help but I kind of see it as if I were to stay off twitter it would almost be ignorance on my part. The reason why Twitter is hurtful is because I am reading stuff that are true and that's why they are concerning, because I know they are true. My twitter has stopped me from being ignorant. It doesn't help any emotional stuff but I think I would feel guilty if I weren't on twitter now, if I got off twitter for emotional reasons because I would know that there is a lot of stuff going on that I should care about but being off social media would be like actively choosing to ignore those things."

Cameron found that he has spent so long being bombarded by the depressing new science and developments of the impacts of climate change that he finds that he is numb to coming across them and explained that:

"It's certainly affected me in reaffirming my generally pessimistic attitude towards these sorts of things. I don't think it makes me as anxious or sad as it used to and maybe that's just because I've gotten used to it."

Dylan also felt that with social media:

"so much of it is doom and gloom these days but I would much rather know than not know because if I didn't know I'd be sticking my head in the sand and then all of a sudden the crisis would blow up in my face."

Although both Cameron and Dylan expressed a sadness or frustration that the reality of the world is very depressing and full of new devastating developments in the climate crisis, they also emphasized that there needs to be a focus towards what people can do rather than fearmongering and staying in the mindset that humanity has no hope of survival. Throughout the discussions with participants on the role of social media and public facing engagement on the climate crisis, it became clear that they want to inspire transformative perspective change in others. They feel that it is not enough for people to understanding the scientific effects, but that they need to really understand how it impacts them personally, how they are positioned in relation to the crisis and others, and what they can do about it. The focus on doomsday rhetoric often leads to people feeling numb, like Cameron, or ignoring it because they cannot fathom acknowledging their grief and fear. Some participants, like Jo, also described getting stuck down spirals on social media where they access hashtags relating to climate change and issues of injustice which sends them into a panic where they are very overwhelmed, sad, and anxious.

It seems that through social media and traditional education, that most youth participants and their peers have some technical knowledge of the climate crisis, enough to know that it is an issue and that there needs to be action on it, but little practical or emancipatory knowledge. Social media does provide users and learners with the opportunities to learn from other's experiences, and hear their experiences directly from them, but it is also confined to very short snapshots of people's lives and the issues at hand which makes it challenging for users to gain practical and emancipatory knowledge and truly participate in the self-reflection necessary to undergo transformative learning. That opportunity to connect with others around the world with similar life experiences is crucial for many, especially those who might be more isolated from

their cultures and communities. Rena, for instance, is Metis and because of colonization and forced assimilation lost a lot of her culture and she explained that:

> *"One of the good things about social media now is it's a very accessible platform for more Indigenous creators so I found that it has actually been really helpful for grounding or reinvigorating my cultural identity because it's a lot easier to access Indigenous memes or Indigenous made content."*

In Rena's experience, social media has been a part of her gaining emancipatory knowledge and participating in critical self-reflection to build her cultural identity and learn from others. For all the youth in this study, social media was a tool that they used to learn more about the issues, connect with others of a similar mindset, find out about actions and work happening in the sphere and get involved, and have access to the ideas and thoughts of countless others, but it was not instrumental in their turning point or "disorienting dilemma" leading their perspective to change and lead them towards action.

5.3.2 The role of traditional news media in learning and climate grief

News that is communicated through both social and traditional media, but especially traditional media has a double standard. Shreetee, and other participants, expressed frustration and anger that there is a such a disconnect between the climate movements and the grassroots frontlines Indigenous sovereignty movements like that for moderate livelihood fisheries when the same systems are at the root of the issues.

Rena brought up another major issue with the traditional news portrayal of environmental and climate activism in which there is a lack of understanding that we need collective action and community and not just individual actions. She shared that she thinks

"there's just a lot of like either really glorifying individual actions or kind of shaming individuals for the choices they're making when really, it's not that there isn't any individual responsibility because there is always some degree of that, but really, it's the context that is responsible for that situation. But that doesn't really get talked about because you can't fit it into a 200-word news piece."

Ricky shared this sentiment, and says that:

"It's maybe not enough. I don't necessarily hear a lot about how Canada is shipping its garbage off to poor countries, definitely very linked to structures of colonialism and the inequality in the world and maybe there's not enough in the media about how people and other areas are going to be affected by this much more quickly and I worry that people in Canada and other wealthy countries are not going to act on it as quickly as they need to until it directly affects them."

Social media and news media brings awareness and coverage to issues but are often missing the nuance and context which makes it challenging for social and traditional news media to foster any deep lifelong perspective change or transformative learning, however it can encourage social movement learning by exposing users to the work of activists and encouraging them to think about it and learn more.

There is often congratulatory and prolific coverage of climate work done by individual white activists and organizations. Indigenous and communities of colour, however, have always been saying that climate and environmental destruction is a problem and aren't listened to or taken as seriously which portrays them as not taking action on environmental issues. The traditional media often highlights individual activists or leaders, who are predominantly white, and

celebrates them as an individual and all they have done for the movement, rather than looking at the centuries of resistance and environmental stewardship that Indigenous and Black communities have done. This is evident through the coverage of protests in which protests like climate strikes led by young white women are celebrated, whereas frontlines protests led by water protectors and land defenders are viewed in a bad light and framed as disrupting society, the economy, and the legal system. Shreetee expressed with frustration that:

> *"The Indigenous water protectors who oppose fracking and oppose drilling are portrayed in a bad angle as if they're doing something wrong when actually they are doing the right thing. You know it is because they are Indigenous and if it was white people, the tone would have been different."*

For many white activists, they gather and protest once in a while when specific bills or events come in as a reaction, but Black and Indigenous peoples are protesting and resisting every day, usually with their bodies physically on the frontlines and exposed to environmental and colonial violence (Waldron, 2018b). This disconnect and double standard is also present within the activism community and that lack intersectionality within many non-governmental and non-profit organizations within the environmental and climate movements is a barrier for many racialized activists.

5.5 Turning point

Throughout this chapter I've touched on the introductions that participants had to the climate crisis, their personal experiences witnessing and experiencing the impacts of climate change, and the role that social media has played in their learning and activism, and those aspects of their learning process frame their ever-evolving perspectives and knowledge on the climate crisis. However, none of that foundational information explains what spurred them towards becoming

politically active, what the turning point was for them when they went from knowing about and

understanding the climate crisis, even caring about, to actively doing something to combat it

whether that be through activism, education, their career, or their daily lives. The turning points

are those moments that made the activists reconsider how they understood the world, their

position in the world, and felt like they needed to take action (Cranton, 2016).

Table 2 Turning points of participants that led them to becoming politically active.

Alias or First Name	Identity	Turning Point	Type of learning engaged
Sarah	Sarah is a white cis-female member of the 2SLGBTQIA+ community	"The summer of 2008 there was a large part of the Arctic ice that broke off and it was making big news and stuff like that so I knew about climate change beforehand, but thought that wasn't for me. At the time, I knew global warming was definitely a thing but that was the first time that I remember being like really upset and scared about it, being like oh my gosh, this isn't good and it's only going to get worse"	Instrumental
Sophia	Sophia is a white cis-female	A gradual process, grew up in a very environmentally focused household and was homeschooled and exposed to a lot environmental education and work at an early age, started to study climate change specifically at age twelve or thirteen and came to the realization that it was a large issue.	Instrumental

Amanda	Amanda is a white cis-female	"It didn't really click as to what an emergency it was until recently, like two years ago at this point. I don't even know if there was a climate related part that made me realize but there were a lot of things going on in the world like Donald Trump and general bad things in the world that related to the climate justice movement and that's the point where I tuned in more"	Instrumental
Hailie	Hailie is a white cis-female member of the 2SLGBTQIA+ community	Got involved with leaders of today at age twelve and participated in a conference for youth, youth workers, and government officials run by the Heartwood Centre for Youth, and that spurred her to come out of her shell and get more involved in leadership and justice issues. Got involved in environmental issues in high school through Envirothon.	Communicative
Ricky	Ricky is a white cis-male member of the 2SLGBTQIA+ community	Grew up loving Animal Planet and being really focused and in love with the animal kingdom and natural world and then was told by the documentaries and science that all the biodiversity was disappearing and it was very shocking.	Instrumental
Tanya	Tanya is a Mi'kmaw woman	Wanting the best for her son and being worried that there wouldn't be much left on the planet to sustain life and provide for a sustainable way of life. Wanting to do everything she could to ensure that her son's and other younger people's futures would be survivable and enjoyable.	Communicative

Cole	Cole is a white nonbinary member of the 2SLGBTQIA+ community	Cole at the first climate strike they went to "When we got there, there was a student. He's two years older than I am and the mayor was just going at his throat about how climate change is not real, it's no different than the oil crisis that happened when he was around our age and people just got over that and it was fine. So, I really started to see that the people in power are not listening to young people and what they have to say and so that's when I was like, wait a minute something is wrong with this situation"	Communicative
Kyle	Kyle is a cis-male newcomer to Canada and a person of colour	"When I found out how serious of an issue and where I'm from and how vulnerable a country like mine is, I became really passionate about what to solve, or at least be a part of the solution to the issue. I think that's really the driver for me is that being a voice and trying to be a voice for people who don't know or aren't able to have a voice themselves"	Instrumental
Jo	Jo is a nonbinary person of colour who is a newcomer to Canada and a member of the 2SLGBTQIA+ community	When Jo experienced their turning point their emotion was "not necessarily panic at first but just their first introduction to activism and understanding that things can change if we want them too. I don't think the grief came until after when I started questioning the prophecies of some pretty white led organizations and I was like, maybe this isn't the best way to go about it and the time is still ticking, that's when the grief kind of set in of oh my God, why have we done this wrong?"	Instrumental

Dylan	Dylan is a white disabled cis-male who is a member of the 2SLGBTQIA+ community	"I know this only happened this year, but this really crystallized everything for me, when my niece was birth I realized that I don't want her to have to grow up in a world where you know, she learns about something like sharks, for example, through a textbook as something that once was. I don't want her to grow up in a world deprived of the things that if we hadn't messed up the world as much as we have, things she should be able to see and wonder at. This is a beautiful world we live on"	Communicative
Bailey	Bailey is a non-binary person of colour who is a newcomer to Canada and a member of the 2SLGBTQIA+ community	"I think it was the first year gender studies where we got to talking about how it's going to change if you fight for it, and that's when my brain just like shifted to, ok, let's be a part of that. I always knew that the term exploitation was very key to all of the things that are wrong in the world" ○ Another time in third year sustainability and they brought in a guest speaker who was very racist and made them realize that there are a lot of ways that things can go wrong even within groups/ people who are doing the work ○ Bailey had a big health crisis last year, had to	Instrumental and Communicative

		go back to Japan and it wasn't life threatening but threatened physical and mental health, made them think deeply about how to life their life meaningfully and with intention	
Shreetee	Shreetee is a non-binary person of colour who is a newcomer to Canada and a member of the 2SLGBTQIA+ community	Became interested and involved through the environmental club at their high school where they were focused on sustainability, cycling, and composting and they were interested in sustainable living but the severity and complexity of the crisis wasn't clear to them until they learned how intersectional the issue is and how Black, Indigenous, People of colour and other marginalized communities are more at risk to the impacts of the climate crisis and also experience environmental racism.	Instrumental
Beth	Beth is a white cis-female who is a newcomer to Canada and a member of the 2SLGBTQIA+ community	Connecting her childhood experiences of the impacts of climate change in Australia with the science that she learned in high school on the climate crisis and understanding the severity she got more involved and worried about the issues.	Instrumental
Mackenzie	Mackenzie is a white cis-female	Friends were really concerned about the climate and environment, experienced a lot of climate anxiety and so as to be able to help friends and relate they learned more about it and then started to be concerned themselves.	Communicative

Choyce	Choyce is a white disabled cis-female member of the 2SLGBTQIA+ community	"I realized from a young age that it was going to be a really big problem and I looked around and I realized that not a lot of people really cared about it, and even the people that really cared about it, not a lot of them were doing things"	Communicative
Sasha	Sasha is a white cis-female who is a member of the 2SLGBTQIA+ community	Creating art to represent that humanity is causing our own death through the destruction of nature and that humans were doing themselves in, but she was able to move through that grief and fear and come to acceptance through her artistic practice and then focus on her studies.	Instrumental
Cameron	Cameron is a white straight cis-man	Studies philosophy and history of science and issues in those fields relating to the climate crisis "It just seems like there are so many unsolved questions that are important to think about and explore and when they stop being thought about and explored then we will stop making progress in thought"	Instrumental
Rena	Rena is a Métis woman who is a member of the 2SLGBTQIA+ community	Having learned and heard about environmental and climate issues her whole life and nothing changing, and things were seemingly getting worse and going to continue to get worse.	Instrumental
Cadence	Cadence is a white cis-woman	At first had no idea that climate change was an issue or something happening at all but then learned about the climate crisis and intersecting issues of injustice all at once from other youth who were more engaged and got worried and concerned that so many awful things were happening in the world that she didn't know about and felt like she	Communicative

		was very small but that she needed to do anything she could.	
Nadia	Nadia is a Black cis-female newcomer to Canada	Always knew the environment was changing and growing up in Harare in Zimbabwe (an urban area), they went on a lot of field trips where they would learn about conservation and why it was important and didn't completely understand until she learned about the climate crisis and how it connected to the education in conservation she had had throughout her childhood.	Instrumental

Although all participants had their own unique turning points in their transformative experiences, understanding the intersectionality and climate justice perspective was key in many participants' turn towards political action. Participants understood that they could work on the climate crisis and other issues of injustice simultaneously which specifically made it more personal to their lived experiences of injustice and oppression. That intersectional understanding and connection to their personal identity and life experience brings together the three types of knowledge processes: technical, practical, and emancipatory and was clearly a major component of participant's turn towards action.

Another major theme was involvement in leadership and helping others throughout childhood and adolescence through a variety of different means, and genuinely being concerned about the wellbeing of all other beings. For example, Cole shared that:

"My mum used to work in crisis centers and deal with people who were a lot less fortunate

than the situation that I grew up in and so she allowed me to ask questions and when we

would see people on the street and asking for money, it was always something that I was

aware of, poverty issues. I was always a very active child that loved to get involved in everything so it wasn't really until junior high when I started social activism issues because people think that young kids can't get involve in that stuff. I was always that person that wanted to help other kids in the class, it's just kind of built in my nature to help people if I have the resources to help them."

Many participants explained that it was a gradual process, they had been introduced to the climate crisis early on in their lives and then learned about it more and more as they grew up and the associated injustices which led them to being politically active. Part of that gradual realization was comprehending the severity and enormity of the crisis, and all the aspects of life on the planet it will affect which brought in that technical comprehension of the scientific reality of the impacts of the climate crisis, and shared understandings. This was for some specifically realizing that they don't want to live in a "barren wasteland" but want a planet full of life, air they can breathe and that really stemmed from their love for the planet and all the species on it, desire for the blue marble to continue hurtling through the voids for eternity, love for communities and wanting to help others.

Tanya shared that she:

> "*was definitely worried about the planet. I really love the woods and trees. I would cry when the trees would get cut down*"

In *Braiding Sweetgrass*, Robin Wall Kimmerer teaches a lot about knowing about the workings of ecosystems and appreciating them, but also fostering a reciprocal relationship where humans are helping ecosystems thrive (Wall Kimmerer, 2013). Taking action as an activist, scholar, public servant, or innovator to mitigate the climate crisis and change practices towards working

with nature translates to giving back to the planet and restoring that reciprocal relationship. To do that, many had to come to acceptance with their climate grief and potential death and then use those feelings towards taking action and being more "productive."

Participants always knew there was something wrong with the world and society/injustice but couldn't quite put a finger on it until they realized how their identity was a disadvantage or how their privilege put them at an advantage, which really connects to emancipatory knowledge. Participants described feeling guilt, frustration, anger, and sadness when they came to terms with how unjust the climate crisis and society are and Shreetee shared:

> *"I guess I also kind of feel guilty, and I think that word came up. But I feel guilty that, oh, you know, I'm living. I have clean drinking water, and I feel guilty because other communities do not have it, and here I am having it and sometimes I don't even realize I just do things and I have to remind myself that I'm trying the best that I can."*

The turning point for participants looked different in every case, sometimes they had experienced a really striking event that made them reconsider and reorient themselves, whereas in other cases it was a more gradual effect of them gaining all forms of knowledge (Cranton, 2016). In all cases, there were key ideas, events, or experiences that ignited the fire within participants and inspired them to take action and dedicate their energy towards combatting the climate crisis and injustice.

5.6 Community connections and peers

Connection with peers and friends has positive effects on climate grief and encourages learning and action but the social dynamics can also be difficult to navigate when people feel isolated and like their experiences are not valued or understood. Some participants struggled with the fact that their peers are not as concerned as they are about the climate crisis and felt frustrated

when their friends didn't structure their lives around climate change. Those in smaller communities also found it challenging when their social circles were small and tight-knit because they worried about never being taken seriously because they can't get out of the shadow of images that community has of them from growing up. Others described feeling disconnected from their home communities and where they grew up because they no longer or never did share the same political/worldviews, being made fun of and laughed at for trying to make personal changes like becoming vegetarian and trying to reject capitalism, and people being too closed minded, which made it difficult to really build relationships and open themselves up.

Many participants identified a need to focus on the local impacts in the areas where people live and their experiences so that the issues of the climate crisis are more relatable and understandable. Participants were clear that we need as many people as possible to join the movement to be able to effect change and that to build that movement there needs to be a deep understanding how communities and people in communities have really been impacted because that can make it real and feel truer for the people facing those impacts and doing the work. Nadia, who does a lot of community engagement as an outsider with the African Nova Scotian community that has faced a lot of environmental racism explained that her climate grief is:

"even more at the forefront when I am in those conversations. You might have read about something but it's very different from being in a room with someone from Shelburne who's telling you that all their friends have lost their lives from drinking the water and that they're starting to feel sick, it's very different and you start to feel the climate grief that comes to the forefront in those moments, and it becomes a justice thing too. Just again emphasizes the layers that exist within this climate movement."

Many expressed that they felt more comfortable to start acting and taking part in public demonstrations when other people they knew very well in their communities were doing so and so they felt that they would be supported in their work. Being asked by members in the community to participate in something gave them confidence to take that step forward to contribute to the fight against the climate crisis and the betterment of life in their community. A part of building that reciprocal support within a community and developing a group identity that encourages social movement learning is by understanding how communities work and fit together and how one can best contribute.

Community care and directly providing services to others in the community was a key way that participants built those relationships and effected change in a way that feels meaningful to them. Jo explained that working with community:

"felt more personal and I felt more gratified doing that kind of work because you see that there are actually effects, like you can support someone. You can offer resources and that'll help them go through that day so they can continue with their work. Meanwhile, with other forms of activism it's hard to see an end goal there. The face to face, that works better for me now."

Although there are challenges to being truly supported in community, participants also described transforming their relationship with other generations and peers through sharing their knowledge and experience. Teaching older generations can be inspiring, hopeful and empowering, Sophia shared that her:

"grandparents just recently started talking about environmental things, and they took a class or something that they were very excited and talking about everything that they learned in

this environmental science class is great. But they are very much of a generation where they

kind of feel like they know everything because they've lived so long and because they've been

around for so many things, but this is something they don't necessarily know a lot about. So

conversations with them are always interesting."

Participants explained that their goal in building relationships with others and their hopes for the

futures of movements and sustainable communities is to foster mutual agreements that work for

everyone, hearing and meetings everyone's needs, and listening to one another. Rena shared that

"Part of the problem with the current system is that it takes out a lot of the relationality and

the relationship building that I think needs to happen to actually have change occur, the

systems just aren't designed to actually promote or encourage dialogue and relationship with

people because it's all about, we don't want to promise too much and then not be able to

deliver instead of just having a really honest and open conversation about what your

limitations are and what you can actually do and what everyone's starting position is and

where you would like to get to."

In looking back at the participants' introductions to the climate crisis and their turning points,

relationships with others and learning from others has been key in all of their learning processes,

and they wish to see better relationships and care being implemented within activist circles but

also in their broader networks. They see that the way forward to enact change and encourage

transformative learning in others is to build strong communities.

5.7 The Learning Process

Throughout this chapter I identified the processes and events that participants underwent

that led them to becoming politically active, including those that encouraged personal

perspective change where they acquired technical, practical, and emancipatory knowledge

leading to true transformation, and where they learned from pre-existing social movements and continued to learn once they became involved in the movements (Figure 10). The diagram in Figure 10 includes a third component as well, intersectionality and their lived experiences, because to truly understand the learning process and motivations of these politically active youth, I needed to explore how their lived experiences based on their identities and position in society provided them with differing opportunities and determined the lens through which they approached the climate crisis. Through the questions I asked in the individual interviews and the self-reflection that the poetry prompts stimulated, this research continued to spur the process of transformative learning wherein participants conducted critical self-reflection and understood their own positionality and experiences better. In addition, the poetry workshop and focus group encouraged social movement learning as it built a collaborative space in which participants were able to interact with one another, empathize, share their deep and dark emotions relating to the climate crisis, feel solidarity with one another and learn about the different experiences of others.

Social Movement Learning Experiences:

Witnessing the power of other people's actions like protests, presentations, storytelling, finding a community of like-minded people where they build trust and work towards common activism goals with, expanding their activism to stand in solidarity with communities experiencing the worst impacts of the climate crisis and injustice

Transformative Learning Experiences: foundational experiences of learning about the climate crisis and injustice, personally experiencing the impacts or being able to relate personally to the impacts, and forming relationships with others who care and support them

Becoming Politically Active

Intersectional Lived Experiences:

How their lived experiences as their identities affects their positionality and their experiences of climate grief

Figure 10 *Diagram of the theoretical and experience contributions to the motivations for becoming politically active.*

The poetry workshop and focus group is a great example illustrating and explaining transformative and social movement learning processes. Participants felt that the poetry workshop was a great collective experience where it was motivating and inspiring to hear other people's hope, community care, and a helpful ritual to help them process some climate grief. The poetry prompts really forced them to think through climate grief and sit with it. Facing their climate grief also became challenging as things got more personal and it was harder to face the

depth of their grief and the emotions. The practice of physically putting pen to paper or typing

words out on paper forced them to acknowledge and accept their feelings of grief, and that made

it clear that it was bringing up a lot of strong emotions. Shreetee described the feelings that came

up as she responded to the prompts in that:

> *"I didn't know there was so much inside of me and the prompts were really helpful and*
>
> *guided you through what to write and it was nice to hear everybody else's poems and words*
>
> *too."*

Although participants were appreciative of the prompts for writing the poetry and felt that it was

helpful as a tool for reflection, the highlight of the workshop was getting to process their grief

and wade through it with others who were doing the same. They shared that without hearing

other peoples' experiences it would have been very isolating and that it was more comforting to

wade through the grief when they could hear other peoples' experiences. In addition, they found

that it was powerful to see the similarities between the experiences but also where people's

experiences differed which opened their minds to other experiences. Hearing other's experiences

also strengthened the solidarity between participants and relationships and helped create a

collective identity that fosters social movement learning. Beth said that she

> *"didn't realize how many emotions or even the imagery I had around climate grief and*
>
> *writing them down and picturing them those emotions of conflict and fear it also gave me*
>
> *strength and validated those emotions and made me realize that I'm not the only one*
>
> *struggling with those emotions."*

Being able to hear other experiences that resonated with them both in the workshop and

focus group helped them relate to others, and Nadia shared that:

"Just hearing everyone else and especially hearing someone else express something and you're like, wow, that's what I'm feeling. I found that really helpful because, again, coming back to how hard it was for me to situate myself in it for me to write about it, having someone else right after that share and it resonating was so powerful. As sad and heavy as it all was, there was still comfort in being like, OK, it's not just me processing all of this. It's not just me working through all of this."

The participants described feeling hope and inspiration to hear that others had positive things to say and that it was not all negative when their experiences of grief and feelings were primarily negative at first. Many expressed interest at participating in a similar type of workshop on climate grief but using other mediums like painting or drawing that could help people visualize their emotions and their grief and connect with other people.

All participants spoke positively both of the experience in the workshop and having the chance to reflect and debrief following the workshop in the focus group. They said that having the chance to debrief and reflect as a group following the workshop was really important because there were a lot of complicated and deep emotions that came up throughout the workshop. For some, the workshop made them anxious and filled with more grief because it forced them to really come to terms with their emotions about the climate crisis and the stark reality of what we're dealing with. For example, some found it scary to acknowledge some of the imagery that came to mind during the workshop. Participants found that being able to debrief and reflect on the experience and what came up was very helpful and comforting as they were able to reflect and discuss with a bit of distance from their poetry and emotions.

The structure of poetry was helpful because it really encouraged forced people to dig deep and think of the emotions and was a very reflective process. All participants said they would happily

participate in other art-based workshops to help them work through climate grief and that they want to continue being intentional around thought and using artistic practice to reflect and process.

5.8 My learning as a researcher
Through the lens of the critical reflexivity methodological framework, it is also important to acknowledge and examine the learning processes that I underwent as a researcher conducting this research. One of the major perspective changes that I had through this research was my understanding and envisioning of what the future might look like. I initially aligned with visions of the future as the end of the world panic but had never considered the white supremacy roots of that rhetoric and the way that it discounts the actions and resilience of Black and Indigenous, Queer, and disabled communities across the globe who have withstood numerous apocalypses. In addition, I discovered that my own ideas and judgement about my value and worth as an activist has been wrapped up in neoliberal ideals about what it means to be a successful activist, and I am constantly facing internal conflicts between what I aim for (connection, collectivity, community) and what I feel I should be doing (taking a stand alone, winning awards for my work, having news stories on just me, starting my own initiatives even if they are reinventing the wheel). Those learning revelations mostly occurred through my exploration and deep dive into the literature, but my learning also happened through my interactions with participants. Specifically, given that I have my own experiences of climate grief and years of experience as a politically active youth, hearing participants say things that I would never have said aloud but that I felt to my core and think about daily was very gut wrenching and made me think deeply about my own experiences. As I gathered and communicated the results, I also had feelings as an imposter not feeling like I have community when identifying that community care and building relationships within communities is the most important thing identified for processing climate grief.

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Chapter 6 – The ties between participants' political activism and their experiences of climate grief

6.1 Introduction

In this chapter, I will describe and explore the different types of work that participants undertake, how that work exacerbates or relieves feelings of climate grief, experiences of burnout and how they connect to climate grief, visions of the future and how that connects to personal life choices and climate grief, feelings of cognitive dissonance and uncertainty, and ultimately how their experiences of climate grief are directly tied to the societal systems of oppression and the calls for transformative change to eliminate injustice and unsustainability and relieve feelings of climate grief.

The types of work and activities that participants are involved in through their political activism vary in type, focus, and depth. Some participants have been deeply integrated in the climate and social justice movements for years, whereas others are just at the beginning of their journey into the world of political activism, but all have unique experiences of climate grief. For many, their experiences of climate grief are directly tied to their motivations for being politically active, their life experiences and experiences within the climate justice movement, and their activism. Their experiences of climate grief go further beyond the types of activism and work they are engaged in but are also deeply tied to any experience of burnout and exhaustion due to their work. Burnout is rampant within volunteer and activist circles, especially around the climate crisis, because of the urgency and necessity of the work that is being done and the prevalent views that time spent on self-care is indulgent and selfish (Gorski, 2015). Burnout is complicated because activism and dealing with crises on a daily basis is emotionally taxing and leads to burnout, but activists also feel guilt and grief when burnt out because they are not able to contribute as much to the movement (Gorski, 2015). Learning to process emotions relating to the

climate and injustice, and effectively engage in self-care to prevent and recover from burnout is crucial for the long term sustainability of activists and movements, and is key to the transformative learning process (Cranton, 2016). Experiences of burnout and grief within work are crucial for understanding the connections between political activism and experiences of climate grief, but there are many additional tensions between activism, work and personal behaviours and life experiences that further compose politically active youth experiences of climate grief.

In the face of the global climate emergency, many youth are left with little to no hope of a livable future. This lack of hope induces decisions around reproduction, career, education, life milestones such as marriage, and personal choices based on fear of what is to come and upholding personal morals regarding contributing positively to the world. In addition, youth are constantly experiencing cognitive dissonance and conflicting pulls between fighting for their lives in the face of the climate crisis and living in the society in which they were born into. For all, this means that daily existence in this capitalistic, colonial, heteropatriarchal, and ableist world is a constant fight for survival and making the "right" choices. These external and internal stressors and pressures make the experiences of politically active youth with climate grief increasingly more complex.

6.2 Types of work

Engagement with climate, social justice issues, and political activism for participants takes many forms including: social justice activism, science, public service, politics, arts, community building and supporting others, and working both from outside and inside the political/societal systems. The engagement and types of work connect to personal life experiences and the communities that which individual participants are a part of. Table 7 details the types of work

that each participant described carrying out through their contribution to the climate crisis. These descriptions range from personal sustainability and making efforts to reduce carbon footprints, working within government institutions to push for action on the climate crisis and injustice, lobbying politicians for action, participating in protests and frontlines activism, to supporting others within the community and building relationships to strengthen the resilience of the community.

Table 3 Types of work that participants have been involved in.

Alias or First Name	Identity	Type of work
Sarah	Sarah is a white cis-female member of the 2SLGBTQIA+ community	During undergraduate in Toronto, she was part of a student group that encouraged more women to engage in political activism, government, and get elected to all three levels of government. She was very connected to her neighbourhood growing up. Now works at the Ecology Action Centre. She studied criminology in undergraduate and became very interested in prisoner rights and social justice issues, later completed a masters researching green criminology.
Sophia	Sophia is a white cis-female	Grew up in a vegan household, environmental impacts were obvious from a young age. She was homeschooled and started studying environmental sciences early. Has been very involved in politics since the age of fourteen or fifteen. Went out and started to volunteer with her local MLAs office and then volunteered on Iain Rankin's campaign for leadership of the Nova Scotia Liberal party. Intended to push for change and more action on the climate crisis and environmental issues from the inside of the Liberal party. Took a step away from politics and then got involved in the Nova Scotia Environmental Network, connected to a lot of other environmental groups in NS, did a training with the Climate Reality Project.
Amanda	Amanda is a white cis-female	First got involved organizing around U.S. politics and fighting against Trump, was

		interested in the work of the Justice Democrats. She then became involved with Courage – a Canadian organization that does a lot of work within the NDP to push them further left wing politically and advocate for more progressive policies on climate change and other social justice issues. Involved in the Fight for 15 movement to push for more fair wages, supporting the Peoples' Park and push for more affordable housing and fixing the housing crisis.
Hailie	Hailie is a white cis-female member of the 2SLGBTQIA+ community	PhD student of education on settler-Indigenous relationships and decolonizing education, involved a lot in volunteering on political campaigns, involved in the Our Time Movement for a Green New Deal, Extinction Rebellion, Solidarity Halifax, Fight for 15, and Indigenous sovereignty organizing
Ricky	Ricky is a white cis-male member of the 2SLGBTQIA+ community	Participant in the Canadian Conservation Corps program through the Canadian Wildlife Federation, beach clean-ups, invasive species removals, minimize the impact people have on various places in New Brunswick, clean up of fishing gear. Formerly ESL teacher in China.
Tanya	Tanya is a Mi'kmaw woman	Studied in the Natural Resources and Environmental Technology program did not have a lot of opportunities for positive education experiences growing up on reserve. Was involved in many volunteer projects in the community like beach cleanups, tree planting, trying to do what she thought needed to be done and had won a Young Environmentalist award. Later, she became involved with the Collaborative Environmental Planning Initiative (CEPI) as a youth leader to initially identify why youth were leaving Cape Breton Island then moved onto being a youth coordinator for environmental events. Currently, she coordinates training opportunities for youth in her community on environmental skills and skills for green jobs like drone training or remote underwater vehicle training. She is also involved in getting more youth involved and heard by politicians and decision makers and organizing a big event for youth to participate in large actionable items to help the climate and environmental crises.

Cole	Cole is a white nonbinary member of the 2SLGBTQIA+ community	Campaign manager for Green Party of Nova Scotia candidate in Truro-Bible Hill-Millbrook-Salmon River. Involved in student council and work with the United Way on period poverty and affordable housing, energy efficiency as well as climate strikes. Now a student in policy studies hoping to address the climate crisis urgently through policy.
Kyle	Kyle is a cis-male newcomer to Canada and a person of colour	Tree planting project in the Caribbean, planted food bearing trees to help with food security and coastal defense, UN climate change summit represented the Bahamas and was on a panel talking about what the Caribbean needs to do to prepare for climate change, work with the ENRICH project, presentations on climate change, presented at Patagonia Toronto to get people to vote before the 2019 election, hosted events on sustainable lifestyle in the Bahamas, had performances and food, spoke on Television, worked in wetland tidal restoration (adaptation)
Jo	Jo is a nonbinary person of colour who is a newcomer to Canada and a member of the 2SLGBTQIA+ community	Focused on community care and solidarity, making food for others, showing up at protests to support Indigenous sovereignty and Black Nova Scotians, supporting the communities most marginalized by the climate crisis. Focused as well on the student movement and supporting others within the queer community.
Dylan	Dylan is a white disabled cis-male who is a member of the 2SLGBTQIA+ community	Focused on ocean and marine science and conservation, worked on solutions to removing microplastics from the ocean. Enthralled by the natural wonders of the marine environment, loves the ecosystems, very connected to them. Involved as well in producing PPE for covid, company that was working on solutions to microplastics transitioned to making PPE during covid.
Bailey	Bailey is a non-binary person of colour who is a newcomer to Canada and a member of the 2SLGBTQIA+ community	Is currently an immigration consultant aiming to help newcomers to Canada immigrate more easily. Migrant rights organizing, student movement organizing, connections to the climate crisis, eating locally and cooking with local in-season produce.
Shreetee	Shreetee is a person of colour who is a newcomer to Canada and a member of the 2SLGBTQIA+ community	Involvement started with environmental club in high school, focused on sustainability, cycling, and composting. Did an undergraduate in environmental studies, focused on the intersections of environmental

		issues and social injustice, fighting capitalism and consumerism, the context of the impacts of the climate crisis. Completed a thesis on Mauritius where they are from and the impact of climate change on migration, considering how the effects of climate change like rising sea levels might cause people to immigrate or emigrate. Also involved in environmental societies on campus, organizing events and sharing educational materials on social media.
Beth	Beth is a white cis-female who is a newcomer to Canada and a member of the 2SLGBTQIA+ community	Personal sustainable decisions like not having a car, encouraging her parents to not have a car. Involved in work to advocate that Halifax Council implement aggressive climate action plans. Studies sustainability and Indigenous studies at university. Was a camp counsellor and taught kids about local flora and fauna in Ontario. Wants to go into education. Involved in different environmental and sustainability societies at school.
Mackenzie	Mackenzie is a white cis-female	Student in psychology taking environmentally focused classes. Brought into environmental/climate issues by friend who was experiencing a lot of climate anxiety, personal sustainable actions like reducing waste and energy use, eating less meat, encouraging family and friends to do so similarly.
Choyce	Choyce is a white disabled cis-female member of the 2SLGBTQIA+ community	Involved in a lot of feminist organizing. Integrates computer programming and environmental studies through her master's research looking at people's reactions and behaviours around extreme weather. Worked for the Voluntary Resource Center in Charlottetown, supported a lot of non-profits of both environmental and labour focuses. Supported push to pass a bill to improve PEI's climate targets. Involved in many environmental societies on the UPEI campus.
Sasha	Sasha is a white cis-female who is a member of the 2SLGBTQIA+ community	Currently a student in biology and environmental science and aims to become a scientist and conduct research and work on the climate crisis through conservation or other research. Became involved in environmental issues through high school biology and learning about the climate crisis. Has created many art pieces depicting the false separation between humanity and nature and illustrating the risks of the climate crisis. In the past, she had been involved in youth

		advisory councils for elected officials in her hometown.
Cameron	Cameron is a white straight cis-man	Masters' student in philosophy and the humanities, major proponent of the benefits of the humanities for the world. Involved in advocating for municipal action on climate change and youth involvement in decision making.
Rena	Rena is a Métis woman who is a member of the 2SLGBTQIA+ community	Currently works for the federal government on implementing the 94 calls to action of the Truth and Reconciliation commission. She is also a student in law school and Master of Public Administration. She has also been involved in advocating for municipal action on climate change and young involvement in decision making, the steering committee for sustainability on campus, the World University Society of Canada branch supporting bringing refugees to Canada to study, as well as community care. Rena has also worked on equity and diversity initiatives on the university campuses. Primarily focused on public service.
Cadence	Cadence is a white cis-woman	She got involved in climate issues through the Thinkers Lodge and the Centre for Local Prosperity youth retreat on climate change. Involved in educating and presenting to her peers about climate change and organizing conferences/retreats for other high school students. Personal sustainable actions like cooking locally and at home, shopping second hand, re-using, upcycling. Is very involved in her small town community through student council, sports, working.
Nadia	Nadia is a Black cis-female newcomer to Canada	Grew up in Zimbabwe and always went on field trips to learn about conservation and protecting the environment. Studied sustainability and international development in university. Currently focused on energy and sustainable communities. Now focused on community engagement and education around sustainable development goals and renewable energy. That work takes the form of equipping communities to advocate for certain policies or broader environmental goals, one-on-one meetings with communities, community meetings.

Jo, nonbinary person of colour who a newcomer to Canada and a member of the 2SLGBTQIA+ community, explained that work

> "*looks like showing up with my body when it comes to actions where like state is involved or cops are involved and paying reparations monetary wise or also food wise, feeding people who are on the front lines. Indigenous folks specifically, making sure that their voices are amplified rather than mine.*"

Most participants focus on contributing to the community and supporting others by standing up for injustices, building networks and coalitions, volunteering within the community, and advocating for better community services. Care work, and activism focused on providing care to others in society and within activism circles is often undervalued and underappreciated. It can, however, be a radical act of rebellion, particularly for marginalized activists who care for each other and sustain each other in a world hostile to their identities and experiences (Michigan Coaltition to End Domestic & Sexual Violence, 2020). It can also be a crucial way for activists to contribute to positive social change. Care is relational, non-violent, nurturing, restorative, and future oriented so that movements and groups can uphold social accountability, democracy, and withstand any discomfort and violence they might experience through their work (Bond et al., 2020). At this point in time, we exist within the peak of individualism, neoliberalism, and intolerant and exclusionary policies around the world which threaten the wellbeing and survival of everyone, especially those facing oppression so self and community care is key (Cornish et al., 2018). Without relationships and community care, sustaining activism long-term is incredibly difficult within the individualistic neoliberal society that which we exist within (Michigan Coaltition to End Domestic & Sexual Violence, 2020).

Traditional media, social media, companies, educational institutions, governments, and general public discourse have developed an emphasis on "self care" in recent years. The self-care movement is framed through the message of "if you want to feel better, you need to do the labour yourself for yourself" (Dockray, 2019). Although self-care has deep radical roots and was first introduced as a radical mode of resistance to combat race, gender, and class power dynamics it has also become commodified and reinforced the responsibility to individuals (Eromosele, 2020). Self care is more than taking a bath, burning a lovely scented candle, and doing a face mask and the discourse and practice needs to acknowledge that it is not enough and start centering community (Eromosele, 2020). (Potorti, 2017). Self-care, however, is not isolated from one's relationships and connections to those they live and work with and it shouldn't be on the onus of the individual to leave their community to restore their energy and then come back ready to fight again. Self-care is also community care: pursuing connection with others and community, mutual aid, supportive and reciprocal relationships, self-reflections, and developing those connections in long term and sustainable ways (Eromosele, 2020)

Community care can also mean supporting, developing, and contributing to initiatives and programs that directly provide services to those in need in the community outside of the institutional system including access to educations, healthy food, and social supports (Clausen, 2016). Self-care as a mode of praxis for marginalized communities and activists was first introduced by the Black Panther Party in which they encouraged Black folks to prioritize their health and wellbeing to ensure their continued ability to resist systemic racism and this was a revolutionary act (Eromosele, 2020). The Black Panther Party specifically introduced free breakfast programs for school children and politicized the experiences of hunger and poverty as institutional racism leading their community programs to build alternative systems to the local,

state, and federal systems in which they returned power to the working and racialized poor.

Community care has to focus on our relationships, and starts with the personal close

relationships friends and family and builds up strong networks of care beyond that (Gan, 2021b).

Community care means that when people provide care for other people that they know that if

they need care in the future that there will be people ready to help and that community members

are committed to being there for each other without having to be asked (Dockray, 2019).

Building and finding a community should be a top priority for activists and individuals, but it

takes time and many feel isolated and too busy to find the community that they need (Dockray,

2019). Interestingly, although community care is often thought to be only possible in person in

physical community spaces, people have found strong communities of care in digital spaces

particularly in Whatsapp, Discord, or other more anonymous messaging platforms in which

people are able to connect with others of similar life experiences across the globe (Dockray,

2019).

There are many examples and case studies of groups and movements that act from the

basis of care work. For instance, a study of Activism of Care within neurodivergent fan fiction

communities on Tumblr found that this online community destigmatizes mental illness,

celebrates neurodivergence, promotes social change, and the rights, well-being, and joy of

neurodivergent participants (Leetal, 2019). This Activism of Care involves uplifting members of

the neurodivergent fan fiction community and using fan fiction to imagine and develop better

world where mental illness and neurodivergence is destigmatized (Leetal, 2019). This fanfiction

community and the methods by which they employ activism of care is also a way of envisioning

and dreaming the future collectively because their fan fiction reinvents social and literary

structures to promote activism, uses fan fiction to process and deal with their pain, and fosters

connection, joy, and laughter within communities that are disempowered and face daily struggles for survival and acceptance (Leetal, 2019). In addition, following the 2008 recession in Ontario, disability justice groups became more active and focused on intersectionality and pushing for the restructuring of neoliberal, institutional care for disabled peoples (Hande & Kelly, 2015). The disability justice movement pushed back against the language of community care and self-care because it identified that there is a history and present practice of exploitation of workers, especially women and women of colour within care work, and that community care for disabled people is still institutionalized and does not allow for any autonomy over their own health (Hande & Kelly, 2015). This movement declared that care must go beyond coping strategies, or one-off events and engagements, and must focus on political resistance to neoliberal policies and structural systemic change (Hande & Kelly, 2015).

Activist focusses on care tends to originate from their lived experiences of gender, race, class, disability, sexual orientation, or ethnicity and their responsibility and connectedness to groups of shared experiences (Hallum-Montes, 2012). A study of Indigenous women activists in Guatemala found that the women were motivated to become environmental justice activists because of their roles as mothers and caregivers for their community and that activism was viewed as an extension of that caretaking (Hallum-Montes, 2012). Another study that looked at the Brazilian movement of mothers whose children were killed by police extended their duty of care beyond the death of their children in that they felt it was their responsibility as a mother to resist and politically organize (Quintela & Biroli, 2021). In the Brazilian movement, motherhood is viewed and defined as altruism and the movement politicized their motherhood and brought it out of the private sphere into the public for all to contend with (Quintela & Biroli, 2021). The movement of mothers were brought together by their responsibility to confront injustice as

loving mothers and uphold their personal justice by acting to fight against the state that took their children's lives (Quintela & Biroli, 2021). Although most of the participants in my research are not mothers or parents, most are women or non-binary people and societally enforced gender roles teach women and those who are less masculine to be caregivers, especially women of colour and newcomer women (Hallum-Montes, 2012). Women of colour typically comprise over 90% of the membership in environmental justice groups in the United States, and 80% of the membership of organizations worldwide (Hallum-Montes, 2012). In my research, over 70% of the participants identified as women, and 85% identified as non-male. Tanya, one of my participants who is a mother explained that the climate crisis didn't really hit home for her until she had her son:

> *"I just started thinking again around like what's there going to be for him? What's going to be for his children, what's going to be left? Sometimes I would just kind of start crying when I would see him playing and having fun, and there's not knowing what's in store for him."*

These statistics illustrate the likelihood of care work and feelings of care responsibility as being a motivator for participants taking action on the climate crisis. However, as anyone within the activism or care communities could tell you: if you want something done, ask a busy person. This is a recurring and prevalent issue for the long term sustainability of community care and activism because the people who can do or are willing to do the care work are often already overextended and overcommitted, so it truly needs to be a movement in which everyone in the community participates in care work and receives care work (Sutherland, 2017).

Community care is also practiced through communal dreaming of utopic futures (Hansteen-Izora, 2021). As residents of Earth and activists, people have a collective

responsibility to think and dream about utopic futures whilst actively creating new spaces that resist current systems and institutions of oppression (Alzate González, 2015). Communal dreaming emphasizes envisioning a future that exists outside of the dominant systems of oppression and power and fosters critiques of the current oppressive narratives within society which can, in turn, empower the individuals and communities to build that speculative future (Hansteen-Izora, 2021). This focus on envisioning the future communally has long been employed by Black feminists, Indigenous communities, and other groups on the margins of society through the lens of both individuals and the multitudes of the knowledge of their ancestors and descendants to come (Hansteen-Izora, 2021). Hansteen-Izora reflects that "In this way, dreaming is a form of time travel. It is a seed rooted in the past, nurtured in the present, and looks towards possibilities in the future" (Hansteen-Izora, 2021). Communal dreaming and the desire to build these futures together are intertwined with calls for abolition, Black, trans, and queer leadership, disability justice, and Indigenous sovereignty as it calls communities to action to fight against the white, capitalist, colonialist, ableist, and heteropatriarchal systems of society (Hansteen-Izora, 2021).

Social change is directly tied to care and collective wellbeing and radical care is defined "as an act of vital but underappreciated strategies for enduring precarious worlds" (Hi'ilei Julia Kawehipuaakahaopulani Hobart & Kneese, 2020). Care work, even radical care work, can have both positive as it can provide community and social benefits and hope in dark times but also negative effects as it can lead to unpaid emotional and physical labour and challenge who is actually in need of care, leaving others to suffer (Hi'ilei Julia Kawehipuaakahaopulani Hobart & Kneese, 2020). Radical care acts towards building and dreaming collective futures of justice that involve reciprocity, awareness, and attentiveness to the inequities present in society and

interactions within one's community (Hi'ilei Julia Kawehipuaakahaopulani Hobart & Kneese, 2020). The building occurs through filling the gaps in current care systems and restructuring the systems towards those that are sustainable and don't leave anyone behind (Hi'ilei Julia Kawehipuaakahaopulani Hobart & Kneese, 2020). Care work, however, is not exempt from injustice and discrimination. Peoples are often drawn to care work by "fellow feeling" in which they share the experiences of the people they care for. Experiences of "fellow feeling" although unintentional, often results in people only delivering care to those that are similar to them and they see as worthy. As such, care work cannot be completely disentangled from structural racism and inequities (Hi'ilei Julia Kawehipuaakahaopulani Hobart & Kneese, 2020).

Community care is especially important during times of crisis wherein it becomes a critical survival strategy and challenges the status quo (Hi'ilei Julia Kawehipuaakahaopulani Hobart & Kneese, 2020). The COVID-19 pandemic provided an important example of community care on a large scale, especially at the beginning with mutual aid movements across the globe in which people took responsibility of caring for their friends, family, and neighbours by helping with hands-on care like picking up groceries, prescriptions (Gan, 2021b). The mutual aid movement in Canada was connected through the social media #Caremongering in which over 130 Facebook groups were created across Canada that brought together hundreds of thousands of people to provide community-led health solutions keeping one another safe during the pandemic (Seow et al., 2021). These groups were all grassroot networks of residents to support vulnerable people in their communities by providing information and access to personal protective equipment, offering aid for different tasks, asking for help, and providing info about case counts, restrictions, and accessible businesses and services to keep people safe and receiving the food and items they needed (Seow et al., 2021). The #Caremongering movement enabled more health

equity, efficiently and rapidly mobilized massive numbers of people to help one another, and

helped people stay connected in a time of social and physical isolation (Seow et al., 2021).

The COVID-19 pandemic also inspired the development of community programs that

alleviated some food insecurity and food deserts in racialized and impoverished communities,

and it strongly identified the need for more of such programs (Lloro, 2021). The Pomona

Community Farmer Alliance is a volunteer and community led farmer's market with affordable

and accessible healthy foods and produce that before the pandemic also provided in-person skill

sharing and education workshops like free community seed exchanges, no-cost arts and craft

classes, cooking demos, and a free lending library which created an alternative just and

sustainable space where regular working class people took to the streets and shared their

knowledge and resources with others (Lloro, 2021). The COVID-19 pandemic made it clear that

those sorts of community led initiatives are crucial to fill the gaps of the current food,

community services, and education systems and foster relationships and social connection.

Community care is essential for fostering social movement learning and understanding

one's place and relationship to others within the movement and positionality (transformative

learning). Through caring for others and building strong relationships, communities build

collective identities and learn about each other's needs and experiences (D. B. Hall & Turray,

2006). These communities of care also create new spaces outside of the pre-existing structures of

power, domination, and inequity that focus on anti-racism, climate and social justice,

decolonization, and building an equitable society (D. B. Hall & Turray, 2006). By communally

dreaming, creating structures of care, and idealizing futures together, communities and activists

are literally envisioning new collective identities and spaces together which requires constant

learning and unlearning of habits of mind and preconceptions (D. B. Hall & Turray, 2006;

Mezirow, 1997). Caring for others also requires individuals to understand and reflect on their own positionality in society, their privilege, what they can offer others, and their needs from others which can, in turn, ignite further passion for change and help people build and further understand their own identities and perspective (Cranton, 2016). The types of work and relationships that activists carry out are direct products of their experiences of personal perspective transformation and learning within the social movements and as such are critical to explore not only to understand the personal experiences of politically active youth with feelings of climate grief, but also their learning processes.

6.3 Burnout

Burnout is a challenge that many activists and volunteers experience on an ongoing basis. Experiencing burnout means that activists are physically and mentally unable to continue launching themselves through their work and they may start harbouring resentment towards the organizations and movements, and the work that they must do for the necessary fight for a better world (Gorski, 2015). The Vicarious Trauma Toolkit defines burnout as: "the sense of exhaustion or being overwhelmed when we feel that our efforts and energy have not done enough. It's both emotional and physical exhaustion that can feel a lot like a major depression." Activist burnout is a specific type of burnout that is long term and accumulative leading to both mental and physical debilitation which leads activists to disengage from movements, creates high turnover and lack of resources or energy within movements, and is one of the largest barriers to activist longevity and the success of social movements (Gorski & Erakat, 2019).

The politically active youth participants from Mi'kma'ki are not exempt from experiencing burnout and their experiences are often tied to both their work and taking on too

much, and also the exhaustion of keeping up with the deteriorating state of the planet. Hailie explained that she often experiences burnout in which:

> "*Maybe this is less related to burnout and more just existential dread. Between the climate crisis and injustice there are days where I'm literally like what's the point of me getting up and doing my PhD work today when the world is burning.*"

Social media and constant awareness of the injustice amplifies feelings of existential dread because it creates these modes of existence that are hyperconnected, where people are constantly "plugged in" and bombarded by the relevant news stories and prominent social/environmental issues numerous times per day (Gan, 2021b). Everyone, particularly young people, are faced with a crushing pressure to constantly "keep up" with everything that is going on in the world and they often face guilt should they take a step away from the news/social media and the work that is burning them out for not being informed or not doing enough (Gan, 2021b).

Feelings of guilt are some of the main reasons that activists might not take the breaks they need or might feel like they have no choice but to keep working and stay informed. The solutions to burnout are often that the individual who is burned out should leave the movement or organization for a certain period of time, go do unrelated things and rest, and then return when they are ready. Those solutions are incredibly isolating and reinforce the message that self-care and healing from the burn out and oppression that people face in this society is an individual's responsibility (Gan, 2021b). To work through burnout, activists and communities need to support each other and make up for the inadequate care that is provided through the traditional institutional healthcare and services system and work towards rebuilding systems that are more just and sustainable (Gan, 2021b). The causes of activist burnout can be classified in three ways:

1) internal: as a result of the pressure that individual activists put on themselves because they are extremely committed to the causes and want to see the movements succeed

2) external: facing retaliation from peers, authority figures, and family because of challenging the unequal systems of power and

3) In-movement: as a result of how activists within the movements treat each other, guilting one another into taking on more than they can handle, touting individualized, commodified self-care, and glamourizing overworking (Gorski & Erakat, 2019).

Jo explains that the culture of activist circles can be a major contributor to burnout:

"There's also a lot of burnout that the kind of [activist] circle promotes and where everyone is always doing something and you feel like you're not doing enough sometimes."

It is crucial to understand and note that burnout is experienced differently and to different extents by privileged and marginalized activists, particularly between BIPOC and White activists (Gorski & Erakat, 2019). For instance, many BIPOC activists have experienced burnout not only because of the emotionally and physically exhausting nature of protesting and activism and having to constantly struggle to survive and thrive in a system that is constantly beating them down, but also because of the actions and words of fellow white activists harbouring unevolved and racist views, undermining or taking the credit for BIPOC activists work, being unwilling to do the work to unlearn their discriminatory and racist views, or white fragility (Gorski & Erakat, 2019).

Rena, a Métis women explains that:

> *"there's definitely a limit on what I can do because my resources are limited and the way the systems are set up, I don't trust them to take care of me. So, it is hard to balance self-interest but also feeling guilty about taking myself into account."*

BIPOC activists are faced with fighting for justice and sustainability but also surviving in a system that was not built to support them. Climate justice organizing spaces are often overwhelmingly white, and many participants of colour described being the only person of colour in these spaces and often facing overt discrimination and daily microaggressions.

Participant experiences of burnout also connect back to the need and desire for community care. For many, their burnout is exacerbated by not being supported by the activist communities and/or friends and family and feeling isolated to deal with their climate grief and exhaustion. Many explained that their constant vigilance and attention to doing the right thing was exhausting because they find themselves analyzing all events and decisions in their lives based on the potential impacts on the world and others, and not being able to do anything without thinking about the problems in the world. Others, particularly Dylan, a queer disabled man, explained that it is just impossible to contribute and consider all possible impacts and injustices:

> *"If you were to dedicate yourself to every last cause out there and going to every last action that you can and every last rally and all of that stuff, you wouldn't be able to take care of yourself. And you can't, you can't pour from an empty cup. You need to be able to care for yourself so that you can take part in this activism. You can't focus on every last activist issue or you'll just drive yourself insane and you won't be able to do anything. You'll be paralyzed by the fact that, again, that all or nothing mentality."*

Dylan emphasized that it is not only burnout from being physically and mentally exhausted, but also having to grasp the enormity of the issues. Shreetee explains that the emotional labour of this work is huge:

"Yes, there's a physical part, but then there's also the emotional part of you knowing that you're doing the work. As I mentioned, you're doing your best, but then it's still not going to fix the issues. So, how do we deal with this? This desperation and hopelessness that comes sometimes?"

Many participants explained that their experiences of burnout and climate grief are linked, and that when their grief is often a cause of their burnout but that they also experience heightened climate grief during periods of burnout when they are unable to contribute to the movements as much as they would like to.

6.4 Visions of their personal futures
6.4.1 Career and Education Directions
Society has raised people to believe that the future is bright and will/should always be getting better, but for many young people around the world the future is bleak and apocalyptic. Almost all participants believed that an apocalyptic, barely liveable future was a certainty for humanity and non-human species alike. Participants expressed frustration and concern that the people who are standing up the most to push for climate justice (young people) are not in positions of decision-making power and won't be until it is too late to do anything. Many described the time we're in as the end of the world and Jo explained that:

"In the world is ending kind of way, everything I do is silly."

The rhetoric and descriptions of the end of the world and destruction that participants gave varied, with some feeling like they still had a chance of a bright personal future because of living

in so-called Canada and being more privileged, where others felt that the planet will survive but they and fellow human and non-human species will experience a lot of harm and suffering, and others felt defeated and like nothing they do will make a different because large corporations are responsible for the vast majority of emissions. This vision and fear of the end of the world, apocalypse, and destruction influences participants' choices in terms of career paths and educational paths, their life milestones, whether or not to have children, and their confidence in their choices.

Many participants chose their educational and career paths based on helping the climate crisis and injustice and selected paths of environmental science, related sciences, policy, law, and engineering or practical professions in which they could directly make an impact. Most felt that they could not justify taking a career or educational path other than ones which would contribute to mitigating and adapting to the climate crisis or caring for others and eliminating injustices. Sophia explained her frustration that others don't think the same way in terms of making decisions about their futures:

> *"I know a lot of people who care about it and will do small things about it, who will*
> *maybe vote in favour of parties that are more environmentally friendly, but I don't really*
> *know anyone on a personal level, who is feeling the way I am where it's, you know, it's*
> *all in at this point because there isn't really another option if I want a place to live on in*
> *30 years or so."*

Although most participants had post-secondary education, they also expressed concern that school was a waste of time because by the time they finished school and were ready to start their careers and really begin making a different that it would be too late. They also identified that

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there are many diverse and important ways to act upon care for the planet and others as Choyce explained:

> *"I've come to realize that people care, it's all at different levels. You need the academics, you need the frontline activists that are tearing down the government, you need the people in government lobbying for change, and you need people in the industry making a way forward."*

Career and educational choices are only one component of participant decision making about their futures, and for many their work as an activist takes precedent and priority over the more personal areas of their lives.

6.4.2 Isolation from peers, missing out, and the glorification of individual actions

Although most participants referenced a desire and need for community and strong relationships with fellow activists and others in their lives, they also described feeling isolated from their peers and having to give up on traditional life milestones to focus on survival in the face of the climate crisis. Shreetee explained that:

> *"People need to get together and mobilize and unfortunately push the government to do the right thing, and this pathway for me of mobilizing with community, does not align with getting married, having a job, getting a house. I want to just have a house and have a little garden and not have a care in the world, not worry about what's happening somewhere else. But, realistically, I can't. I can't do that because I'm aware that things are bad right now and they are going to get worse if we don't do anything."*

The definition of a "good" life does not need to be one that follows the traditional Westernized ideals for the nuclear family and suburban lifestyle, but it is important to note that youth feel like

they have to give up on their happiness and futures because of the climate crisis. Many

participants explained that they could not take the time away from the cause to justify

transitioning through the life milestones of buying a home, getting married, and having kids, but

others felt that the state of life on Earth is too unstable that it didn't feel safe to go through those

steps. Other participants, particularly those who grew up in white, upper-middle class

households, however, felt that they still could plan for their future and assumed that while the

climate crisis may be worsening that they would still have a relatively "normal" life. For

example, Amanda described her future plan in that:

> *"I plan for the future, I have a retirement savings account and I do have this expectation*
>
> *that I'll still get the normal future and retirement that my parents have but I know that*
>
> *isn't guaranteed, but there are a lot of expectations that you will carry on as normal and*
>
> *that you will be prepared for those things. You have to prepare on two fronts almost,*
>
> *because you don't know whether you should be preparing for some climate crisis that is*
>
> *going to happen and preparing an emergency bunker or something or preparing for a*
>
> *normal requirement."*

This split between preparing for a "normal" future and preparing for apocalypse was one that

arose in many interviews with participants. As young people, participants are constantly faced

with pressure from their friends, families, and peers about their future, what they will choose to

study in university, if they will go to university, what types of jobs they plan on getting, whether

they want to have kids, as well as the pressure of living in a time of climate catastrophe and

sociopolitical strife. Youth, especially politically active and engaged youth, are pulled in many

different directions and often criticized or judged by the people on both sides: those in the

activist world encouraging them to put all hours of their days into their work, and those expecting them to fulfill their predefined roles in society.

Participants also shared examples of ways in which they already felt like they had been left out of typical life stages or were currently missing out. Tanya described her experience, starting by explaining that as a kid growing up on Indigenous reserve that she missed out on the carefree childhoods that many white settler Canadians enjoy, although climate change at that point was the least of her worries, but that that changed as she grew up and that:

> "*It probably influenced my entire 20s, basically it was me being stressed out about the climate, so I didn't get to live like other people got to live where they were enjoying their 20s and not having a worry in the world, going on cool vacations, I was way too stressed out about the climate to go to Cuba or Mexico. I couldn't bring myself to do those things that everybody got the chance to do.*"

Participant's choices to miss out on typical life milestones and experiences were primarily guided by their commitment to upholding their moral and political views in their individual everyday lives.

Although it is admirable that these youth, like myself, are committed to embodying and living their ethics every day, it is also an embodiment of neoliberalism and capitalism that places the responsibility and the blame onto individuals (Benigno, 2021). Many participants expressed frustration and anger that the majority of carbon emissions and environmental destruction is carried out by the largest and richest corporations in the world, but at the same time they place enormous pressure on themselves to live as sustainably and ethically as possible through all of their individual actions and choices, which many said is exhausting. These participants, like

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myself, were raised and experienced many of our foundational moments while the carbon

footprint ideal was created and gained popularity. The carbon footprint calculator measures an

individual's or family's annual greenhouse gas emissions based on their transportation, travel,

food consumption, energy usage, etc. and can be used to compare to other's actions and results

(Solnit, 2021). Although the carbon footprint has been touted as a progressive tool by

environmentalists, politicians, companies, and communities alike, it was actually developed by

British Petroleum, an oil and gas company, and an advertising firm in an effort to remove the

responsibility of cutting carbon emissions from oil and gas companies and instead put that

responsibility on the shoulders of individual consumers (Solnit, 2021). While it is important for

individuals to make environmentally friendly and ethical choices, the reality is that 70% of all

greenhouse gas emissions since the industrial revolution have been caused by only 100

companies, and they continue to emit without reducing their emissions or direct pollution to

environments caused by oil spills (Mitloehner, 2020). British Petroleum's public relations

campaign to shift the responsibility away from them was so effective that major environmental

organizations, millions of socially and environmentally concerned people, and education

institutions have promoted the use of the tool (Kaufman, 2020). The carbon footprint tool and the

investment of fossil fuel companies in its use has led too many people and groups to be focused

on achieving individual purity and perfection in environmental decision-making behaviour, and

not on the major systemic issues of capitalism, neoliberalism, white supremacy, heteropatriarchy,

ableism that are the foundations of Western society (Gan, 2021a).

The focus on individual purity and perfection is counter to the needs and calls for

systemic action because it leads to narcissism and isolation, and fails to acknowledge the

positionality and privilege involved with choosing personal sustainable actions (Gan, 2021a).

Although many of us, including the participants in my research, would love to obtain a position in which we are doing no harm to anyone or anything in the world, that is not possible. Since we all live and exist in this societal system that created the climate crisis, everyone is contributing to the climate crisis in some way and focusing on trying to attain personal purity allows politicians and corporations to act with no regard for environmental and social sustainability (Beck, 2017). Beck explains that "purity is an illusion that will never be achieved but people act as though a natural state of purity is possible to achieve if only we tried hard enough" and this leads to fear, guilt, and judgement because people feel as if they are constantly failing themselves and the world (Beck, 2017). Although participants consistently emphasized the need for broad transformative and systemic changes, many held themselves to unattainable images of personal purity, which prevented them from acting to the best of their ability to enact social and environmental change and also greatly increased and exacerbated their feelings of climate grief. Acting sustainably in one's life can be fulfilling, but it is also impossible to completely negate one's negative impact on the planet and focusing solely on that takes efforts away from facing the real issues.

6.4.3 Reproductive decisions

Deciding whether or not to have children is already a decision weighted with countless pressures, personal, familial, and financial considerations, and personal preference, but young people today are also faced with the choice of whether to bring children into a world that feels like it is about to end. I did not directly ask participants whether or not they plan to have children but focused primarily on what they saw as the potential for their personal futures and almost every participant brought up the question of whether or not to have children. The overwhelming majority of participants expressed their fear for the futures of their potential children if they were to have any and explained that they would feel guilty if they were to bring new life into this

world. The carbon footprint calculator has been used to illustrate that not having children drastically reduces one's carbon footprint, but a study by Pinkert & Sticker showed that those calculations were faulty and resulted in an inaccurate picture of how emissions change if people have or do not have children (Pinkert & Sticker, 2021). The scientist who authored and conducted the study claiming that not having an additional child could be the most effective individual action to mitigate climate change later came out to say that the impacts of that decision would be negligible and that if people want to be parents that they should have kids anyways (Samuel, 2021). Hailie explained that she:

> *"feels a lot of guilt about wanting to have kids. I really want to have kids; I've always wanted children. My partner also wants kids, and we want to have kids together. We have those conversations and wondering if we are horrible people, should we even have kids? I can see having kids in my early thirties and I'm like, oh my god, what's the state of the world going to be like? Am I a horribly selfish person for wanting to bring an innocent person into this world? Oh my gosh, like maybe I'm a terrible person for wanting to bring kids into this world, what is wrong with me?"*

Hailie is not alone in worrying that the planet will be unliveable for future generations or feelings of guilt and selfishness at wanting to bring children into the world. Participants explained that their peers and colleagues are having conversations about the ethics of bringing children into this world in the community both on social media and in person. Many shared that if they were to have children that they would be more likely to foster or adopt than procreate themselves, or they prefer to help other people bring new life into the world by providing services as a doula or caregiver. Although many explained that they don't judge other people for their decisions to

have children, they would not bring new life into this world and don't understand how others feel comfortable doing so.

Participants concerned with the ethics of bringing new life into this world also described the conversations they've had within the climate justice activism space in which others will comfort those who are concerned and argue that the world needs more "good" people to raise conscientious children and build a better world, and that it is unfair for younger generations to have to consider the ethics of bringing new life into the world and wanting a future for ourselves. The #BirthStrike movement that started in the United Kingdom encourages young people to commit to not having children in the face of the climate crisis until there is more adequate action on the climate crisis (Dapcevich, 2019). Members of the BirthStrike movement explained that they don't feel like it is a choice of not to have children, but they feel that the state of the ecological, climate crisis and mass extinction makes the choice for them (Dapcevich, 2019). The BirthStrike movement calls for transformative change that is fast-acting and deep leading to an equality based, sustainable, non-violent, and caring for humans and all other beings on the planet. Although the climate crisis is inarguably the largest issue that humanity has faced, the concerns over whether or not to have children because of the world that they might be born into are not new. Many parents or potential parents considered not having children in the time of the cold war and nuclear fall out, or when the societal views and actions towards their identities were/are violent and discriminatory (Samuel, 2021). Cole says that they:

> *"almost feel like it's ignorant at this point to ignore that bringing a child into this planet*
> *is going to be a big responsibility and there's going to be a lot of things that you're going*
> *to have pay attention to and when watching the carbon footprint of this other human on*
> *the planet."*

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Many young people are choosing not to bring children into the world, and those who already have are struggling with the ethics and choices around raising children in a world faced with climate catastrophe. Tanya, a Mi'kmaw mother of a young boy explained that:

> *"I don't know if my son wants to have children, but I kind of hope he doesn't because I don't know what's left for them. So that makes me really sad and angry that it got this far."*

There is a lot of research and public discourse on how to ethically raise children in the times of climate change and the responsibilities of parents to act on the climate crisis and work to build a better future for their children, but little focuses on the challenges to mental health and wellbeing of the parents in this time. A study on the lived experiences of parents raising their children in the times of climate change identified complex feelings of climate grief and confusion, specifically parents experiencing sadness, hopelessness, and anxiety about the future of their children and feeling guilty that they are unable to achieve personal purity in sustainable actions (Gaziulusoy, 2020). It is incredibly important to support children and young people through this complex and catastrophic time, but parents cannot be forgotten either. Parents aim to protect their children and provide a safe and enjoyable life for them, but many face the reality that they will not be able to protect their children from the impacts of the climate crisis and that is devastating (Gaziulusoy, 2020). Parents also need support and care to be able to effectively support their children and work towards a better future.

The negative reactions towards having children and bringing more people into this world regarding the impacts that each additional human adds to the carbon emissions and environmental destruction on the planet is rooted in the individualistic assumptions and pressures of the carbon footprint ideology. In addition, those negative views are reminiscent of the Western

and Eurocentric belief that humans are separate from nature and therefore only exist to take and harm the planet and non-human beings (Wall Kimmerer, 2013). Robin Wall-Kimmerer in her book *Braiding Sweetgrass* describes her shock when bringing her ecology class out into the woods for fieldwork and hearing that her students only believed that humans could do harm to the planet and there was nothing good that we could give (Wall Kimmerer, 2013). Wall-Kimmerer explains that Indigenous peoples of Turtle Island believe that humans and nonhuman beings live in reciprocity in which both provide benefits to one another and that humans can benefit what Western society calls "nature", that humans cannot be a disease plaguing nature because we are a part of the ecosystem and the planet (Wall Kimmerer, 2013).

In addition, proposals of population control to mitigate the climate and ecological crises, and rhetoric that is grounded in population control has roots in eugenics: the movement to preserve "desirable" characteristics of the human race which aims to encourage the white upper class to reproduce and succeed and discourage/prevent people of colour, those with disabilities, immigrants, and anyone who is different from reproducing (Rutherford, 2021). Although eugenics is often thought to be a movement and political ideology of the past, the foundations of neoliberal Western society are rooted in eugenics and continue to disempower and endanger birthing peoples especially those who are Black, Indigenous, Disabled, or Queer. Black child bearers in the United States are the most likely demographic to have negative birthing experiences and outcomes (Oparah et al., 2021). Indigenous child bearers in Canada are likely to be forcibly separated from their children at birth, receive inadequate medical care, and have their children apprehended (Doenmez et al., 2022).

In Black and Indigenous movements and communities, birth has been used as a form of resistance. Both groups are working to reclaim birthing by training and incorporating more Black

and Indigenous doulas, midwives, and birth supports as well as traditional ceremony into the birthing process (Doenmez et al., 2022; Oparah et al., 2021). Reclaiming birthing and the joy, celebration, and resistance that comes along with it is critical to the foundation of Indigenous sovereignty and decolonization (Doenmez et al., 2022). A Mi'kma'ki based organization, Wellness Within, works to support child bearers who are incarcerated and advocates for them, and has most recently worked with the Nova Scotia Public Interest Research Group to offer doula trainings specifically to 2SLGBTQIA+ and BIPOC peoples (*Wellness Within*, n.d.). The push to discourage procreation in the name of climate action is a shadow of eugenics as it largely frowns upon black and brown families, particularly newcomer families, who may have multiple children. It also connects to the eugenics and historical views that people of colour are more likely to be promiscuous and immoral as it paints birthing new life as an immoral and wrong choice, and echoes the fear that the Western world will no longer be the majority white (Davidson & da Silva, 2021).

To give up on bringing new life into this world for some would also be giving up on the planet and humanity. People might wonder what the point of continuing to resist and exhaust oneself working for a better future if you don't believe that there is any hope for future humans which could lead to disempowerment and less action on the climate crisis. While it is completely valid to not have children for any reason, including not wanting to subject them to the impacts of the climate crisis, the rhetoric of scientists, politicians, and the public that having children is immoral also has roots in Eurocentric neoliberalism, eugenics, and faulty science.

6.4.4 Facing uncertainty

Participants also felt a huge amount of uncertainty and face challenges when trying to plan for their futures, whether that be their careers, families, or other personal decisions because there is no way to know for sure what the world might look like throughout our lifetimes. Sophia thinks that the future is:

> "*Very uncertain, I can't really plan for my future the way that generations before me could. I don't know that after I get my university degree that I'm going to be able to go work a job for the rest of my life or if I'll be able to retire because I just don't know what the world's going to look like. At this point, it is pretty messed up and will probably be messed up at the rate that we're going.*"

That uncertainty makes it challenging for young people to envision their futures or have hopes and dreams for them. They often also face a lot of parental or peer pressure to have a plan in place for their lives and are viewed as indecisive or unsuccessful if they do not, but many feel that is impossible with the current state of the world. Others explained that some of the uncertainty and inability to plan for their future arises from a sense that there is so little they have control over. Rena explained that she:

> "*Would really like to be able to set myself up in a way that I can be at peace with, which is something that is really challenging because I could go and have a very solid, very safe job and it could even be work I enjoy, but if it's not going to actually change anything or will continue to disadvantage certain groups, I don't know how I could invest in that. But there aren't really good alternatives, there are just so many factors to take into consideration when you're trying to make sustainable decisions for yourself so it's overwhelming and there are also so many things you don't have control over.*"

The complexity of globalized society means that it is really difficult to know what the right thing to do is. This has become a topic of public discourse, popularized by the Netflix show The Good Place, among others. The Good Place, a sitcom about the afterlife, unearths some complicated truths about the complexity of modern society in which it is impossible to tell whether people are truly "good" (Yoder, 2020). In the show, no one has been admitted to The Good Place in hundreds of years, including global figures famous for humanitarian efforts, working for justice, and discovering new technologies to help humanity, and they discover that the embeddedness of colonialism, capitalism, neoliberalism, ableism, white supremacy, heteropatriarchy and forms of oppression in society and the impossibility of tracing the origins of products and actions makes it impossible to be truly "good" (Yoder, 2020). The Good Place is a TV representation of the realities that individuals, especially young people, face on a daily basis when trying to decide what to do, where to go, and what to buy.

6.5 Systemic oppression and the need for transformative systemic change

Throughout all major topics and areas of discussion within this research on climate change, the most pervasive theme and need that arises is transformative systemic change that undoes the discriminatory systems of oppression present in society. This understanding builds on the call for large, worldwide actions rather than individual small actions like recycling or waste management and illustrates the connectivity of the climate crisis with all other aspects of society. Participants explained that the more they have grown up and/or become involved in the climate movement, the more they have learned about and understand the intersections of the climate crisis with colonialism, capitalism and that climate justice must also fight for Indigenous sovereignty and ending capitalism. Hailie exclaimed that:

"We're nothing without respecting Indigenous sovereignty, nothing is ever going to get done…I'm obviously very anti-capitalist, I identify as a communist and I understand how climate change is so tied to capitalism but also colonialism."

 The more complex and widespread participants understand the climate crisis to be, the more challenging to feel comforted or at ease in the world. Many participants described intensified feelings of grief and frustration when learning and acknowledging the pervasiveness of injustice throughout all systems of society. They described feeling unable to work within the settler-colonial system that exists and skepticism that anything can change within the current political system to be more sustainable and just, identifying the need for complete systemic overhaul. The systems of oppression within the Western world have allowed for climate denial and inaction to breed. Ricky, who has taught English as a second language in China explained that in China:

"There isn't a movement of climate denial, everyone just accepts it as a fact because the impacts are so readily obvious. They still have lots of things that need to change, but residents agree that it is an issue."

Although there are evidently other pervasive issues within Chinese, and other nations' society, the lack of climate denial is interesting to note.

Politics was the center of the discussions on the need for transformative change. Most participants expressed frustration that all of the political parties in so-called Canada are centrist and are not willing to take the radical, transformative action that is necessary to combat climate change meaning that things will inevitably worsen. The inaction of politicians leaves many feeling disempowered and full of grief because they feel like their ideas and beliefs about where

the world needs to go to ensure a livable future are too radical to happen because climate change is never the top priority for politicians. Jo explained that:

> *"With the parties in power things are going to be more or less the same. I think we have to shape or shift power politics and move away from colonial systems of power and then give the land back to the original stewards of the land in order for any real chances of understanding the land and saving the climate."*

Jo's explanation is representative of the root causes of the climate crisis, specifically colonialism. Understanding and knowing the history of the land and the violent injustices that have occurred in Mi'kma'ki and so-called Canada is necessary to know what steps need to be taken moving forward.

Many participants also work within the current systems and are trying to effect change from within. Rena is one of them and explains that there are lots of people, like herself and her Indigenous peers and colleagues who are really focused on trying to move forward that systemic change but that:

> *"the people who are working in the systems have to be willing to recognize that no, it's not just you, it is because you're working in the systems, but that's something that you have to take on some responsibility for changing it. I think there's a lot of hesitation around doing any sort of really revolutionary work."*

She described experiences in which people might feel they are unable to do anything to change the systems because of their culpability of contributing to and benefitting from the current systems but emphasized the fact that they still have a responsibility to try and change it.

Bailey shared a powerful message used in their culture that is representative of the need to understand the foundations and history of the systems we are working to change:

> "*It's a Chinese proverb, but we also use it in Japanese. It kind of means when you drink water, think of where the source is.*"

They went on to explain that when you are thinking about your own experience or an issue in society on the surface, you should also consider how that thing came to be about, personally who/what made you who you are, and understand your position and place in the world, key pieces of transformative learning experiences.

These transformative changes also need to occur within progressive activist circles. It is easy to assume that the movements working towards this systemic change and betterment of society are free from its downfalls. However, that is often not the case. Climate activists and environmentalists specifically have a legacy of reinforcing racist stereotypes and oppression through their calls for eugenics like action and activists are not always aware of all the intersecting issues with the climate crisis which leads to fighting within and between movements, cancelling people, call-out culture, and tension that hinders progress. Of course, activists are also products of the systems in which we live and as mentioned earlier it is impossible for people to not do any harm. Dylan described his frustration that within activist and non-activist communities alike, he often feels like he is just trying to get people to care about others beyond themselves and that that should not be a difficult task.

The solutions to the climate and intersecting crises and the transformative just futures that youth want to see need community, strong relationships and trust, and a return to a sense of public collective good. Rena shared her experience growing up in a communal anarchist

Indigenous lens which provides an alternative to the way decisions and interactions are formed in current systems. Rena explained that growing up, and even as a young adult, she often does not understand why people aren't concerned about the collective good and wellbeing and shared that her mother's focus on communal anarchist and Indigenous views:

> "*Was very subtle, all my mother's decisions were very communal, even when I was a small kid, I never felt like I didn't have a voice or like my opinion didn't matter. A lot of our decisions were made as a collective and it was important that everyone's opinions and needs got taken care of. It was a lot of negotiation and compromise to make sure that everyone had felt seen and heard and that we had a solution that would work for everyone.*"

Through this research and the views of these politically active youth, it is clear that we need to build communities and a society where everyone's opinion and voice matters, and where everyone listens and attends to other's needs and voices. There needs to be reciprocity, respect, collaboration, care, and sustainability. The calls for systemic and transformative change are weaved throughout the results of this research and echo the broader calls of many activists and movements throughout the world. Climate grief is multidimensional, it is not only about the loss of sea ice or polar bears, or the iconic mass media images, it is not about fear of personal loss, but often a sense of collective grieving, current and future collective suffering, and unearthing the violent histories of the land and societies in which we live.

<u>**Chapter 7 – Conclusion**</u>

In this chapter I will revisit the research objectives and summarize the research results, highlighting where this research fills some of the gaps in the literature and theoretical frameworks. I will identify the limitations of this research, the contributions of this research to the academic literature and the youth activism community, and recommendations for future research.

7.1 Research summary

The purpose of this research was to engage politically active youth in reflection on climate grief, understand how their political activism is connected to their experiences of climate grief and use arts-based inquiry and intersectional analysis to do so. This research engaged politically active youth ages 12-29 in Mi'kma'ki in reflection through semi-structured interviews, a poetry workshop followed by a focus group, and individual art submissions. This research fulfilled the three objectives by identifying some key vocabulary that youth use to describe their climate grief as well as activities that they use to process it, understanding how they learned about the climate crisis and what led them to becoming politically active, and described how their political activism serves the purposes of being a ritual to help them process their climate grief, help them learn how to be effective as activists and learn from other people in the movement about justice and equity, and can exacerbate their climate grief through burnout and the weight of systemic oppression.

Politically active youth in Mi'kma'ki are scared for their futures, angry at the state of the planet and injustice, and ready to do the work to build relationships with others, discover and strengthen community bonds and ties, and focus this global issue onto the local level where the impacts of the crisis both mentally and physically will be felt the greatest. Many participants entered this research having directly experienced the impacts of the climate crisis and

experiencing forms of climate grief, eco anxiety, and solastalgia. This topic was clearly one that participants were glad to discuss and felt that it should only be the beginning of discussions and research on climate grief.

This research only touches the surface. The definitions and descriptions of climate grief were similar across all participants and centered on two major themes: climate apocalypse and climate justice. Their definitions and descriptions were apocalyptic, focused on end-of-the-world narratives, but their responses to climate grief and their visions for action spelled a story of resistance, hope, perseverance, and community. Community care, community wellbeing, and community strength were key themes throughout the entirety of this research. Participants emphasized the need for strong relationships with others to be able to withstand their climate grief and the worse impacts of the climate crisis to come, but also to build resilience and communities where people can count on one another to show up, to stand in solidarity, and to have a shared vision and identity, which is key is social movement learning. They identified that not only are community care and spaces necessary for processing climate grief, but also for developing effect directions forward for the climate movement and climate action as a whole. The climate movement is too rooted in the problematic systems of neoliberalism, colonialism, capitalism, heteropatriarchy, ableism, xenophobia and extractivism that it leads to burnout, tense community relations, inaction, and intensified feelings of climate grief. Their calls for transformation of the way that we relate to one another in society, in the movement, and in our personal relationships towards one of reciprocity, respect, and sustainability echo the wisdom of Robin Wall-Kimmerer in Braiding Sweetgrass, and many other Indigenous and Black led resistance movements.

These politically active youth experiences of climate grief are inherently tied to their personal experiences of injustice and oppression, their frustration at the intersecting systems of oppression and injustice, and their comprehension of how vast and complex the climate crisis truly is because it effects and is caused by all areas of society and everyday life. This research provides some key takeaways for the activism movement to mitigate climate grief, for decision makers, care providers, and thinkers of the time that not only will help youth process their climate grief but help us all build a better world.

7.2 Limitations

This research does not claim to provide generalizable results on the experiences of politically active youth with climate grief in Mi'kma'ki. The goal was to explore the depth of their experiences through learning, vocabularies and rituals, and their political activism and how that connects and describes their climate grief. Although the results and discussion were successful in exploring and addressing all three objectives with a lot of depth, there were some key limitations. One of the primary limitations being that I only had one round of interviews with participants exploring their personal journey and experience with political activism and climate grief. I knew many of the participants from outside of the research to varying degrees but only having one interview might not have allowed for participants to become comfortable enough to share the entirety of their experiences with climate grief. Additionally, all the research engagement (interviews, poetry workshop, focus group, individual art interviews) were held through Microsoft Teams and as such there was little possibility for picking up on body posture and cues and it was difficult at times to read participants' comfort in the research, it also made some of the interactions unnatural. Having digital interviews, however, also made the research more accessible to youth in different areas of Mi'kma'ki and more accessible to myself as research since I could reach a more diverse population without necessitating travel.

7.3 Research contributions to the academy and the youth climate activism community

7.3.1 Research contributions to the academy

The literature exploring the learning of youth on the climate crisis focuses on youth as blank slates without prior knowledge of the climate crisis, or with very little knowledge, typically engaging public school classes of varying experiences. Little attention has been given to the learning processes and experiences of climate grief that youth already engaged in combatting the climate crisis face, specifically in understanding what their learning process was to become engaged. This research looked at uncovering what transformative learning processes the participants had already undergone, as well as how participating in this research could further their learning through both social movement and transformative learning. In addition, this research illustrated the powerful role that artistic approaches to climate work in communities can have in connecting people, facilitating reflection, and providing opportunities for learning.

This research identified that participants' motivations to becoming politically active were directly tied to their positionality in society and their experiences of systemic oppression. For example, the participants who were more likely to have experienced the impacts of the climate crisis already (primarily BIPOC and newcomer youth) were spurred into action by those personal experiences of the crisis and were also more likely to value the wellbeing and power of communities in responding to and withstanding the impacts of the climate crisis. This research also illustrated that transformative learning and social movement learning are continual processes and that research can simultaneously work to understand learning that participants have already undergone as well as facilitate learning within the research participation. In addition, this research illustrated how transformative learning theory and social movement learning theory can compliment each other. In many cases, communicative learning that must take place in order for transformative learning to occur is carried out through social movement

learning in group situations. In addition, learning that occurs within social movements often leads to further transformative learning. Many participants described the deepening and widening of their understanding of the climate crisis and the intersecting issues of injustice once they became active in organizations and community groups. They then underwent transformative learning regarding many other issues leading them to be involved in climate activism but also solidarity with the many marginalized communities facing injustice.

This research also provided a unique decolonized lens by focusing the geographic range to traditional and current Indigenous territory and encouraged participants to learn more about the Indigenous territory in which they live to understand their eligibility. It also recognized and explored the context of Mi'kmaq resistance to environmental racism and extraction across Mi'kma'ki and weaved that throughout exploring the engagement of politically active youth in Indigenous rights and sovereignty.

7.3.2 Research contributions to the youth climate activism community

Any and all youth involved in any form of climate and social justice activism experience forms of climate grief, burnout, and despair but many have been forced to push those feelings down and ignore them so as to continue their work and fight. This research is first an affirmation of their experiences, providing them with the opportunity to share and reflect, be heard, and validated and will also hopefully be validating for other youth outside of this research once knowledge translation occurs.

This research identifies the ways in which politically active youth are expressing and describing climate grief, including their messages for hope, perseverance, and community through visual art and poetry that can inspire and uplift readers and other youth activists. Many key rituals and activities were also identified that other youth can try and implement into their

lives to help them process their climate grief including: spending more time with community, building stronger relationships and community with those around you and in your work, helping each other out, having social and community building events, using art or journaling to reflect on experiences of climate grief and express them, having more conversations about climate grief with those they work with and care about, grounding themselves in nature and through physical activity or environmental actions like tree planting, litter clean ups, or shoreline clean ups, and participating in both individual consumer choice actions like shopping zero waste and political action like protests.

This research is not an answer, but it is the beginning of a larger conversation that needs to happen within families, friend groups, chosen families, organizations, clubs, educational institutions, and everywhere young people are learning about and are engaged in action on the climate crisis. The systems of society like to convince people, especially youth, that we are all alone and that we have the responsibility alone of making the world change, but part of resisting the climate crisis and injustice, and processing climate grief needs to be through rejecting the notion that it is an individual's burden to bear.

7.4 Recommendations for future work

The arts-based engagement in this research of hiring a poet to facilitate a poetry workshop guiding participants in reflection and prompts to write their own poetry on their experiences of climate grief was very well received and powerful as an experience for the participants and in deriving meaningful data. The use of arts-based workshops to explore experiences with climate grief, bring people together, and facilitate a ritual to aid in reflection and processing of climate grief was a key component of this research but I have only begun to scratch the surface of its potential. In the future, research could explore the value and use of

multiple arts-based workshops with the same participants over multiple different mediums of art to really strengthen those group connections and better understand the role that those workshops hold. Such a research engagement could benefit from partnering with youth climate organizations through the development and implementation and could not only serve as an important tool in the research but also as a powerful experience for participants. Should research with more arts-based workshops be carried out it could lead to recommendations and the development of more public based and facilitated climate grief art workshops for youth activists as well as people in many other communities suffering from climate grief as well.

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Unearth: A Poetry Workshop on Climate Grief

Proposal prepared by: Katie Feltmate
For Lilian Barraclough

October 6, 2021

One of the penalties of an ecological education

is that one lives alone in a world of wounds.

-Aldo Leopold

Workshop Overview:

This workshop is a component of a larger research project led by Lilian Barraclough in Dalhousie's Master of Environmental Studies program. This work is centered around the concept of *Climate Grief*, an emerging field that examines the relationship between climate change and psychological wellbeing. It is the idea that human beings witnessing the environment change and be damaged can produce feelings of grief, hopelessness, anxiety and depression.

The purpose of this workshop is to explore the many ways that climate grief may manifest in the minds and hearts of youth and young climate change activists. How is this impacting their mental health? What are they thinking about? How does it make them feel to see the impacts of climate change all around them? What role does the intersectionality of an individual's identities play in their overall experience of climate change?

The poetry workshop will take place online through Zoom or a similar provider over an hour and a half time period and adhere to covid-19 safe protocols. The participants will be an estimated group of 15 youth from a variety of diverse backgrounds and perspectives, many having involvement in climate change advocacy. The participants will be made aware in advance of the workshop, the type of prompts they may be asked and that they are allowed to take a break or leave at any time. The goal of the workshop is for the youth to have an opportunity to use poetry as a tool for artistic expression to foster healing and a greater sense of self and understanding of the world around them and the way climate grief is affecting them. Built on the foundations of collective learning and transformative learning theory, the workshop will ask the participants to think deeply about these issues and their own experiences, offering support and moments for sharing with the group.

Workshop Structure

Introductions and Ice Breaker: (15 minutes)

Lily will kick off the session with a brief introduction of herself, her research and the purpose of this workshop. Lily will also reiterate that the participants have the autonomy to take a break at any time as well as leave the session. <mark>**Lily will provide a land acknowledgment.**</mark> Lily will then set the stage by providing a brief overview of the concept of climate grief and a few current issues of climate change.

Katie will then introduce herself as the facilitator, providing a brief background, why we are here, what we want to accomplish today, how the workshop is going to flow, some ground rules around support and sharing during the workshop, as well as a trigger warning around the topic. **Include: why we are using poetry as the medium.**

Next, we will begin with an icebreaker. We will go around the virtual 'room' and have each participant offer a quick introduction of themselves, what exposure they have had to poetry, what they are excited or nervous about and what they hope to gain from the session. This will help set the groundwork for making the participants feel more at ease as well as connected to each other and safe to share later in the session. Sharing will not be mandatory but will be encouraged.

Part I: *Open Waters*
This section called, 'Open Waters' serves as a warm-up to allow participants to wet their feet and become familiar with the context they will be writing about. It contains several free writing and journaling exercises designed to trigger stream of consciousness writing, offering flexibility, accessibility, and creative license.

Exercise #1: (7 Minutes) Participants will be asked to take **5 minutes** and write every word that comes to mind when they think of the climate crisis. The more the better. Katie will provide a sample list to get them thinking. For example, **forced migration, loss of home, erosion, instability, earthquake, inequality, refugees**. Participants will then be asked if anyone would like to share their list. 1 minute will be allocated here for sharing but will depend on the response.

Exercise #2: (15 Minutes) Next, participants will be asked to free write for ten minutes striving to include as many words from their list as they can.. If participants get stuck they can try to use one word from their list to start each sentence. The key in this exercise is to continue writing, not worrying about grammar, spelling or flow. This is a journaling exercise not designed to develop a polished piece of poetry, although some participants may come out of the exercise with something close. Following the ten minutes of journaling, five minutes will be set aside for participants to share their work, talk about the exercise and what topics or words stuck out to them while writing.

Exercise #3: (7 minutes) Now that folks are warmed up, participants will be asked to select 5-10 of their strongest words from their list and create a poem in the five minutes provided. Length, style and flow of the poem is completely open and flexible to the participant at this stage. Participants will then be asked to share with the group and reflect on the first section of the workshop.

Part II: *Tides of Change*

In this section, titled, 'Tides of Change' participants will be challenged to dig deeper as they begin to 'unearth' the profound impacts of climate grief and the climate crisis. Drawing from their own lived experiences, they will explore their intimate thoughts, feelings and perspectives on the climate crisis. Diving into the root of the issue, this section guides participants to confront the difficult reality of the psychological impact of climate change.

Exercise #4 (7 Minutes) Prompt: **"The world around me is changing and I am…"**
Participants will be asked to take five minutes to write a poem using this prompt. Katie will provide an example and folks will be asked to share afterwards. Participants will be asked follow up prompts such as, where are you? What are you feeling? What is changing around you? Do you feel in control or powerless? Do others feel what you feel? What are you doing?

Example: **The world around me is changing and I am** sitting at the edge of it all
 legs dangling, heart pounding, afraid to look down but unable to look away
 I think about what was, and what will never be again
 like watching as pieces of our world evaporate before my eyes
 as coral becomes bleach, forests become flatlands, species become folklore
 can you feel it too? this unsteadiness, the ground beneath our feet forever

<blockquote>
shifted, the earth's tectonic plates once again out of place
the whole world hanging a little crooked
</blockquote>

Exercise #5 (15 Minutes) **"Climate grief feels like, looks like, smells like, tastes like, sounds like…"** This exercise will help participants write a poem about what climate grief *feels* like. Structured with five prompts, they will have 2 minutes per prompt to build their poem. Katie will provide an example and participants will be encouraged to share and debrief their experience writing this piece in the remaining 5 minutes. As this exercise may be the most emotionally difficult exercise in the session, participants will be reminded of the support available to them and the option to take a break or opt-out if need be.

<u>Example:</u> **Climate Grief….**
   feels like a weight around my neck, the tying of my hands behind my back
   looks like water rising all around me, like inaction, like denial
   smells like the thick smoke of forests burning themselves alive
   tastes like plastic buried in the belly of the fish on my dining room table
   sounds like the quiet of forests once alive with the symphony of birds, now silenced

Part III: *Building Resilience*

In this capstone section of the workshop, participants will move away from the depths of climate grief and into a mindset of empowerment with a focus on healing, resilience, and action. The intention of this final section is for the participants to build on the skills from the first two sections, feeling empowered and inspired as they close out the session.

Exercise #6 (5 Minutes) "**What does climate justice look like? What kind of world do I want to live in?**" In this exercise participants will have five minutes to write a poem about what climate justice would look like to them.

Part 1: What does justice mean to you? (1 minute)
Part 2: What does climate justice mean to you (1 minute)
Part 3: Write a poem about what climate justice looks like. (3 minutes) What would need to happen? Who would need to be involved? What changes need to be made? What could our world look like? Participants will be asked to share at the end of this section.

Exercise #7 (5 Minutes) **"And with my mind, heart, words, actions I can…."** This final prompt will guide participants into a place of self-reflection as they identify their own resilience and strength in tackling climate change and the grief they experience.

Prompt:

and with my mind, I can...
and with my heart, I can...

and with my words, I can...
and with my actions, I will...

Final Sharing, Debrief and Discussion (10 minutes)

Participants will now be invited to share any piece of work from the workshop including the last section. This time will be used to debrief and discuss the participants' experience in the workshop and what they learned and discovered about themselves through the process.

Workshop Closing Remarks (4 minutes)

The workshop will conclude with a closing from Katie and a reminder for participants to take care and continue writing about climate grief. Lily will be invited to offer her closing remarks and reiterate to participants that supports are available as well as indicate where participants may access those resources.

APPENDIX II Codebooks

Table 2 Codebook for deductive and inuctive thematic analysis from the semi-structured

individual interviews.

Code	Subcodes	Inductive/Deductive
System Change	Within activism community, white supremacy, power imbalances, heteropatriarchy, cultural shift, colonialism, ableism	Code – Deductive Subcodes – Inductive
Burn out	Barriers to action	Inductive
Calls to action	Self and community care, sustainable infrastructure, supporting young people, listening, less waste, justice, intersectionality, empathy, education, corporate greed, community, collaboration, belonging and action	Inductive
Descriptions of climate grief	Worry, wonder, urgency, unfairness, uncertainty, trivial, too radical or too much, stressed, shock, shame, sadness, responsible, resigned, powerlessness, passion, overwhelm, not feeling welcome, nihilism, motivation, meaninglessness, love for Mother Earth, loss, loneliness, judged, inspiration, hopelessness, hope, helplessness, guilt, grief, gratification, frustration, fear, exhaustion, empowered, emotional labour, disconnect, devastating, determination, desperation, depressing, crushing, confusion, compartimentalization,anxiety, anger, alienating, abandonment	Code – Deductive Subcodes - Inductive
Hope	Visioning for the future, community, collaboration, art	Inductive

Introduction to climate change	Young age, science, school, parents, massive issue, individual actions, global warming, friends, personal experience of the impacts, as a crisis	Code – Deductive Subcodes – Inductive
Lived experience	Worldviews, working class, woman, using privilege, refugee, queer, poverty, person of colour, newcomer, mental health issues, Indigenous, disabled, climate refugees	Code – Deductive Subcodes – Inductive
Personal futures	Will be okay, uncertainty, reproductive decisions, sustainable decision making, security, running out of time, powerless, missing out, meaning of life, loss of nature, little agency, instability, career path, apocalypse	Inductive
Personal impacts of climate change		Inductive
Politics	Voters, tradition, tokenism, slow, self-interest, money, lack of a voice, inaction, inaccessible, fear, engagement, empty promises, common humanity, challenges to change, campaign involvement	Inductive
Rituals to process climate grief	Tangible activities, safe spaces, relationship with the land, reading progressive visions, personal growth, nature, meditation, food, focusing on the positives, feeling at home, escapism, educating others, connection to place, community care, collectivity, art, activism, access to a like-minded community	Code – Deductive Subcodes - Inductive
Social media	News, misrepresentation, hope, education, doomscrolling, connector	Code – Deductive Subcodes – Inductive

The future of humanity	Necessary actions	Inductive
Transformative moment	Turning point, pandemic, motivations, making a different, injustice, gradual process, encouragement from others, community	Code – Deductive Subcodes - Inductive
Upbringing	Unsustainable, rural, Indigenous, family conflict, collective, anarchist, activist	Code – Deductive Subcodes - Inductive
Vocabularies	World on fire, share definitions, marginalized, climate justice, climate anxiety, cancel culture, apocalypse, anti-capitalism	Code – Deductive Subcodes - Inductive
Work	Supporting others, social justice activism, science, public service, politics, outside system, leadership, isolated spheres, inside system, individual actions, Indigenous rights, experience as a youth, environmentalism, education, decision-making, conservation, arts, actions	Code – Deductive Subcodes - Inductive

Table 3 Codebook for Poetry

Code	**Inductive/Deductive**
Systemic change	Inductive
Politics	Inductive
Loss	Inductive

Injustice	Inductive
Impacts of the climate crisis	Inductive
Hope	Inductive
Grief	Deductive
Fear	Inductive
Despair	Inductive
Definitions of climate grief	Deductive
Connection with the land	Inductive
Compassion	Inductive
Community	Inductive
Anger	Inductive
Action	Inductive
Accountability	Inductive

Table 4 Codebook for poetry workshop and focus group

Code	Subcode	Inductive/Deductive
Vocabulary	Terror, loneliness, isolation, disconnection, climate crisis	Code – Deductive Subcode – Inductive
Exposure to poetry	Some, none, lots	Deductive
Experience of the poetry prompts	Easy, brought clarity, challenging	Inductive
Would want to repeat		Inductive
Resonated		Inductive
Resiliency		Inductive
Relating to others		Inductive
Reflection		Inductive
Putting words on paper		Inductive
Helpful prompts		Inductive
Positive		Inductive

Poetry brought deep emotions		Inductive
New emotions arose		Inductive
Motivating		Inductive
Hope		Inductive
Helpful		Inductive
Positive collective experience		Inductive
Facing emotions		Inductive
Despair		Inductive
Community care		Inductive
Comforting		Inductive
Challenges		Inductive

Table 5 Codebook for individual art interviews

Code	Inductive/Deductive
Systemic change	Inductive
Ritual for processing climate grief	Deductive
Reflection	Inductive
Nature	Inductive
Interconnectedness	Inductive
Impacts of the climate crisis	Inductive
Frustration	Inductive
Expression	Inductive
Community	Inductive
Anger	Inductive
Action	Inductive