"*There's a Lot of Deep*:" Exploring Worldviews, Emotions, and Denial around Political Action for Climate Change

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B.A, Saint Paul University, 2007

A thesis submitted in partial fulfillment of
the requirements for the degree of

MASTER OF ARTS
in
ENVIRONMENTAL EDUCATION AND COMMUNICATION

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January 2013

Abstract

This study explores the cognitive and emotional complications – worldviews, denial, and emotional responses – that prevent concerned citizens from engaging collectively for structural solutions to climate change. Using psychoanalytically informed methods, I conducted two interviews with five environmentally-conscious adults in Vancouver, BC. The first interview used a biographical narrative interview method (BNIM), while the second interview used a qualitative semi-structured method. Participants' pro-environmental actions focused on individual lifestyle changes or persuading others, with worldview assumptions of individualism, Enlightenment reasoning, selective systemic thinking, and negative social norms. By wavering between overconfidence and under-confidence in the power of individual actions, participants expressed some denial. Participants also felt overwhelmed, were frustrated, and experienced loss. These factors limited their desire and ability to engage collectively. For environmental communicators, these findings can inform a new strategy that focuses on empowering citizens to confront their emotions and assumptions in order to engage collectively for systemic solutions.

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Acknowledgement

I couldn't have completed this learning journey and resulting research without the help of some extraordinary people whom I'd like to thank.

Thank you very much to my amazing supervisor, Liza Ireland, for your support, encouragement, and advice. This thesis would not be what it is without you. I'm grateful for all of your help.

To Renee Lertzman, thank you for your extra time and help with this challenging yet rewarding method.

My learning journey was shaped by each and every one of my classmates in my MAEEC 2010 cohort. To each of you, thank you for sharing your wisdom and supporting my growth.

To my wonderful participants, thank you so much for volunteering your time and opening up and sharing pieces of your lives with me. Your stories are invaluable to me. I have so much respect for the work you're doing, your tireless commitment to the environment, and your struggles.

Thank you to my family for your encouragement and reassurance. When I've been discouraged, you remind me to be proud of myself and my work. And thank you, Jeff, for being there for me, for comforting me when this seemed impossible, for making sacrifices, for listening, for caring, and for celebrating me.

Chapter 1: Introduction

Social Context

We live in interesting times. On the one hand, our Western society has flourished with democracy, art, technology, greater access to quality education, greater respect for cultural diversity, more sophisticated communications networks, and scientific insights about the mysterious universe. On the other hand, much of society's growth has led to many unintended consequences, such as humanity's physical and emotional separation from the rest of nature, widening income gap between the rich and the poor, human and drug trafficking, species extinction, rampant global pollution, and human population explosion (Dale, 2001).

Climate change, one such unintended consequence, poses a serious threat to nature and society. Scientists from around the world and across multiple disciplines have come to an agreement that anthropogenic climate change is occurring. According to the United Nation's International Panel on Climate Change (IPCC), climate change is defined as "changes over time in the averages and variability of surface temperature, precipitation, and wind as well as associated changes in Earth's atmosphere, oceans and natural water supplies, snow and ice, land surface, ecosystems, and living organisms" (American Psychological Association, 2009, p. 1). The amount of carbon dioxide, methane, and nitrous gases in the global atmosphere has increased drastically since 1750 due to human activity (IPCC, 2007). These gases, collectively called greenhouse gasses, disrupt the energy balance of the Earth by trapping infra-red heat in the atmosphere from the solar radiation that has hit the Earth's surface and would have otherwise bounced back into outer space. As a result, the global average temperature has increased by 0.76 degrees Celsius since 1850 (IPCC, 2007). These changes may destabilize the Earth's climate system and can have an array of far-reaching consequences, such as more heat waves and

droughts, habitat loss, rising ocean levels, and increased number of environmental refugees due to more natural disasters and quickly changing landscapes (Orr, 2007).

Environmental movement's response.

In the context of climate change, the environmental movement has thus far struggled to catalyze the drastic changes needed for mitigation. The environmental movement is the intertwining of people and groups worldwide rooted in environmental activism, social justice initiatives, and indigenous cultures' resistance to globalization (Hawkin, 2007). Estimates range between one and two million organizations are working on ecological sustainability and social justice (Hawkin, 2007). In the modern environmental movement of the past 40 years, the dominant strategy has been to define problems as environmental and craft technical policy solutions (Shellenberger & Nordhaus, 2004). While previously having made significant progress, these old tactics have largely not worked in the last 20 years (Shellenberger & Nordhaus, 2004). Thus, they argue, we have remarkably little to show for the hard work by dedicated people and hundreds of millions of dollars (Shellenberger & Nordhaus, 2004).

When organizations and governments talk about solutions to climate change with the general public, they tend to promote individual lifestyle changes, such as driving less, biking to work, switching light bulbs, and eating locally-grown food. Of course, some organizations do focus on lobbying and political action. Shellenberger and Nordhaus (2004) note that "in the face of perhaps the greatest calamity in modern history [climate change], environmental leaders are sanguine that selling technical solutions like florescent light bulbs, more efficient appliances, and hybrid cars will be sufficient" (p. 10). In an effort to meet Canada's Kyoto Protocol emission reduction targets, the Government of Canada relied on public information campaigns and modest subsides to promote non-compulsory changes, despite expert recommendations for mandatory

policy changes, such as a carbon tax and cap (Jaccard, 2007). For example, the Government of Canada's One-Tonne Challenge, a public campaign to raise awareness of climate change and encourage personal emissions reduction in 2003-2006, focused on these types of individual actions (Environment Canada, 2006). However, in 2002, households were only responsible for about 30% of Canada's greenhouse gas emissions (Environment Canada, 2006). As a result, in 2007, Canada's emissions were 35% above Kyoto targets (Jaccard, 2007). As Norgaard (2006) states, for climate change, "the pattern of meager public responses in the way of social movement activity, behavioral [*sic*] changes, or public pressure on governments exists worldwide" (p. 373).

In recent years, it seems that the focus of many environmental organizations' on individual behaviours and technical fixes are mostly insufficient at successfully mitigating climate change on the scale that the problem requires. While individual lifestyle changes are important, they are insufficient on their own. After all, one person cannot halt the Alberta oil sands development by simply driving less. Because climate change is a complex problem, it cannot be solved only at the individual level; instead, it must be tackled at the collective or systemic level (Berry, 1988; Dale, 2001). Since almost every aspect of our society is implicated in climate change, political engagement would be more effective at creating new policies and large-scale changes necessary to decrease Canada's overall greenhouse gas emissions (Canadian Centre for Policy Alternatives, 2008). This is especially true given change resistance, a system's tendency to maintain the status quo, which is often located outside of individuals in the larger system (Harich, 2010).

Problem: Lack of Political Engagement

While the environmental movement struggles to influence governments and citizens to mitigate climate change, there seems to be a pervasive sense of disengagement from politics among the general population in Canada. According to data combined from Elections Canada's 2000 and 2004 surveys, only 48% of respondents showed general interest in politics (Howe, 2005). In addition, just 42% of respondents showed political knowledge by answering at least half of the knowledge test questions correctly (Howe, 2005). Even voting in elections, the cornerstone of civic engagement, is low. For example, the last federal election in May 2011 was hailed by the media as the 'Twitter election' due to the increase presence of politicians and debates on the social networking site (Hanna, 2011; Payton, 2011); yet, voter turnout increased just 2.3% to 61.1% (Elections Canada).

Fortunately, a lack of political action for climate change is not due to a lack of concern. In 2006, a public opinion survey found that 90% of Canadians thought that climate change was a very or somewhat serious problem (GlobeScan, 2007; Leiserowitz, 2007). However, for some reason, this concern is not translating into political action.

Problem: Lack of Spillover

Public campaigns that encourage people to reduce their personal environmental impact are ubiquitous (Thøgersen & Crompton, 2009). The idea is that everyone doing a little bit – doing their part – collectively, will add up to have a large impact. In social psychology, *positive spillover* is the name for the belief that adopting simple and painless lifestyle changes can create more space for people to accept more ambitious, more environmentally significant behaviours (Thøgersen & Crompton, 2009).

However, the effects of spillover are debatable. Often people use the fact that they do an environmentally friendly behaviour as justification for not doing other, more significant actions (Thøgersen & Crompton, 2009). As they see it, they are already doing their part and thus do not need to do more. In this instance, doing simple and painless things makes it easier for people to not adopt more difficult or costly things to lessen their impact (Thøgersen & Crompton, 2009). This is confounded by people's tendency to interpret evidence self-servingly: people tend to exaggerate the positive effects of their actions (Thøgersen & Crompton, 2009). Politicians are not immune to this, as they too can feel justified having done their part by supporting behaviour change campaigns instead of also supporting policy changes (Thøgersen & Crompton, 2009).

Further, spillover campaigns can reduce public support for policy changes. For example, some people may be less supportive of enacting policies that enable others to do environmentally friendly actions with public funds if these people have already undertaken such actions at their own cost, especially when their reasons for these behaviours are economic rather than environmental (Thøgersen & Crompton, 2009). They may also resist government interventions, such as tax incentives, that can positively shift consumer choices (Thøgersen & Crompton, 2009).

The pervasiveness of these campaigns can also normalize individual changes as the solution. They can create the general perception that incremental, individual changes that barely impact our current lifestyles are all that is necessary to mitigate climate change and can reinforce the idea that we can rely entirely on individual choices, within people's self-interest, such as financial benefits (Thøgersen & Crompton, 2009).

Furthermore, even in instances where spillover is successful, it still has had a limited impact. After all, "if everyone does a little, we'll achieve only a little" (McKay as cited in

Thøgersen & Crompton, 2009, p. 142). “It would be a mistake therefore to rely on spillover from simple and painless steps to create the rapid and often difficult behavioural changes that will be needed to address global challenges such as climate change” (Thøgersen & Crompton, 2009, p. 151).

Courtenay-Hall and Rogers (2002) critique the distinction that environmental behaviour change models often make between indirect environmental actions, such as donating money, volunteering, or acting politically, and direct environmental actions, such as recycling, driving less, and buying organic food. They point out that often, people implicitly devalue indirect actions because these actions do not have an immediate impact on the environment, whereas direct actions do (Courtenay-Hall & Rogers, 2002). This distinction, and the resulting environmental messages, contains a class bias that marginalizes people: economically disadvantaged people are less likely to have the means, such as extra income, to do direct actions, such as pay more for organic food (Courtenay-Hall & Rogers, 2002). As a social movement, environmentalism should aim to be as inclusive of as many interested people as possible. Further, focusing on these individual solutions to large-scale environmental problems has the negative consequence of privatizing environmental actions (Courtenay-Hall & Rogers, 2002). It “shifts the burden of responsibility onto individuals and households, and away from states, corporations, and global political arrangements” (Sandilands, as cited in Courtenay-Hall & Rogers, 2002, p. 290). In addition to potentially creating large-scale changes, indirect actions have the potential to make the most difference in cultivating responsible citizens (Courtenay-Hall & Rogers, 2002). It seems as though behaviour change campaigns hoping for spillover are dwarfing people’s concerns about climate change and channelling them exclusively into direct, individual actions, rather than political activism.

In addition to such behaviour change campaigns, environmental communicators and the media often use what is known as fear appeals to garner public attention (O'Neill & Nicholson-Cole, 2009). Fear appeals are "the persuasive communication attempt designed to arouse fear in order to promote precautionary motivation and self-protective action" (O'Neill & Nicholson-Cole, 2009, p. 360). Fear appeals contain a threat, the emotion of fear, and the receivers' perceived self-efficacy in response to the fear (O'Neill & Nicholson-Cole, 2009). Research has shown that fear appeals are unlikely to produce long-lasting effects as people may become desensitized; further, in the face of fear, people either try to control the external danger or their internal fear. Since people see controlling the impacts of climate change as difficult if not impossible, people instead attempt to control their internal fear by psychologically denying the fearful realit. Furthermore O'Neill and Nicholson-Cole's (2009) study discovered that fear appeals induced resignation, which fostered disengagement rather than engagement.

Research Question

My research is situated in this context of climate change, Canadian's lack of engagement with politics despite environmental concern, and the environmental movement's focus on ineffective, small-scale individual changes. Given these issues, my research question is: What are the cognitive and emotional complications that prevent concerned citizens from engaging collectively for structural solutions to climate change? My question is supported by four sub-questions. Questions one, two, and three below help illuminate the cognitive complications, specifically aspects of worldviews and psychological denial. Question four relates specifically to the emotional aspects.

1. What actions or behaviours do the research participants think are most effective at mitigating climate change, as exemplified by what they do?

2. What worldview elements affect how the research participants engage for change?
3. What perceptions of society, in terms of environmental behaviour, do the research participants have and how do these perceptions affect social engagement?
4. What are the research participants' general emotional responses to ecological destruction?

Research Framework

Ecopsychology.

To synthesize ecology and psychology (Fisher, 2002), ecopsychology has emerged. Ecopsychology is the study of the human psyche in relation to nature (Fisher, 2002). Fisher (2002) views ecopsychology as a multifaceted project that expands psychology's field of significant relationships to include other-than-humans. Ecopsychology sees humanity in a state of pathological rupture from the rest of nature. According to Fisher (2002), the emotional upheavals we experience from immeasurable ecological destruction are the central psychological reality of our time and are thus validated as healthy and real. In particular, climate change confronts us with many losses: loss of species, loss of predictable weather, loss of land, loss of biodiversity, loss of economic activity, loss of human lives, loss of nature. All of these losses make climate change a difficult reality to face because it brings up negative emotions associated with loss, such as grief and anxiety (Randall, 2009). In the face of this suffering we are experiencing on an individual and collective level, we tend to deny or repress this pain, numbing ourselves psychically (Fisher, 2002). As a result, we live a tension between knowing and not knowing: being aware or intellectually informed about the problems but not acting on this knowledge in a meaningful way (Lertzman, 2009; Norgaard, 2011a).

These insights about the psychological impact of ecological destruction have been largely ignored by environmental scholars and their discourse (Lertzman, 2009) until very recently. Instead, environmentalists tend to assume what Lertzman (2009) calls a "myth of apathy:" an explanatory discourse about people's gap between values and actions, which focuses on barriers that prevent people from engaging. "To view a public as apathetic is to suggest people 'do not care' and as such are somehow immune to the highly distressing issues, so viscerally felt by those with a more 'environmental subjectivity'" (Lertzman, 2009, p. 6). According to the myth of apathy, inaction is due to a lack – of concern, information, resources, etc. (Lertzman, 2009; Norgaard, 2011a), placing the blame for inaction on the public and treating them as pathological. Ecopsychology, on the other hand, reveals that rather than a lack, as the myth of apathy posits, there is a surplus of complex defenses against overwhelming unconscious experiences (Lertzman, 2009).

Therefore, operating within an ecopsychological and psychoanalytic framework, I will abandon the myth of apathy and accompanying discourse of barriers to action. A psychoanalytic framework presumes that people will have internal contradictions, ambivalences, and ongoing meaning-making work (Lertzman, 2009). Socio-psychology can reveal hidden reasons why people's attitudes and behaviours differ (Stoll-Kleemann, O'Riordan & Jaeger, 2001). In light of this, I was looking for potential complications that are present within people in relation to climate change. I use the term *cognitive complications* to refer to elements in people's thoughts about climate change, such as their worldviews and psychological defenses. *Emotional complications* refer to people's emotional responses.

Worldviews.

A worldview is a set of assumptions and beliefs about life and reality (Koltko-Rivera, 2004). Everyone has a unique lens, often formed unconsciously, through which s/he sees the world. Although different for each person, worldviews are influenced by society, social norms, and cultures. Worldviews contain hidden assumptions, rules, codes, taboos, and conventions (Koltko-Rivera, 2004). Because worldviews govern the way people see the world, they have the power to blind people to thinking about or even seeing the world differently (Hebdige, 1979). Given the power of worldviews to shape perceptions of reality, I anticipate that certain worldview beliefs may cause cognitive complications.

Delimitations

My study is limited to a select group of environmentally conscious Vancouver residents in order to reduce the population size and solicit in-depth interview data. I chose Vancouver because I want to conduct face-to-face interviews to establish an emotional connection between myself and the participants.

For the purpose of this study, I have focused on political action as engagement with climate change, excluding individual lifestyle changes that lessen one's ecological footprint. Thøgersen and Crompton (2009) divided political action into three categories: passive acceptance of policies, which means accepting policy initiatives or supporting political parties with environmental policies; low-commitment active citizenship, which are low-profile, low-risk political activities such as writing letters or donating to advocacy groups; and committed public activism, which is direct involvement with pressure groups such as participation in demonstrations. Unless otherwise specified, I combine all of these categories into my definition. Political engagement is any effort to solve collective problems in the political arena.

Limitations

In order to gain in-depth knowledge of people's thought processes and emotional lives, I limited the number of participants to a small number. This necessarily means that the study findings are representative of these individuals, with limited ability to generalize out to a larger population. These findings, therefore, do not account for everyone's perceptions. To seek participants, I used a selection survey sent via social media channels by environmental non-profit organizations. Generally, people who are already more engaged were more likely to click on the link, add their contact information, and agree to participate in the interviews. Thus, many of my participants were more engaged than I had envisioned on the outset. One participant in particular was quite politically involved and committed to volunteering regularly with an organization.

Given the voluntary self-selection process, I did not control for demographics, such as gender, race, age, or sexual orientation. Because my sample size is not large enough, I cannot draw conclusions for such demographics. Most participants were women, which perhaps reflects the general trend of women being more environmentally concerned then men (Davidson & Freudenburg, 1996). Most participants were in their twenties or early thirties, and all but one were Caucasian.

Need

Given the imminent state of the environment, society needs to act quickly to mitigate climate change. By uncovering the complications that inhibit political action, I hope to explore new ways environmental communicators can empower citizens to engage politically. Hopefully, this could mean a new way of campaigning that focuses on political action rather than individual actions.

So far, much of the work done in ecopsychology is focused on individual behaviour changes (see Lertzman, 2009; Randall, 2005; Stoll-Kleemann et al., 2001). For example, Randall (2009) has developed Carbon Conversations, a workbook for people to create groups in their communities to get together and discuss emotional issues around lowering their carbon footprint. Studies that do incorporate political aspects focus on policy preferences (see Lesierowitz, 2006; Lorenzoni, Nicholson-Cole, & Whitmarsh, 2007), which can be passive rather than active. I want to extend this work by inquiring exclusively into the aspects that arise in the context of political activism.

I want this work to bridge the study of worldviews and the study of ecopsychology. Though I see much overlap, so far, many scholars on either side have not made connections between the two explicit.

Researcher's Perspective

My interest in this topic comes from two sets of experiences. The first set of experiences is *conscientization*, the process of becoming aware of and reflecting on one's own worldview (Larson & Allen, 2006). Through confrontation with injustices, I learned that my worldview hid certain elements of reality from me, blocking me from seeing situations from different angles. Through transforming my worldview, I learned about the gaps in my previous way of seeing the world. This happened in two ways at the same time. I became spiritually enchanted with the beauty of nature while simultaneously learning about the severity of the ecological crisis.

The second set of experiences is my frustration from engaging with the environmental movement. I have tried many of the lifestyle changes that non-profit organizations tout as the solutions to climate change, but found them insufficient. I care deeply about nature and want to do more than these simple actions. Why do environmentalists ask people to do so little? Also,

many of the suggested changes do not suit my lifestyle for reasons outside of my control. For example, I do not own a car, so I cannot drive less, and I do not own a house, so I cannot renovate. As a result, I am frustrated with the portion of the environmental movement that focuses on small-scale individual actions. Something is missing; namely, meaningful political engagement.

Chapter 2: Literature Review

In this chapter, I will outline relevant scholarship concerning worldviews, social norms, framing, and ecopsychology. In acknowledging the fallacy of the myth of apathy, I avoid behaviour change studies that refer to gaps between values and actions, as ecopsychology reveals strong connections and a surplus of underlying emotions and anxieties, rather than a lack or gap (Lertzman, 2009, 2012).

Worldviews

Worldviews are a cohesive collection of concepts, beliefs, axioms, and assumptions about the world and one's role within it (Aerts et at., 2007; Koltko-Rivera, 2004). This collection allows us to construct an image of the world and make sense of our experiences (Aerts et al., 2007). The term worldview is derived from the German word *Weltanschauung*, meaning one's total outlook on the world, society, and life (Koltko-Rivera, 2004; Matutinović, 2007). 'World' here refers to the "broadest environment that is cognitively, practically, and emotionally relevant" (Aerts et al., 2007, p. 8), not just the physical Earth. Worldviews allow us to make sense of our experiences, and thus understand and evaluate the world around us (Aerts et al., 2007). In this way, they answer questions of meaning (Aerts et al., 2007).

Since the 19th century, many scholars in different disciplines have theorized models of worldviews (Koltko-Rivera, 2004). Koltko-Rivera (2004) summarized these various models into a comprehensive model with seven aspects or elements, divided by subject: human nature, which cover beliefs about human nature; will, which governs beliefs about free will and goal-oriented behaviour; cognition, which covers beliefs about reliable sources of knowledge; behaviour, which provides guidelines for proper behaviour; interpersonal, which guides ideas about a variety of relationships with other people, groups, authority figures, and the rest of nature; truth,

which indicates whether people see truth as universal or relative; and, world and life, which focuses on beliefs about nature and the universe. With the possibility for countless combinations of different beliefs within these aspects, there are almost as many worldviews as people on this planet.

Perhaps the central quality of worldviews is their general invisibility. They operate beneath our consciousness in our subconscious, naturalizing beliefs as normal, self-evident, or common sensical (Hebdige, 1979). They saturate our everyday lives and discourses with their assumptions, values, and beliefs. Fortunately, people can experience a challenging process of worldview transformation "when an experience is so profound, or shifts people's steady state in such a fundamental way, that they are forced to change the way they view the world" (Schlitz, Vieten, Miller, 2010, p. 19).

Cultural worldviews.

While every worldview is a unique combination of the aspects mentioned above, one's worldview is also influenced by one's culture. Culture can be defined as collectively shared history, language, and worldview aspects. A culture is a shared meaning system (Koltko-Rivera, 2004) and a whole way of life that is collectively expressed in values, social institutions, and ordinary behaviours. Through culture, people pass on worldview aspects and their associated meanings, types of behaviours deemed appropriate, political problems, art styles, and histories from one generation to the next (Aerts et al., 2007). Since experiences with other people shape who we are, these experiences also shape our worldviews (Koltko-Rivera, 2004).

Through cultural worldviews, people learn what to pay attention to and what to ignore. "Deciding whether to pay attention to a given idea or event in a given moment or not is a learned process" (Norgaard, 2011b, p. 5) called *optical socialization* (Norgaard, 2011b). As part of our

unexamined cultural worldviews, these patterns of paying attention strike us as normal or natural (Norgaard, 2011b).

Certain worldview elements can become dominant within a society (Hebdige, 1979). One central worldview aspect that is dominant within Western culture sees humanity as separate from and superior to the rest of nature (Berry, 1988; Hage & Rauckiene, 2004). In this anthropocentric, or human-centered, worldview, nature is merely an instrument for human uses. Nature is mechanistic, like a factory, assembly line, heat engine, or storehouse of natural resources (Verhagen, 2008). Any sense of emotional connection or attachment to nature is disregarded or trivialized (Kidner, 2007).

While many worldviews contrast with the anthropocentric worldview, the ecocentric worldview is significant here because of its environmental focus (Ireland, 2007; Verhagen, 2008). This worldview is less dominant in Western society, but is gaining strength, especially among environmentalists. An ecocentric worldview places nature and "the biosphere at the center of a person's way of life, thought, and feeling" (Verhagen, 2008, p. 7). Instead of human domination, it envisions a partnership between humanity and the rest of nature, as humanity is one part of the interconnected web of life (Verhagen, 2008). Nature is seen as our mother, an interconnected web, an Earth community, the measure of quality, and a source of spirituality (Verhagen, 2008). Thus, nature has intrinsic value (Berry, 1988; Dale, 2001; Ireland, 2007).

Individualism, the belief in the primacy of an individual's agenda over a group's agenda (Koltko-Rivera, 2004), is another aspect of our cultural worldviews (Bellah, Madsen, Sullivan, Swidler, & Tipton, 2008; McKibbon, 2007). Assuming that individuals are independent from one another (Oyserman, Coon, & Kemmelmeier, 2002), this view highly values independence, self-reliance, and the dignity of the individual (Bellah et al., 2008). Individualism focuses on rights

over duties, concern for oneself and one's immediate family, personal autonomy, self-fulfillment, and freedom of choice (Oyserman et al., 2002). In short, this aspect of our cultural worldview "centralizes the personal – personal goals, personal uniqueness, and personal control – and peripheralizes the social" (Oyserman et al., 2002, p. 5). This worldview aspect is rooted in Cartesian epistemology, which places the foundation for knowledge in the individual thinker (Wilson, 1995). According to this view, the individual, rather than the collective, is the source of knowledge (Wilson, 1995). Individually-centered rational thought is seen as superior to collective intelligence (Ireland, 2007). The autonomous self is the center for action, affirming that individuals have more self-efficacy or power on their own (Fischer, 2008). For example, people with an individualistic worldview are more likely to attribute actions or outcomes to personal characteristics or traits rather than external constraints (Fischer, 2008).

Less dominant in Western culture is the worldview aspect of collectivism, which focuses on how groups bind people together with common goals and values. In this view, the agenda of the collective has greater sway than the agenda of the individual (Koltko-Rivera, 2004). As a part of the larger group, the individual's identity is based on group membership. This worldview maintains that by working together on common goals, we have more power (Oyserman et al., 2002; Schlitz et al., 2010). Here, people collaborate out of a desire to learn together and co-create solutions to social problems (Schlitz et al., 2010). Some groups even experience resonance, a deep sense of interdependence and interconnectedness with each other, developed through shared attention, positive feelings, and coordination (Schlitz et al, 2010).

Another way of seeing the world is thinking in terms of systems (Kauffman, 1980). Systemic refers to the whole of a system (Kull, personal communication, Jan 21, 2013). Systemic or systems thinking recognizes that the world is composed of nested systems, or sets of

interconnected elements that produce their own pattern of behaviour over time to in relation to a common purpose (Meadows, 2008). Thinking systemically focuses on relationships among elements instead of solely on individual parts, as the whole often amounts to greater than the sum of the parts (Capra, 1996; Meadows, 2008). Using systemic thinking, one can apply experiences with one set of systems to a new system: although dissimilar topics, the systems will have similar characteristics (Kauffman, 1980). In this way, systems thinking enables people to see similarities or connections between seemingly separate things. However, because our cultural worldview focuses on of individualism and reductionism, this way of thinking is not widespread.

The distinction between these aspects of our cultural worldview is often fuzzy in reality. People's worldviews may contain many of these elements and emphasize different aspects in different situations. After all, people can subscribe to certain beliefs, while simultaneously holding contradictory ones deep in their unconscious (Lakoff, 2010). These deeper views can have a stronger influence over their actions.

Power.

Worldviews also govern how power is perceived and distributed in society. Ideologies are ideas or beliefs within worldviews that typically justifies the interests of dominant social groups (Matutinović, 2007). Some social classes and groups have "more say, more opportunity to make the rules, to organize meaning, while others are less favourably placed, have less power to produce and impose their definitions of the world on the world" (Hebdige, 1979, p. 14). Our society is inundated with complex power relationships and many kinds of power (Gaventa, 2006). 'Power over' describes how more powerful people have the power to control less powerful people. 'Power to' refers to one's capacity for action. 'Power within' describes a

process of gaining confidence, awareness, or skills as a precondition for action. 'Power with' refers to synergy generated through partnerships with other people (Gaventa, 2006).

Gaventa's (2006) power cube provides "a framework for analyzing the spaces, places and forms of power and their interrelationship" (p. 26). In this model, there are three spaces for power: closed spaces, where most people lack decision-making power; invited spaces, where authority figures with more power invite those with less power to participate; and claimed or created spaces, where those with less power claim space for action and decision-making from the more powerful. There are also three forms of power: visible power, which are formal rules and procedures for decision-making; hidden power, where more powerful people set the agenda and devalue the concerns of less powerful people; and invisible power, which outlines who can and cannot participate in society in what ways (Gaventa, 2006). Invisible power operates at the level of unconscious worldviews and influences people's sense of self and normalcy of the status quo (Gaventa, 2006).

Frames.

In the past 40 years, neuroscientists have made remarkable discoveries of how our brains work (Lakoff, 2009). Prior to this, our 18th century Enlightenment view of our minds saw reason as conscious, reflective, unemotional, disembodied, universal, logical, and value-neutral (Lakoff, 2009). On the contrary, modern neuroscientists have realized that the exact opposite is true: reason is largely unconscious, automatic, uncontrolled, emotional, embodied via neural connections, and value-laden. Cognitive scientists have discovered that we think and speak in terms of typically unconscious structures called frames or schemas (Lakoff, 2009). A frame is a complete system of roles and relationships. A single word can activate its defining frame and much of the surrounding system. Although words are defined relative to frames, they are not

frames in and of themselves (Lakoff, 2010). Frames are made real in institutions, industries and cultural practices, and do not disappear until these do as well. Repeated language usually becomes 'normal language' that activates a cultural worldview. "We see ourselves as having only the choices defined by our brain's frames and cultural narratives" or worldviews (Lakoff, 2010, p. 34). As such, frames are strongly associated with our worldview.

The language, images, and social relationships that environmental communicators draw upon affect which frames are activated in people's minds (Lakoff, 2010). Studies of environmental messaging have shown that people respond differently to similar information framed in a different way. Presenting an issue as an opportunity for desirable policy changes, instead of a risk of unwanted policy changes, can increase people's political support and action (Miller & Krosnick, 2004). Also, presenting an issue in a thematic way as part of general trends elicits more policy support than presenting an issue in an episodic frame, as a case study or isolated event (Hart, 2011). Here, I explore two frames that currently dominate much environmental communication.

The first frame is the Enlightenment reasoning frame, which states that since reason is rational, logical, and emotionally detached, information alone is sufficient to convince or persuade people of an idea. This frame upholds the Enlightenment idea of rationality, which cognitive science has shown is not accurate because reason is strongly influenced by our emotions, unconscious mind, and worldviews (Lakoff, 2009, 2010). Regardless, our dominant worldview still separates feeling from thinking (Kidner, 2007). Clinging to this frame, many environmental campaigns assume that if people only had the correct scientific information, people would act more environmentally friendly. Thus, many environmentalists focus on public information campaigns dedicated to communicating scientific facts about climate change.

However, in general, people only need to know two simple facts to understand climate change: that an increase in greenhouse gases in the Earth atmosphere causes climate change, and burning fossil fuels causes an increase in greenhouse gases in the Earth's atmosphere (Norgaard, 2011a).

The second frame is the individual action frame. The environmental movement has built up this frame about environmental action that focuses almost exclusively on individual behaviour changes and ignores political engagement (Lakoff, 2010). Randall (2009) identifies how environmentalists speak of individual actions adding up: "Painless, feel-good, easy steps by committed and empowered citizens set the nation on the road to climate-recovery" (Randall, 2009, p. 119). This frame speaks to an individualistic worldview, where it is perceived that people have more power on their own as opposed to collectively; hence, the priority is on personal aspirations and goals rather than collective ones (Oyserman et al., 2002). By continually activating this individualistic take action frame, environmental communicators unwittingly normalize an exclusion of political engagement (Lakoff, 2010).

Social norms.

Social norms are another aspect of our worldview that consciously or unconsciously directs our behaviour. Descriptive social norms are people's collective perceptions about what others commonly do in situations (Griskevicius, Cialdini & Goldstein, 2008). People are often sensitive to others' behaviours, as they are able to generate estimates about the percent of people who engage in specific behaviours (Nolan, 2011). These estimates are based on direct observations of others, cultural communication, and self-knowledge (Nolan, 2011). Directly witnessing or learning about someone engaging in a behaviour can favourably influence one to act similarly (Nolan, Schultz, Cialdini, Goldstein, Griskevicius, 2008). In addition, people tend to believe that others think and act the same way they do. This is called the *false consensus* or

false conception effect (Nolan, 2011). Studies have demonstrated that when people believe that most people behave in certain ways, such as littering, recycling, or using high amounts of electricity, they are more likely to align their behaviour with these beliefs (Griskevicius et al., 2008; Nolan, 2011).

Despite the impact that social norms have on shaping behaviour, people are generally unaware of this influence (Nolan et al., 2008; Griskevicius, Cialdini & Goldstein, 2008). Nolan et al. (2008) found that people who received a social norm communication about energy consumption aligned their behaviour with the social norm. However, people rated the social norm communication as the least motivating factor (Nolan et al., 2008). Therefore, "normative information is a powerful but under-detected form of social influence" (Nolan et al., 2008, p. 921).

Given the power of worldviews, with their ideologies of power, composite frames, and social norms, it is important to explore how these elements within people's worldviews inform or impact their political engagement. In this study, I refer to all of these factors as cognitive complications.

Ecopsychology

In addition to these cognitive complications, emotions are a significant area to explore. Ecopsychology, a growing field that incorporates nature into our domain of significant self-other relationships (Fisher, 2002), is revealing new insights about the powerful impact emotions and our psyche can have on our attitudes and behaviours towards the rest of nature.

Ecopsychology's main method for investigating our unconscious is psychoanalysis (Lertzman, 2009). Searles, one of the first proponents of ecopsychology, stated that the nonhuman environment is one of the most important aspects for human psychological existence

(Lertzman, 2009). Studies have shown that in a variety of cases, people gain physical and psychological benefits from merely looking at pictures of natural landscapes versus built landscapes (Kidner, 2007). After all, we co-evolved here: our consciousness evolved out of and together with the rest of nature (Berry, 1988). We become spiritual and psychological healthy beings by learning to recognize nature's intrinsic value (Kidner, 2007).

In light of the deep connection between humanity and ecosystems, ecopsychology defines our dominant worldview as a schizoid way of thinking (Mishan, 1996). *Schizoid* means pathologically separating what should be together (Mishan, 1996). The anthropocentric worldview has separated what should belong together: humanity and the rest of nature (Mishan, 1996). In fact, Kidner (2007) calls our "self-as-autonomous-individual" individualism an immature version of ourselves (p. 137). Yet, much of our anthropocentric worldview has generally made us oblivious to our capacity for a deep, spiritual relationship with the rest of nature (Kidner, 2007).

However, because these relational capacities are central aspects of who we are, ecopsychologists maintain that we feel the negative emotions from environmental loss. Our current level of ecological destruction evokes largely unconscious anxieties (Lertzman, 2009). Randall (2009) likens these emotions to the emotions of loss accompanying death. Albrecht (2006) suggested the term "solastalgia to describe the pain or sickness caused by the loss of, on inability to derive solace from, the present state of one's home environment" (p. 2). A kind of homesickness while still at home, solastalgia is the pain experienced by the destruction of one's cherished environment by external forces (Albrecht, 2006). These feelings of general distress, loss, and bereavement can escalate into serious health and medical issues (Albrecht, 2006). Searles (1972) wrote:

> I postulate that an ecologically healthy relatedness to our non-human environment is essential to the development and maintenance of our sense of being human and that such a relatedness has become so undermined, disrupted, and distorted, concomitant with the ecological deterioration, that it is inordinately difficult for us to integrate the feeling experiences, including the losses, inescapable to any full-fledged human living. (p. 368)

Although collectively, people are experiencing the array of negative emotions from witnessing nature deteriorate at accelerating paces, our worldview hides the cause of these emotions. Traditionally, psychology has interpreted these feelings of outrage, grief, and depression as anxiety and internalized the problem by not connecting the emotions to the external cause (Kidner, 2007). By not connecting the symptom to the cause, we "[derail] the feedback loop that would otherwise motivate action to *prevent* this degradation" (Kidner, 2007, p. 137, emphasis in original). Randall (2009) identified that while loss is a dominant theme in environmental communication about climate change, it is absent from narratives about solutions.

Our worldview deflects and reinterprets these emotional reactions, even positively portraying the cause of environmental destruction as 'progress' or 'development' (Kidner, 2007). Referring to nature as natural resources, our dominant anthropocentric worldview emphasizes a purely cognitive connection to nature (Kidner, 2007), resulting in an emotional or physical disconnection to nature. In this way, nature "is *already* 'lost' to many of us in an emotional and cultural sense even before it is physically destroyed, and a chronic, suppressed sense of loss becomes an accepted part of our 'personality'" (Kidner, 2007, p. 133, emphasis in original).

Denial.

Sigmund Freud, the father of psychoanalysis, wrote about denial as a response to something traumatic in the external world (Randall, 2005). When this happens, the mind temporarily splits itself, so that "what is known in one part of the mind is unknown in another, thus allowing ordinary life, in some form, to continue" (Randall, 2005 p. 167). If this split is not reconciled, it can become permanent and cause more divisions. This process is known in psychology as *splitting* (Randall, 2005).

Sociologist Stanley Cohen divided denial into three different types (Norgaard, 2011b). There is literal denial, where one outright rejects whether a certain event happened or the validity of certain facts, such as climate change deniers. Then there is interpretative denial, where one accepts the facts but puts a new spin or interpretation on them to change their significance. Finally, there is implicatory denial, where one denies the psychological, political, social or moral implications that follow from accepting the facts. It is not the failure to accept information, but the failure to integrate this information into everyday life, recognize a moral imperative to act, or translate it into political action. Psychological denial or splitting fits into this third type of denial (Norgaard, 2011b).

In addition to splitting oneself from the negative emotions arising from climate change, people can similarly deny the necessity of action (Stoll-Kleemann et al., 2001). Norgaard (2011a) defines denial as active "work to avoid acknowledging disturbing information" (p. 400). She found that many people live in tension between knowing and not knowing: while they know about the reality of climate change, they do not integrate this information into everyday life. Instead, people live a 'double reality,' where one reality is a collectively constructed sense of normal everyday life that ignores climate change, and the other acknowledges the troubling

reality of climate change (Norgaard, 2011a). This does not mean that people reject information about climate change; rather, they fail to integrate this knowledge and transform it into social action.

Another type of denial arises from cognitive dissonance, which occurs when one blocks out information in order to maintain a coherent meaning system or worldview (Norgaard, 2011a). When people experience an inconsistency leading to cognitive dissonance, they seek to resolve, deny, or displace the inconsistency (Stoll-Kleemann et al., 2001). Usually, people reduce this inconsistency by the easiest means necessary (Thøgersen & Crompton, 2009), which can often lead to ignoring information about climate change (Norgaard, 2011a).

Denial exists both at the individual and collective level. Norgaard (2011a) identifies cultural denial as the way people collectively hold "information about global warming at arm's length by following established cultural norms about what to pay attention to, feel, talk, and think about in different contexts" (p. 408).

Environmental communicators' calls to action are unlikely to shift this type of denial (Stoll-Kleemann et al., 2001). Stoll-Kleemann et al. found that while Swiss citizens painted climate change and high energy usage undesirably, they experienced internal resentment and denial about the necessity to make lifestyle changes. For example, people used one pro-environmental behaviour to justify not doing others, denied responsibility for the problem by shifting blame somewhere else, and expressed powerlessness. These responses helped people assuage their guilt.

Thus, ecopsychology has begun to reveal a host of complex emotional and psychological reactions to climate change and ecological destruction more generally. In this context, it makes more sense to refer to a tangle of anxieties, fears, losses, anticipants and desires, than a gap

between values and actions (Lertzman, 2009, 2012). In this study, I call all of these factors emotional complications. By weaving together cognitive and emotional complications, I uncover some of the underlying realities that occur when people engage with environmental issues, such as climate change.

Chapter 3: Method

To address the question of emotional and cognitive complications in relation to political activism, I conducted in-depth qualitative interviews, borrowing principles and methods from psychoanalytically informed research methods.

Theoretical Underpinnings

I sought to include psychoanalytically informed or psycho-social free association methods in my research. The term 'psycho-social' is a way of "holding together an understanding of the workings of the psyche and the social without reducing one to the other" (Hollway, 2009, p. 461). In the context of psycho-social research, a psychoanalytic approach assumes contradictions, ambivalence, internal conflicts as people continually construct meaning. Anxiety is a central human experience (Lertzman, 2009). Psycho-social studies connect the social and political context with one's largely unconscious processes (Lertzman, 2009).

Defended subjects.

The defended subject framework recognizes that anxiety and other defence mechanisms affect people's actions and stories (Hollway & Jefferson, 2000). This research framework posits that research subjects may not hear the question through the meaning-frame intended by the researcher, may not know why they feel the way they do about experiences, are invested in protecting their vulnerability, and are somewhat unconsciously motivated to hide the meaning of their thoughts, actions, and feelings (Hollway & Jefferson, 2000). The central tenant of this framework is that there is a *gestalt*, a hidden agenda with a whole that is more than the sum of its parts, within each participant (Hollway & Jefferson, 2000). Many hidden aspects of people's emotional lives in their unconscious influence and are intertwined with their more conscious processes (Walkerdine, Lucey, & Melody, 2001). Often, people do not know everything about

who they are, and participants are not always willing to openly tell a researcher everything about themselves (Hollway & Jefferson, 2000). Rather, the accounts that I received were clouded by "people's less clear-cut, more confused and contradictory relationship to knowing and telling about themselves" (Hollway & Jefferson, 2000, Introduction, para. 8). After all, I asked participants the potentially sensitive question of why they do not engage in socially beneficial behaviour.

Free-Association. Types of Questions

I used both free-association and narrative questions. Free-association questions in particular are beneficial for eliciting narratives that are structured by one's unconscious logic and emotional motivations, not conscious logic or rational intentions (Hollway & Jefferson, 2000). Using free-association is based on Freud's work, which sees these types of questions as a way to dig into people's unconscious desires (Hollway, 2009).To hear how participants interpreted events, I tried to solicit narratives or stories. The way in which we construct and reconstruct meaning is more significant than the event itself (Bruner, 2004). Asking for broad narratives is also a way to access deeper issues "from the side," which helps reduce defensiveness (Lertzman, personal communication, November 23, 2011).

Researcher involvement.

Through reflection and self-awareness, I considered my role in co-constructing meaning, both verbally and non-verbally. I started by engaging with my pre-existing emotions about my research topic before I began the interviews (Ezzy, 2010). Throughout the interview process, I continually engaged in self-reflection (Ezzy, 2010). I kept a research journal before and throughout the interview and analysis processes in order to remain aware of my influence.

Type of Participants

I interviewed adults in Vancouver, BC who are concerned about climate change but not involved in politics. I focused on people who know that anthropogenic climate change is occurring, to remove overt denial as a factor. I therefore ensured that each participant identified that they were concerned about climate change before scheduling interviews.

I assumed that people who are concerned about climate change try to keep informed about the latest news and stay in touch with organizations working on mitigation campaigns. I therefore decided to consider people who subscribe to social media updates from environmental groups that have a climate change campaign to be somewhat concerned about climate change. In addition, according to McAdam and Paulsen (1993), people who are members of organizations have a stronger sense of efficacy, which is "a good predictor of participation in collective action" (p. 645). These people likely find information about climate change or the organization's activities somewhat interesting or relevant to their lives; otherwise, they would not have chosen to subscribe to updates. Further, the decision to participate in political action can depend on the occurrence of an invitation (McAdam & Paulsen, 1993). I felt that these people are prime people for engaging in political action, and wondered what is complicating their efforts. I have used psudonyms to protect my participants' identities.

Data Collection

Selection survey.

I coordinated with the David Suzuki Foundation and the Sierra Club of Canada, British Columbia chapter to post an invitation to participate in an online survey on their Facebook and Twitter accounts, respectively. The nine survey questions sought to ensure that potential participants met the study criteria. Questions asked whether they thought climate change was

happening, whether it was caused by human activities or natural changes, how often they thought about climate change and let it impact their decisions, how they felt about climate change, and how often they volunteered with or donated money to an environmental group. For a full list of questions, please see Appendix A. The survey questions flowed from easiest to hardest, from potentially most interesting to most sensitive. All questions were closed-ended questions with supplied answers. Only one question was left blank for respondents to add additional comments. At the end of the survey, participants were able to select an option to input their contact information into a separate form if they were interested in being interviewed (Sosu, McWilliam, & Gray, 2008).

I used SurveyMonkey.com for this online survey. The introduction to the survey explained the opportunity to participate in two face-to-face interviews in Vancouver, BC. In the last question, respondents could choose to fill in their contact information if they were interested in the interviews. I contacted everyone via email with more information about the interviews and the benefits. In total, 29 people responded to the survey, eight people filled in their contact information, five people responded to my invitation email, and four people from the survey participated in the interviews. In addition to helping me select participants, I used the survey to help prepare for each first interview by reviewing the participants' answers beforehand. Since my response rate was low, I included a fifth participant from my pilot interview process.

Interviews.

Before conducting the interviews, I held two pilot interviews in order to test the interview questions and practice the methods. Based on feedback from these pilot interviews and the first interview with my first participant, I edited the first question in order to be more specific and conversational in style. Thus, two participants, Ann, my second pilot that became a participant,

and Robert, my first participant, responded to a slightly different question in their first interviews. Although the questions were slightly different, I do not believe this affected the actual data. Rather, this change eased the data collection. To see both the original and edited questions, please see Appendix C.

I held two interviews with each participant in order to have more time to delve deeper into their emotional and cognitive complications. The first interview used a *biographical narrative interview method* (BNIM, see below), while the second interview used a qualitative semi-structured method. The defended subject framework is best suited to two interviews because it does not take participants' stories at face value and it acknowledges that participants are not always consciously able to understand their actions (Hollway & Jefferson, 2000). The first interview sought out stories so that I could begin to search for hidden meanings, inconsistencies, contradictions, and insights. The second interview enabled me to check my preliminary findings and follow up for more information with the participants.

Interview 1.

The first interview used a biographical narrative interview method (BNIM), which is a psychoanalytically informed method (Hollway & Jefferson, 2000; Wengraf, 2001). I asked just one question, a single question aimed at inducing narrative, where the participants' responses were determined with minimum researcher intervention (Wengraf, 2001). Please refer to Appendix C to see the question.

First, when I met the participants, I briefed them on the interview process by defining the subject of the interview, the purpose of the interview and the use of the recorder (Kvale, 2007). During this time, I also requested that they sign a consent form, which also introduced the study (see Appendix B). I explained that the first interview would be unlike a back and forth, question

and answer interview because I had just one, broad question. In my briefing, I borrowed introductory language from Wengraf (2001). Before starting, I asked if the participants had any questions (Kvale, 2007). This initial set-up, plus our chit-chat on our way to the meeting room gave participants a chance to get a feel for me before feeling able to talk freely and openly with me.

After the briefing, I then asked a broad, open-ended, introductory question about any instances or examples of when they did something about environmental issues. When needed, I probed for more details or stories of specific instances by asked a few prompting questions. Sometimes, silence, a gentle nod, an "mm-hmm," or repetition of a few significant words the participant just said helped the participant continue to talk (Kvale, 2007). At the end of the interview, I debriefed with each participant, asking if they had anything they wanted to add (Kvale, 2007) and thanking them for their time. These interviews were typically about an hour long.

Immediately following the first interview, I noted my initial thoughts, feelings, and impressions (Kvale, 2007; Wengraf, 2001). These notes provided me with a context within which to situate the participant, and later, my interpretation (Kvale, 2007). I also tried to record what I remembered from our chit-chat both before and after the interview, as every interaction is part of the interview (Lertzman, personal communication, November 23, 2011). Often, I found that participants referred to our previous conversations, whether part of the official interview or not, during the interview. I transcribed the interviews as soon as possible after the first interview and before the second (Hollway & Jefferson, 2000). While transcribing, I made notes of general themes or ideas that occurred to me. I also did a preliminary analysis of the completed interview

transcript to figure out questions that would address my initial thoughts in the follow up interview.

Interview 2

The second interview used a qualitative semi-structured method. After a shorter briefing, I began by asked two or three questions unique for each participant, based on my preliminary analysis of the first interview. These questions served to confirm, refute, or provide more information on my preliminary analysis (Hollway & Jefferson, 2000). Afterwards, I asked a set of five open-ended, free-association questions. These questions asked about their concern for nature, a time when they experienced politics, a message they recalled hearing from an environmental group, their associations with the terms climate change and global warming, and their perceived power. Please see appendix C for a full list of questions. The second interviews ranged in length from forty minutes to over an hour and a half.

Both interviews typically took place at the main branch of the Vancouver Public Library, with a few exceptions. With Ann, the first participant who was initially a pilot, I conducted the first interview in my living room, and the second outside at a park, as she was comfortable with these locations. With Robert, I conducted the first interview on couches in a corner of the lobby of my office building after hours, which unfortunately had a noisy fan that interfered with the recorder. With Deborah, she offered to host the interviews at her house in Kitsilano, which was very beneficial as I was able to see the gardens that she cares for so much.

Data Analysis

I employed a *bricolage* method for analyzing the data, where I combined a variety of analytical techniques (Kvale, 2007). After all, I am interested not just in the face value of what

participants say, but also in how they say it, and what possible hidden meanings there are. I used hermeneutics of suspicion, coding, and cross-comparison.

I first employed a hermeneutics of suspicion to deconstruct the interview text to uncover underlying assumptions, worldviews, and values (Kvale, 2007). A hermeneutics of suspicion distrusts what is said, as statements are critically interpreted to mean something deeper than what is on the surface. Using the defended subject framework, I paid attention to what was and was not said. I divided sections of text generally under a few categories, such as worldviews, environment, framing, denial, and emotions, and recorded my initial thoughts based on what the participant had said. This let me begin to see participants' potential worldviews.

To explore the meaning of what is said, I coded the data by attaching keywords to each text segment. I used coding to categorize the text in order to draw out thematic ideas (Gibbs, 2007). I used the online software Dedoose to code and sort my data, then exported my data into Microsoft Word. I kept an updated codebook with a list of all codes with definitions (Gibbs, 2007). In this codebook, I grouped codes that referred to similar subject matter in hierarchies. While I initially started with descriptive codes, my analysis focused on more categorical, analytical, and theoretical codes. Many codes captured what the participants' actions and statements seemed to take for granted (Gibbs, 2007; Gibson & Brown, 2009). Most codes were *apriori* codes, as I defined them based on my research question and literature research before examining the data (Gibson & Brown, 2009). As I started coding, additional codes – *empirical codes* – arose from the interview data. Often, I revisited text that I had already coded to make sure I was applying codes consistently as the code's definition evolved or as a new empirical code emerged. While coding, I reread the data over five times. Throughout my analysis process,

I found that because I manually transcribed all the interviews, each participant's voice rang in my head as I read and re-read the text.

Once I completed assigning codes, I moved on to a thematic analysis. A thematic analysis examines the commonalities, relationships, and differences across the data (Gibson & Brown, 2009). I combined all the passages with the same codes within each participant to get a sense of each participant individually. I wrote memos that compiled my thoughts on the interview data attached to each code.

Then, I compared participants to each other. I summarized a few codes into cells of a table for each participant and compared participants to each other, noticing how they were similar or different from each other (Gibbs, 2007). I focused on comparing how they tended to think or feel. Then, I ranked them numerically in order of most to least active, based on what they told me about what they do about environmental issues. Please see Appendix D for this table. I coded, compared, and reviewed the data until reaching saturation, when I felt I had exhausted my data and potential for new categories (Rosaline, 2008).

Validity and Reliability

To ensure validity in my qualitative research, I piloted the interview questions with two volunteers before conducting interviews. This ensured that the questions were clear and easy to understand. I audio recorded all interviews, made notes immediately after the session, and aimed to transcribe the interview as soon as possible, before the second interview. This way, I was able to notice emerging trends among participants as they arose throughout the interview process. I also was able to verify whether my preliminary interpretations were accurate by asking the participant during the follow up interview, a process called member checking. As such, I was able to delve deeper into participants' potential assumptions, worldviews, values, and emotions.

I built evidence for themes from my literature research and several of the interviews (Creswell & Plano Clark, 2011). While coding, I used intercoder agreement to ensure validity by having my supervisor code a blank copy of an interview, then verifying that we both applied the same codes in the same instances (Creswell & Plano Clark, 2011). I was also careful to report evidence to the contrary, since I encountered a variety of reasons for political disengagement.

Chapter 4: Results

My research goal was to explore the cognitive and emotional complications that prevent concerned citizens from engaging collectively for structural solutions to climate change. This goal was informed by the findings from the following four research sub-questions. Questions one, two, and three relate to cognitive complications, while question four covers emotional complications.

1. What actions or behaviours do the research participants think are most effective at mitigating climate change, as exemplified by what they do?
2. What worldview elements affect how the research participants engage for change?
3. What perceptions of society, in terms of environmental behaviour, do the research participants have and how do these perceptions affect social engagement?
4. What are the research participants' general emotional responses to ecological destruction?

Research Sub-Question 1: Participants' Reported Behaviours

My findings about participants' behaviours are a summary of the actions or behaviours people thought were most effective at mitigating climate change. It is a description of participants' pro-environmental actions, as self-reported during the two interviews. These can be divided into individual, persuasion, or collective actions.

When I asked participants what they did about environmental issues, many focused on *individual actions*. Within this research, I define individual actions as things that people do in their own in their life that directly lessens their ecological impact of their lifestyle (Courtenay-Hall & Rogers, 2002). Examples from participants include: organic gardening, recycling, commuting via bicycle, buying local and/or organic food, buying recycled products, composting,

carpooling, using public transit instead of driving a vehicle, using a car-share program instead of owning a vehicle, and eating less meat. A few people said they also sign petitions and send online form letters from organizations to elected officials.

Ann, an early-thirties student in web design with a background in Christian theology, summarized this well. Her first response to what she has done about environmental issues was:

> I guess the main thing I do is try to produce the least amount of waste that I can. And, not anything, and try to avoid actions or behaviours that will like directly harm the environment. It is something I'm conscious of everyday, and… I ask myself all the time… for example, if I buy something, is how is this going to impact the environment if I purchase this product.

She went on to give examples of how she used to avoid elevators because they use electricity, and how she used to avoid straws because it is unnecessary waste.

Rachael, who just earned her master's in environmental health and started a new job as an air quality assessment scientist, is passionate about eating what she calls *"real food"* by which she meant local, sustainably farmed, pesticide-free food, which does not necessarily need a certified organic label because she knows where it came from and how it was grown. She described how she challenged herself to not purchase or consume anything from a grocery store, instead connecting with growers at local farmers' markets, for four months. She also did all this grocery shopping while biking, which is her usual mode of transportation.

In addition to these individual actions, participants discussed how they try to *persuade and convince others* to live more environmentally friendly. Amber, an early-twenties undergraduate student in environmental sciences, shared many stories about convincing people to use the city's composting program when she worked at the Township of Langley's solid waste

department. Independent of this co-op job, she also regularly tries to convince her friends to use reusable coffee mugs or water bottles:

> If my friends don't have their coffee mug with them when they come to pick me up when we're going out for coffee, I'm like, "yo, where's your mug?" I'd be like, "are we staying for coffee or are we not? And where are we going?" If we're going somewhere that doesn't have coffee mugs, I'm like, "ok, I'll go grab a mug." And they'll be like, "where are you going?" I'm like, "I'm going back in the house, I'm going to go grab a coffee mug – you forgot yours." … They know I'm not afraid to say that to them.

Rachael also talked about convincing friends to change their individual behaviours. In addition to annually putting together biking teams for HUB's Bike to Work Week and Better Environmentally Sound Transportation's Commuter Challenge, she also tries to persuade her friends to commute via bicycling. For example, she told me about trying to convince a couple of friends to bike regularly. She explained that one friend is *"concerned about money she spends on transit, so I would say, 'this bicycle is sitting there doing nothing, so let's get it like tuned up, and bike.'"*

In addition to these individual and persuasion actions, a couple of participants touched on collective actions, such as volunteering with groups. Robert, a late-twenties marathon runner with an undergraduate degree in geography, talked about how he volunteers with an environmental non-profit as *"essentially a receptionist:"* He responds to public inquiries by providing information and encouraging people to act on their concerns, even if it is beyond the scope of the organization.

Only one participant, Deborah, a semi-retired lifelong activist in the women's movement, made group work the main focus of what she does about environmental issues. She demonstrated the committed public activism type of political action. She is an active volunteer with an environmental non-profit and has helped the group reorganize itself as an association with a purpose statement, a strategic plan with specific objectives, a constitution, and members. With the group, she has hosted a forum of speakers, facilitated an educational series, and produced a pamphlet with sample questions to ask electoral candidates during the previous election.

In summary, all participants mentioned individual actions – lifestyle changes they made to lessen their ecological impact in their own life. They also talked about convincing others, such as family members, friends, colleagues, or classmates, to make similar changes in their lifestyles. While most focused on these actions, only a notable few talked about larger social engagement.

Research Sub-Question 2: Cognitive Complications

Cognitive complications refer to people's perceptions in relation to climate change; namely, their worldviews and psychological defences. The main worldview elements evident in the data were individualism, Enlightenment reasoning, and selective systemic thinking. The hidden assumptions within participants' worldviews, or the lens through which they saw the world, seemed to affect what they thought of as the most effective way to mitigate climate change and other environmental issues, and so shaped what they did. As previously discussed, participants reported doing individual, persuasion, and collective actions. All but one participant had strong biases towards individualism, upheld a belief in the Enlightenment reasoning frame (Lakoff, 2009), and saw systemic thinking only in relation to the problems rather than the solutions. In addition to these worldview elements, another cognitive complication is participants' inconsistencies, which can hint at denial as a form of psychological defensiveness.

Individualism.

The prominence that individual actions played throughout the interviews suggests a worldview strongly centered on individualism, the belief in the primacy of the individual and the individual as the primary social unit (Ireland, 2007; Koltko-Rivera, 2004).

In addition to most participants focusing on individual actions, participants felt they had the most power to enact change on an individual level. Participants expressed the greatest degree of power to affect change with these individual actions and spoke confidently here. They felt they had the power and ability to control outcomes on this level. Rachael said it outright: *"Well, the greatest amount of power that I have and that we all have is to make personal changes."* Ann, too, felt she had a great deal of power to make environmentally friendly choices, namely, buying used:

> I think my general tendency now will be to, you know, buy used as much as I can, and not just with clothing but also like with home décor, that's definitely an area where I feel yea, you can easily furnish your home with used products, and that's definitely a goal of mine when it comes to decorating.

Though Deborah is the only participant who did not make individual actions primary, she also believes that she has power through individual actions. After explaining more collective areas where she has power, she added, *"and then I have the power in my own sphere, my own space, to live and act as environmentally sustainable, as sustainably as possible, which is a powerful, I believe that it's a powerful act."*

In addition to doing individual actions, Amber expressed confidence in being able to convince others to also make individual lifestyle changes:

> All my friends all have water bottles and resalable mugs because I bought them for them to use and if they don't use it, I'd be like, "hey, why didn't you use my birthday present?" Like that kind of thing, I'm not afraid to do that until they start using it so. I feel like I have the power to definitely influence my friends.

Not only did most participants see that their power lies with individual actions, they felt that they had less power working collectively in groups. For example, Amber spoke despairingly of working part of a team at her job at the local township. *"Because it was a government thing there was really no individual thing, like it was the township's idea, the township goes forward."* She complained that in a group, she had less power to make her own choices, something that to her, is crucial. When she had an idea, for example,

> We couldn't say it was our idea, like it had to come from the department, so I guess I could've myself personally argued for [my idea] and be like, "you know what, I want this, this is this the way it needs to be." I couldn't do that because even though I'd want to because it'd have an impact, they'd be like, "ok, well too bad, like, what does your department think?"

Amber had a hard time articulating why teamwork was negative, but my sense is that, to her, working with others means relinquishing some of her power to the rest of the group. Amber emphasized the importance of being able to make choices, so diminishing her ability to make choices within a group robbed her of some power. When talking about her job at the township, she largely focused on her own personal efforts, such as going door-to-door by herself, or talking to residents one-on-one. According to her responses, working with colleagues did not increase her effectiveness. Thus, her individual autonomy was more important than collaboration, an important aspect of individualism (Ireland, 2007).

Similarly, because of his focus on individualism, Robert did not think there was a potential for power in groups. When I asked Robert what power he has to create or initiate change, he automatically assumed he had to work on his own in order for it to qualify, discounting his volunteer work. For Robert, since *"a lot of the issues that I would be concerned with have already been tackled with someone who's trying to do a similar thing, I feel like I couldn't break any ground in what they're doing."* He viewed his volunteer work as unimportant because he disappointingly does not *"work on any specifics;"* rather, he works on encouraging the public. His defeated tone implied that his efforts have little value because encouraging others is not directly taking action on his own. In addition, he felt that because protests are seen as *"weak and silly"* by the media and society, they are not effective.

Participants felt that they had the most power in places where they could make conscious decisions. For Amber, having power and responsibility over her choices is her primary motivation:

> We can make choices, we can use greener, we can walk instead of taking the car for a five minute drive, or just simple choices that over time that do pack up and… it's that idea that really that makes me want to try and do better.

Amber firmly believed that, *"simple choices that actually… to you don't cost that much, but to everyone can have a big impact, I think are important."* To her, everyone has the responsibility to make these environmentally friendly choices. She reasoned, *"the choices [people] make now are already affecting us, the choices made in the past are already affecting us… there's no two ways around it, you have to be responsible for the choices you make."* So, she would tell people: *"When I'd be going door-to-door or just talking to a resident, they'd be like, 'oh why does it matter?' And then you'd just explain to them that all the choices we make*

[are] going to impact the future." These decisions are all lifestyle changes, mainly focused on waste reduction; namely, composting, recycling, using reusable mugs and water bottles, avoiding Styrofoam take-out containers, and walking or busing instead of driving. As with Amber, Ann also felt she had the power to make conscious choices. Ann explained,

> I like to buy things that are made out of recycled materials, so for example… if I'm shopping for food, and it comes in some sort of packaging, you know, I look… that the box is made out of recycled paper. Yea, so I try to support… businesses and products that use as much recycled materials, you know, as much as possible.

These participants seemed to be arguing that individual actions add up. According to these participants, all of their decisions added up the more often they made these choices and the more other people made these choices. They accepted spillover, the notion that simple and painless individual actions have a large impact collectively, and that one such action leads to more and more similar actions (Thøgersen & Crompton, 2009). For example, Amber firmly believed that recycling pop cans has a large impact when she talked about picking up pop cans from the garbage and putting them in the recycling: *"Well, that's a pop can and that's two pop cans that could've been saved, that's a lot of metal that could've been saved. It'll make a difference eventually."* As Amber saw it, one pop became two pop cans, which then increased exponentially to *"a lot of metal"* all in the same sentence. This shows how Amber has exaggerated the impact and importance of something as small as recycling one pop can. It also indicates her optimism because she connected recycling one can to solving a larger, systemic issue.

Robert also accepted spillover, as he conveyed the same idea that the impact of conscious choices increase exponentially when he discussed environmental campaigns that focused on individual actions. Throughout our discussion, he remained entrenched in individualism. He reasoned that,

> It's just practical things you can do around the house and it gets you thinking that way, and when you start to think that way and act that way you want to do more, and it builds. I think I feel like that's some of the best, most important, or yea, the best working messaging that you can do is something like that: behaviour lifestyle thing. And it's in small increments, at least that's what I believe, I mean you have to start off small, start with the compost and then work up from there and yea. And then you can make the big decisions, you know to downsize or live in a more eco-friendly place or, not own a car…. That's what I think a good effective program is, at least to me.

To summarize, most participants focused on individual actions, described a feeling of empowerment, sensed they had less power in groups, and believed that one's conscious choices can have a cumulative impact. These factors together reveal a strong bias towards individualistism, with an emphasis on independence, self-reliance, and autonomy (Fischer, 2008; Oyserman et al., 2002).

Enlightenment reasoning.

Another cognitive complication that many participants had was a belief in Enlightenment reasoning. A majority of participants operated within the frame that all humans tend to think and act consciously, rationally, and logically. Therefore, they assumed that others only need to correct information to change their behaviours. According to this frame, information alone both

is and should be sufficient for the participants to act in an environmentally-friendly manner and to encourage others to do so (Lakoff, 2009).

Ann showed how information played a central role in helping her change her behaviour by listing a lack of information as limiting her power for change: *"sometimes just lack of information… you don't even know where to start, or you don't know who to connect with… a lot of times it's lack of information."*

Amber firmly believed that understanding information is central in convincing others to act environmentally friendly. Most of her efforts have been focused on trying to persuade people with information. Concern about making people understand came up again and again in her interviews. For example, she explained that in trying to get someone to change his/her mind,

> you just need to be able to get the message across and make sure they understand that it's ok, what they're doing will make a difference, it's not going to cost them anything, or whatever the reason is for whatever you're trying to get someone to do is, they need to understand that, the time spent now… you'll be rewarded in the future.

For people who do not care about the environment, Amber is convinced that the right information will make them care:

> Some people are just like, "oh I don't care about that whale," or "I don't care about this," but just by explaining to people, like for instance… how long things take to decompose in the garbage or in the landfill. That's something I like to bring to people.

Amber believes so strongly in the ability of reason to change people's minds that she likened it to turning on a light switch:

> It's frustrating when people either don't have the time, or don't care and you're like, "well I'm sure in 20 years or maybe tomorrow, something will click and you'll be like, 'ok that was a bad idea.'" Whether it's to do with the environment or not, it's really. I just, I wish I could make people feel responsible. Like go into your brain, turn the switch, c'mon, get it!

Other participants also acted within the Enlightenment reasoning frame, but were discouraged with the results. Despite directly experiencing evidence to the contrary, they still believed that information alone should be sufficient, and were confused when they noticed that this was not the case. Rachael's first experience with this was when someone told her that *"a pretty predominate climate change researcher in Canada drives to work. And not an electric car. On a regular basis. And things like that really puzzle me."*

Having just started a new job at an environmental consulting company, Rachael is discovering a similar gap between knowledge and action among her colleagues. Even though she is working with people who are well aware of the negative impact of greenhouse gas emissions and air pollutants, she noted that *"most of the people, like again, like drive to work."* In particular, *"my manager at work is like manager of the air quality modelling group and they do a lot of work on health effects of air pollution, and he drives to work by himself in his car every day!"*

The assumption here is that information alone should be sufficient, so she is confused to see that there are other unknown barriers to action among well-educated people. Although she has had this jarring experience a few times, she has not examined her frame about the centrality of information. Instead, she concluded that *"for one reason or another, there's not like social or political will. So things don't change. Well, except for the climate."*

Assuming that people act logically, Ann was also confused why more people are not environmentally friendly. For her, being environmentally friendly is *"the logical thing to do, so Ashley, I have a hard time understanding why people don't, why more people aren't living sustainably cuz it just seems like a really rational thing to do."* The way she addressed me by name suggests that she was confessing something personal and confiding in me. She continued: *"why do you want to damage your environment… that, to me, doesn't make sense."*

Robert bemoaned that information alone is insufficient. He believes that everyone should act rationally so that all that is required is information, but sadly, this is not the case. He stated,

> I've had conversations with people who view the environment or view politics in a different way, and it just, what you think is a valid argument or a logical argument has no merit to them, and it, I think vice versa. So I don't know… in terms of changing the world, it's less about fact and logic than it is about emotional responses from people. And I think that's a frustrating idea.

He continued to say that in these conversations, *"I wish I could, you know, bring out a fact sheet and just be like this is why, this is why it's a better, but I don't think it's ever going to be that way."* Though he knows that information alone is insufficient, he is still using the Enlightenment reasoning frame because he believes that the world ought to be this way.

Hypocognition seems to explain why participants cling to the Enlightenment reasoning frame despite first-hand evidence to the contrary. In cognitive science, hypocognition is "the lack of the ideas you need, the lack of a relatively simple fixed frame that can be evoked by a word or two." (Lakoff, 2004, p. 24). Participants used the Enlightenment reasoning frame as, to them, there appeared to be no other frame they could employ. Our culture lacks a suitable frame that

summarizes what cognitive scientists know about how we actually reason, so they stand by the old beliefs about rationality and information (Lakoff, 2009, 2010).

Systemic thinking.

Similar to the hypocognition with an Enlightenment reasoning frame, I also noticed a gap when it came to systemic thinking. To my surprise, all participants employed systemic thinking when talking about environmental issues. All participants have a sense that environmental issues are large-scale and are connected to other issues, whether social justice concerns or economics. However, systemic thinking seemed to end with the problems, instead of being extended to potential solutions.

Everyone had a sense that climate change has far-reaching, non-linear consequences besides an increase in the global average temperature. Deborah said climate change is, "*a big broad tent under which, within which, there are all of these issues, and matters that we need to take into account."* Rachael said that climate change, *"describes that some areas will get warmer and some areas will get colder. And I think the word climate is also important because there's predicted to be more and more extreme weather events associated with it, so it's not just that the Earth is getting slightly warmer."* Ann explained it as "*the crap we're putting in the air that's causing, you know, weather patterns to change and sea levels to go up or down or you know, icebergs to melt, and stuff like that."*

> Ann linked environmental issues to the economic system. Climate change is:
>
> more than the environmental issue, I mean, yes, it is an environmental issue but it's also an economic issue, and I think, you know, if it's not going to help the profit margins of businesses, I don't think we're going to change.

Robert similarly linked environmental issues to economic and equality issues: *"when we look at environmental issues too, it's not just environmental issues, you're at you're looking at how it relates to social issues, economic issues, it's everything combined and you can't dissect it."*

As exemplified in the quotes above, most often, participants used systems theory or systemic thinking to describe the problems – environmental, social, and economic issues. However, rarely did they discuss solutions to these problems in the same way. Instead, they spoke about individual solutions to these systemic problems. Ann and Amber were preoccupied with reducing the amount of waste they produce and Rachael focused on bicycling instead of driving. After talking about the overwhelming scope of systemic problems, Robert retreated back into individualism:

> It's the little things, I guess, I try to do small things around the household, and I try to do more to be friendly, eco-friendly but or minimize my ecological footprint and, you know, hopefully talking with friends, ideas get spread.

When a few participants discussed solutions systemically, there seemed to be a lack of power or ownership over these potential solutions. These were ideas for other people to implement, not themselves. Rachael used a passive voice and identified further issues when she talked about possible solutions. She displayed only a passive acceptance of policies, the first type of political engagement. For example, she said that sustainable food, one of her primary concerns,

> needs to be more accessible. People shouldn't have to rely on a farmers market once a week. Cuz they're often also expensive because, you know, the farmers have to pay to be there for their vending spaces. A lot of extra costs, should be more accessible.

Again, when talking about driving, she said that "*the price of gasoline should be – I don't know I'm just going to throw it out there – it should, you know, the cost of the environmental and social, the full cost of things should be built into the price."* In both of these instances, and many others, she did not personally connect to being part of the solution; rather, these ideas were things that other unnamed people ought to do.

Similarly, Ann suggested, *"a strategy would be, you know, raising awareness among consumers but also, you know, asking business to change their practices, you know, maybe a combination of those two can help reduce waste."* While a great idea, the way she said it conveys a lack of personal involvement.

To contrast, Deborah thought systemically about both the problems and the solutions. Through committed public activism, she saw herself working with groups for systemic solutions. When discussing environmental communication, she expressed a desire to be "*informed by those messages and if I am informed, if it's new information, if it connects the dots for me, helps me understand an issue more deeply, that intrigues me."* Her preference is for *"rich data, which can be referred to if you're writing a brief or if you're putting together a discussion."* She explained that

> There's a lot of deep. It's not just a matter of stop this and go with that… so as a strategist, as someone who likes to sort of think through the best way to move, it's really important to understand the deep and work with that. Assume nothing is the motto is that I've taken on in my last decade. Assume nothing. Always check.

In conclusion, most participants applied systemic thinking to the problems, while only Deborah extended systemic thinking to the solutions. Selective systemic thinking, in addition to

individualism, and Enlightenment reasoning, are the main aspects of participants' worldviews that seems to limit participants' involvement in collective political action.

Inconsistencies.

In addition to the worldviews discussed, another cognitive complication is the apparent contradiction in participants' thoughts. Throughout the course of the two interviews with each participant, most participants contradicted themselves somewhere. These contradictions or inconsistencies are a possible glimpse into their unconscious aspects operating under the surface (Hollway & Jefferson, 2000).

Robert spent most of the first interview saying that he did not make individual lifestyle changes while feeling hopeless at the size of the problem. He struggled to come up with examples of how his lifestyle was environmentally friendly and reported he rarely spoke with friends about environmental issues. He admitted that, "*most of the pollution, most of my ecological footprint is based upon flying and things like that so what significant changes I make elsewhere in my life or insignificant changes really don't compare to that*." Yet, in the second interview, he said that he tries to do more eco-friendly things around the house and hoped that by him talking with friends, ideas will spread. He made no mention of his air travel. Furthermore, he saw these little things around the house as his only option. In this way, he expressed a level of denial by simultaneously knowing and not knowing (Norgaard, 2011a): on the one hand, he acknowledged the limits of behavioural changes, yet on the other hand, he posited that these behavioural changes are the solution.

Similarly, Ann expressed both doubt and overconfidence in individual actions. Judging by how much she tried to lessen her impact by reducing waste, she clearly sees value and

importance in this. Yet, she also wondered aloud how much of a difference these small things actually make.

Rachael was inconsistent because while she thought about and emphasized systemic solutions, in the end, she affirmed that individual changes are somehow more important. She struggled with focusing on what she calls quantifiable achievements, such as volunteering or writing letters, or focusing on what she calls living an authentic life, such as taking the time to establish connections with local food producers. Throughout our interviews, she continually linked issues to possible policy changes – whether making public transit more affordable, making local food more available, or focusing environmental education on children. Yet, she used a passive voice, saying that these things should be done, rather than personally involving herself and using an active voice. At the end of the second interview, she explained:

> Well, I can be involved in all these organizations, and do all this volunteer work and develop all these programs but, the first, I think the most important thing is the first thing I said which is… enacting the changes in your life and maintaining them and just being that example and hoping I guess and nicely encouraging others to join you or to give others ideas.

Here, Rachael seems to be justifying her inaction in one area by her action in another. She is using the fact that she lives an authentic life to excuse her from volunteering. Stoll-Kleemann et al. (2001) calls this a type of denial.

Amber revealed some inconsistences as she grappled with how little some people recycle. Despite participating in waste audits where she saw and tracked the households that did not recycle – as evidenced by the lack of recycling or composting bins outside houses on pickup days – she refused to believe that people do not recycle. Instead, she thinks that people must not

know how to recycle everything possible. For example, when she talked about these waste audits, she explained:

> To me it was just the biggest shock and [my manager said], "what did you expect?" I'm like, "I expected everyone recycles." To me, that's what I think and I still think today that, I like to think that most people do recycle, but it was kinda an eye opener, that, I was just like, really?

It seems as though Amber has split herself from this knowledge. Unconsciously, she has not allowed herself to integrate this knowledge into her daily life and instead clings to her worldview (Norgaard, 2011a).

These inconsistences around the role and importance of individual actions often revealed a deeper layer of denial. In the conclusion that follows, I link these inconsistencies to the other cognitive complications, emotional responses, and ecopsychology.

Research Sub-Question 3: Social Norms

The final aspect that I wanted to examine was my participants' perception of others. What perceptions of others do my participants have, and how do these perceptions affect their engagement? Significantly, I found that most participants thought negatively of other people and society. According to them, other people were unaware of the issues and not environmentally friendly. They found others to be a barrier to change, and therefore my participants seemed to be less willing to engage collectively.

Overall, Ann thought that people simply do not care, or are unaware. As with false conception (Nolan, 2011), she thought that many people were unaware, just as she used to be. Talking about unnecessary waste from food packaging, she said that *"it's something that people do without thinking about… it doesn't even make a blip on their radar. And even with me, like it*

didn't even strike me until recently." Later, she continued, *"people just don't think about it, and I understand it's hard to like recognize trivial things like that, things that you take for granted, something like, you know, food packaging."*

As another example of false conception, Amber reasoned that since she took a long time discerning the difference between global warming and climate change, others must still be confused and unaware. She:

> started as ok, I don't understand… what do you mean by climate change, and understanding that it's not just global warming kinda took a few years for me to understand, and also I think a lot of people to understand too as well.

Concerning climate change on a global scale, Ann thinks that there are *"only a select number of, you know, first world countries that are really concerned about it, I think most of the world either does not know or doesn't give a hoot."*

These statements, particularly the first part of Ann's, are also consistent with the Enlightenment reasoning frame out of which both Ann and Amber operate: people who do not know just need information. Participants seemed to use awareness and knowledge interchangably. For them, it could be that people who are unaware do not have enough information, and thus need to know more.

Similarly, seeing people as part of the problem while employing the Enlightenment reasoning frame, Rachael also classified people as either aware or unaware and so need information. According to her social norms, in both groups, there are still barriers to being environmentally friendly:

> So I feel that there's almost two populations when talking about you know, environmental responsibility, but the two I'm going to divide it into right now, is

> people who are pretty keenly aware of the issues and know why it's important to make changes. And then there's people who are either unaware or they just have so many other priorities in their lives that they, you know, see things like buying organic food or, you know, too expensive…. In talking about the former group and having, you know, until very recently been in academia I'd say being in a more educated crowd, people are pretty aware but there still seems to be barriers to people taking action.

In addition to being unaware of the problems, another social norm participants identified was that other people were not environmentally friendly. Similar to Rachael, Ann's social norms also divided society into two groups of people, although she mentioned three: those who are and are not willing to live more sustainably.

> I feel like there's two kinds of people, like people who are like open to… living more sustainably, even though they might not be actively doing it, they are people who [are] respectful of it and find it and think that the idea is good, even though they may not practice it. And there's other people like my best friend who think it's totally a waste of their time and they're not going to change their minds on it. So, and I guess maybe there's a third category of people who people who are just wholly indifferent or people who are in denial, don't want to think about it.

Rachael, feeling busy with having just started a new job, felt that people were too busy to make individual actions a priority. Using false conception, she extended her frustration with being too busy outward to include others. She believed in a social norm where people are too busy with a hectic modern life to make environmentalism a priority. "*People these days, and I'll include myself in this category, feel like probably on the cusp of being overwhelmed most of the*

time just with like keeping afloat in life." She explained that "*life is busy, your time is hard to come by, and I guess like, when it seems like it's another task or too much effort people become disinterested*."

Only one participant, on the other hand, held opposite social norms. Deborah felt that many people are aware and concerned about the environment:

> I just know there's environmentalists and people who are concerned about the environment in every household in Vancouver, I just – well, maybe a little bit grandiose – but way more than people imagine, way more than people imagine.

As such, Deborah engaged collectively with others to encourage people. She reasoned that these people would be more inclined to be active if they were empowered. For example, she identified that *"there's people in the office towers you know, wearing their suits who would also be [at environmental events] if they were so encouraged. You know, I think it's possible."*

It seems as though this positive social norm enabled Deborah to engage with her volunteer group to mentor, motivate, and encourage people to talk about and get involved with environmental issues. In contrast, the negative view that most other participants had seemed to limit them to individual actions in their immediate lives instead of engaging with others on a collective level.

Research Sub-Question 4: Emotional Responses

Climate change and ecological issues more generally can cause a variety of negative emotional responses in people who care about nature (Albrecht, 2006: Kidner, 2007; Lertzman, 2008, 2009, 2012; Mishan, 1996; Randall, 2009; Searles, 1972). This seems to be corroborated by my research, as I found that throughout the interviews my participants were frustrated, felt

overwhelmed, and experienced a sense of loss and grief. The few positive emotions that arose during the interviews were centered on a spiritual connection to nature.

Frustrated.

Participants expressed a lot of frustration in their engagement with climate change and other environmental issues they are concerned about. In particular, participants were frustrated at how difficult it was to convince others to live more sustainably. Their information-only approach, as guided by Enlightenment Reasoning, caused a great deal of frustration when people did not change. Their one-on-one focus may also be an indication of individualism, where the individual is primary over the collective (Koltko-Rivera, 2004; Oyserman et al., 2002).

Amber expressed a great deal of frustration when she was unable to convince others. She often couched her frustration by saying she was *"a little"* frustrated; however, I sensed that she was possibly shielding both of us from how frustrated she truly felt. Her frustration rings in her loss of words when she is speaking about trying to convince others:

> It's hard to put into words, but why don't you [make responsible choices], and so sometimes that can be a little frustrating for myself. Just like, I don't know how to explain to you how frustrating you are right now cuz you don't get it. Like c'mon, the environment: it's important.

Amber was so frustrated with a neighbour that she became angry:

> My neighbour across the street, for the longest time he had this stupid old truck, he would turn it on, and it would sit there for 10 minutes idling until it was warm. And I, many a time would like, give him a dirty look or I'd knock on his door and be like, "hey, your truck's running, did you know?" Like I knew he knew, but I would keep bothering him, just cuz I was so annoyed that he'd let his stupid old

> truck that hardly passed air care sit there for 10 minutes idling. Doing nothing! He wasn't even; sometime he would actually go and turn the engine off because he didn't have to go anywhere afterwards. I was just like, are you kidding me? Like, you're retired, buddy, do you really need to wait 10 minutes for your truck to warm up? No you don't.

Ann felt so frustrated that she questioned the value of her individual actions and whether such lifestyle changes were worth bringing up with others:

> These, little things I do as an individual you know, if they'll make a difference in the big picture.… I find it's difficult to bring this up with people because they think you're nuts, like you're an enviro-Nazi or something, you know, like an eco-Nazi.

Overwhelmed.

Many participants simply felt overwhelmed by the scale and severity of environmental problems, especially when they responded with small-scale individual actions. Robert, in his desire to simultaneously address environmental and social justice issues, expressed:

> cuz really we wanna tackle everything together and really a wide spectrum of things, and globally and nationally, and to have people come together like that I feel like you need some sort of, you need some, you need the government leading the way, and it feels a little bit beyond our hands in a way.

Further, Robert was so overwhelmed that he felt powerless: "*it's not like there's a manual laid out for me – this is how you change things, this is how effective these things are. And I think that would nice to see.… So really I don't know where I'm going.*"

Rachael, too, was overwhelmed both by the problems, the lack of progress in Parliament, and her inability to solve the problem:

> Ah it's so crazy! There's so many issues I feel going on, like with the disaster budget going on now. Like I want to do something but I also want to sleep if you know what I mean. Like there's so many things I can't spend hours writing letters so I do just click through all these forms and then you get an auto-response and like really, I don't know what good it does.

Similarly, Ann was overwhelmed by the scope of climate change and frustrated by the lack of progress society has made on mitigating climate change; so much so, she expressed outrage:

> I feel like the problem is so huge and even if you start making some changes, I almost feel like it's too late. We've already done too much damage, you know, cuz I've seen pictures of glaciers that were around 100 years ago and what they look like now, and it's appalling like how much they've receded, you know and, all because of climate change. In just 100 years, the change is so significant, you know, and I don't think we're cutting down our emissions, you know, and so I'm like, we're going to keep, you know, destroying the earth.

For Deborah, climate change is very overwhelming. Hearing about climate change makes her:

> sad to think that will change, no more than sad, like I can't even wrap my head around the fact that we could be changing, we because of our human-caused effort, we could be changing that natural world so much. So it's that kind of holy moly is it, is it going to be that big?

In the face of both large-scale systemic problems and small-scale individual solutions, participants felt overwhelmed.

Solastalgia.

Everyone also expressed a sense of grief or loss to varying degrees. Some even expressed solastalgia, emotional pain as a result of the destruction of one's cherished environment (Albrecht, 2006). This was most prevalent with Deborah. She feels grief about the actual and potential loss of the health of the ocean, especially through ocean acidification. She is so attached to the ocean that for the ocean to become unhealthy or full of dead zones brings her overwhelming grief. This grief can be a powerful motivator for action, but she said she has to be careful not to get overwhelmed. She explained that for her, it is important to:

> actually feel the grief, and then you can start to move with it or pass it. I mean, as I say, it never goes away once you really take it in, it never really goes away…. whenever I feel like, "oh god this is so much," or whatever, I just pull out a few things, pull out a few things, just to remind me this is really important work, for me, more important that anything at this particular time. So the grief is um, is both a sad and thing and it's also a firing up thing.

However motivational as a "*firing up thing*", she is aware of the potential of being overwhelmed by grief and solastalgia, so she guards herself against this. She explained that, *"when I read that [gloom and doom] stuff, I can only read about a chapter at a time because it's so powerful and so big and so grief-making, that it, I mean, it's just hard to imagine."*

Ann remembered being struck by how dirty the parks and beaches were in Los Angeles when she was younger. Shortly after moving from Argentina to L.A., she visited a beach with her aunt, and remembers finding the beaches *"gross"* due to all the trash littered everywhere.

The litter in the park closest to her house, a long drive away, made her not want to visit there. Today, she has vivid and apocalyptic images of the world being *"overrun with trash."* It seemed these early experiences have made her fearful and grievous of the possibility of losing clean, pristine natural landscapes, untouched by humanity.

Robert could not explain why, but felt solastalgia as well: *"it's hard to see clear cuts, you know, I don't know why, but it has that reaction where you just, looks like a disease or something."*

Clearly, feeling frustration, being overwhelmed, and feeling solastalgic are powerful negative emotions expressed by all participants. I sensed that everyone was struggling to cope with the weight of these emotional burdens that ecological destruction placed on them. Struggling with these deep and complicated emotions seemed to inhibit participants' ability to act. Ann even said that she felt *"paralyzed."*

Connection.

Despite the power of these negative emotions, nature often evoked positive emotions as well. Deborah, with her positive, systemic worldview, especially felt a powerful sense of interconnectedness with the rest of nature. *"I'm so energized and feel so much life from the coming of spring."* She told me about what she calls her annual sacred walk on the June solstice, *"at a beach that I absolutely love, where the tide goes way, way, way, way, way, way, way out and you get to see things that you never get to see for the rest of the year."*

Similarly, Rachael expressed *"awe and wonderment"* for nature. She marveled at:

> … the fact that we are here, that all species are here, that things are the way they are is absolutely remarkable. The probability for things to have worked out and evolved, you know, how they did is just fantastic, and nature is so beautiful. I've

> been really lucky to experience a lot of beautiful places and I hope to see more, many more in my life… I remember having a conversation with a good friend about this, and I think she actually said this and I love this phrase, she said, "it's just so amazing that it exists," that nature, you know, nature encompasses so much it's like the, you know all biotic and abiotic, natural if you will, factors out there, it's remarkable and it's beautiful and scientifically speaking, it's so cool!

Robert confessed that *"personally in my life, the moments that I really cherish, a lot of them have been surrounding me in nature."* He felt a deep sense of peace from all nature.

> Ann, too, expressed a sense of connection to nature. She recalled that
>
> Someone recently mentioned to me this idea that we're borrowing from the Earth. Like, none of this belongs to us, we're here temporarily. And so, you know, she mentioned like, you're just borrowing the air you breathe and, you know, it sounds really hippy-dippy, but if you really think about it it's profound cuz yea, you're not here for long. You're here temporarily and so everything is borrowed, you know, the land you live in, the water you drink, you know, like you're not entitled to any of that. It's just here.

These brief comments gave me a glimpse into participants' deeply profound emotional connection with nature. Participants have experienced emotional benefits, such as a sense of peacefulness or connection to a greater reality, from being in nature.

Summary

Thus far, I have explored the cognitive and emotional dilemmas that participants faced while engaging with climate change and environmental issues. Their worldviews, which contain a belief in individualism, a commitment to Enlightenment reasoning, and rather selective

systemic thinking, all seemed to bias them towards a preference for taking individual actions. They also revealed inconsistencies in their reasoning that can suggest psychological denial. In terms of emotions, feeling frustrated, overwhelmed, and solastalgic in addition to expressing positive connections, created some emotional complications while thinking about the environment. All of these elements seem to interact to prevent people from engaging in political activism for systemic changes for climate change.

Chapter 5: Discussion and Conclusion

In this final chapter, I will examine the themes of individualism, Enlightenment reasoning, limited systemic thinking, negative social norms, and emotions all together. Combining these cognitive and emotional complications along with ecopsychology and participants' contradictions and hints of denial reveals a possible underlying dimension. After noting an important exception, I explore the implications this study has for both environmental communicators and for further academic research.

"There's a lot of Deep:" Towards an Understanding of Emotions, Denial, and Worldviews

As Deborah said during our interview, "*there's a lot of deep*." While she was referring to the complexity of intertwined environmental, economic, and social issues, I believe the same is also true about how we perceive and engage with such issues. After reviewing my data, the emergent themes, and the literature, I have discovered that powerful emotions, denial, and a worldview containing individualism, Enlightenment reasoning, and negative social norms all hindered participants' desire and ability to engage in systemic political action.

Emotions.

Ecopsychology posits that we feel strong emotions for nature, both positive emotions due to our relational capacity (Kidner, 2007) and negative emotions due to ecological destruction (Albrech, 2006; Lertzman, 2008, 2009, 2012; Mishan, 1996; Randall, 2009; Searles, 1972). As we saw, every participant expressed care and concern for nature to varying degrees. Some participants even talked about a spiritual connection to or profound awe for nature. Further, every participant also expressed some degree of frustration and a sense of being overwhelmed at the scope, scale, and pervasiveness of ecological destruction. Some even expressed solastalgia, a deep sense of pain and loss (Albrecht, 2006).

Acknowledging the large-scale, structural aspects of climate change and other environmental issues, most participants felt powerless. They realized that a multiplicity of factors were causing climate change, which itself had many, wide-spread, non-linear consequences. They did not feel as though they had the power, ability, or control required to help stop such ecological destruction. This sense of powerlessness led to more negative emotions, especially frustration. Participants often expressed powerlessness and frustration together in the same breath. Such emotional responses, both positive and negative, overwhelmed participants and made it difficult for them to engage systemically for change.

Denial.

Most participants expressed inconsistent thoughts by contradicting themselves over the course of the interviews. These inconsistencies concerned the role, effectiveness, and pervasiveness of individual actions. Robert and Ann wavered between being confident in the power of individual actions for change and being frustrated with the lack of impact these actions have. Rachael expressed similar confidence and doubt concerning systemic solutions, as she posited systemic changes for other people while retreating into individual actions for herself. Amber refused to believe how little people recycle, despite witnessing evidence to the contrary. Overall, participants wavered between believing that individual actions were the most important solution and believing that individual actions were a small part of the solution.

These inconsistencies reveal that participants struggled when thinking about environmental behaviours. They wavered between different possibilities, sure of themselves one moment, then questioning their reasoning the next. Participants grappled with how to conceptualize and solve such complex environmental issues. Their inconsistencies also

demonstrated how it is possible to say and believe contradictory ideas simultaneously in environmentalism.

Participants' inconsistencies concerning the importance of individual actions can be a form of denial. These inconsistencies align with Cohen's implicatory denial, where one denies the psychological, political, social or moral implications that follow from accepting the facts (Norgaard, 2011b). This denial is not a refusal to accept information, but rather the failure to integrate this information into everyday life and translate it into action. Through their questioning, participants indicated that they were aware of the limitations of individual actions; however, with their focus on individual actions in their lives, they revealed how they refused to integrate this knowledge by not fully accepting and acting upon it. Instead, they lived in this tension between knowing and not knowing (Norgaard, 2011a). On some level, participants acknowledged that individual actions do not always add up to have a large impact, that systemic change is significant, and that not everyone does basic individual actions; however, on another level, they believed that individual actions do add up, individual actions can be more important that systemic changes, and that everyone does certain individual actions. Norgaard (2011a) calls this living a double life.

Living such a double life presented a complication for engaging systemically for change. The participants who were most confused about the role of individual actions seemed more likely to have difficulty navigating the confusing waters of social change. For more detail, please see the participant comparison chart in Appendix D. Living a double life of both overconfidence and underconfidence in individual actions usually meant that when participants considered their options for action, they thought of either individual actions or nothing. These inconsistencies may have helped participants interpret information self-servingly (Thøgersen & Crompton,

2009) and focus on the benefits of individual actions. As I explore below, worldviews play a significant role in also biasing participants towards individual actions.

Worldviews.

In addition to living a double life of denial about the limitations of individual actions, participants upheld aspects within the dominant anthropocentric worldview that seemed unhelpful for political engagement. As I observed, most participants by default seemed to focus on individualism, Enlightenment reasoning, negative social norms.

Our dominant worldview is anthropocentric: it assumes that humans are separate from and more important that the rest of nature (Berry, 1988; Hage & Rauckiene, 2004; Verhagen, 2008), trivializes environmental concern (Kidner, 2007). Other elements of our cultural worldview affirms an Enlightenment era view of rationality (Capra, 1996; Ireland, 2007), focuses on reductionism (Capra, 1996), and believes in the primacy of the individual Koltko-Rivera, 2004, Oyserman et al., 2002). In contrast, the ecocentric worldview sees humans as one part of the interdependent and relational system or web of nature (Capra, 1996; Ireland, 2007; Verhagen, 2008) and recognizes humanity's capacity and need to relate with the rest of nature (Kidner, 2007). Other elements of a less-dominant worlview uses systemic thinking to draw connections among seemingly dissimilar topics (Capra, 1996; Ireland, 2007; Kauffman, 1980). Overall, participants tended to accept the aspects of individualism, Enlightenment reasoning, and some ecocentric beliefs.

In focusing on individual actions and believing that they held more power individually rather than in groups, participants showed a clear bias towards individualism. While they seemed able to think systemically about environmental issues, their most prominent frame for solutions was individualistic. The only power participants thought they had is with individual lifestyle

changes because they can directly control their surroundings. As we saw, all but one participant focused on individual actions, felt like they had the greatest amount of power with these behaviour changes, and believed that working collectively detracted from their power.

The majority also believed that these individual actions added up exponentially either the more often they did them, or the more people who did them. This is one way that participants justified their overconfidence in individual actions while denying the limitations of such individual actions. Their belief that these actions add up exponentially echoes the notion of positive spillover, which forms the basis of many environmental campaigns today (Thøgersen & Crompton, 2009). Spillover is the notion that getting people to adopt simple and painless actions will lead them to commit to more ambitious, more environmentally significant behaviours (Thøgersen & Crompton, 2009). Thøgersen and Crompton (2009) argued that these ubiquitous campaigns can create the perception that we can rely entirely on individual choices to solve climate change. This seems to be true with most participants: given their emphasis on individual actions adding up, most participants seemed to have adopted the notion of spillover into their worldview. Adopting this view means denying the knowledge that individual actions have a limited impact. Such denial could be due to hypocognition, or the absence of alternative frames for conceptualizing a different role for individual actions. Focusing on individual behaviours, and thus enacting the individualism in the dominant worldview, seemed to crowd out consideration of large-scale actions.

Participants also clung to elements of their anthropocentric worldviews in light of evidence to the contrary with the Enlightenment reasoning frame, or the idea that people act in purely rational ways without recognizing emotional, unconscious, or worldview aspects. Participants still believed that using facts or information alone was an effective way to

communicate despite experiences to the contrary. This also seemed to be due to hypocognition , as mentioned in the findings.

Most participants also held negative social norms, thinking that other people in society were part of the problem, not part of the solution. According to these negative social norms, people were unaware, too busy, or unconcerned about nature. These norms may have reinforced individualism and a lack of systemic thinking about the solutions because they imply that no one else can or will help.

While trying to espouse elements of an ecocentric worldview, such as caring for and connecting with nature, participants often fell back into the dominant worldview. It is interesting to note that a couple of participants expressed some kind of self-consciousness when discussing their emotional connection to nature. They included dismissals, saying it sounded "*hippy-dippy*," or "*muchy-schmuchy*," acknowledging that our culture looks down on such a connection. In the anthropocentric worldview, nature is merely a backdrop of natural resources for our use, not a place for emotional connections (Kidner, 2007; Verhagen, 2008). Despite experiencing an emotional connection and acknowledging the intrinsic value of nature, they internalized this cultural message to a certain degree, and felt self-conscious for expressing contrary thoughts. In this way, participants aligned more closely with society's dominant worldview. They experienced tension between society's view of nature as a resource and emphasis on human rationality on the one hand, and their experiences of emotional connection with nature on the other hand.

Note: An Exception

I must note an important exception in my data. Deborah, the lifelong activist who volunteers regularly, does not fit easily into the cognitive and emotional complications noted in

the findings or the above analysis. She contrasted with the other participants in many ways. However, this contrary data reinforces the above analysis rather than challenges it because while Deborah did not express many of the cognitive and emotional complications, she was significantly more politically active than the other participants. I think she reflects what the environmental movement needs: an engaged, concerned citizen. By examining how Deborah differs, I think we can gain insight into what is needed for people to be as politically engaged as she is.

Rather than living a double life of knowing and not knowing the limited role of individual actions, Deborah incorporated this information into her thinking. For her, individual actions are part of the solution for climate change, but not central. Instead of thinking individualistically, Deborah saw that greater power resides in groups. She experienced that collaborating with groups increased the amount of power they had, provided the group was organized around a central vision. While individual actions were important to her, they were not paramount. In fact, she just briefly spoke about how she gardens organically and instead focused much of our time on telling me stories about volunteering to encourage, motivate, and mentor others with her group. Escaping the Enlightenment reasoning frame, she recognized the important role that emotions play in forming her convictions. Because she acknowledged that she reasoned with her heart, she expected others to do so as well. For her, power starts from within, but not solely from information. Rather, power resides in the whole individual, with one's skills, experiences, and feelings. She exemplified systemic thinking not just about the problems, but also about solutions. Instead of seeing other people as part of the problem, she saw them as potentially part of the solutions, if they could be so encouraged. Furthermore, she had a very strong connection to nature. While she expressed many of the same negative emotions as other

participants – namely, solastalgia and being overwhelmed – she was also confident that she could manage these emotions by acknowledging and working through them. She even said that they motivate her and remind her how important her volunteer work is.

Deborah seemed mostly aware of her negative emotions. This awareness may well have negated the need for unconscious defense mechanisms, so that she did not deny the reality. Instead, she seemed to compartmentalize it. She could acknowledge these feelings, feel them, then set them aside, and move forward with working on solutions. She even went as far as to say that these negative emotions, particularly grief, are a "*firing up thing*:" they can motivate her to continuing working for change.

Implications for Environmental Communicators

These results have important implications for environmental communicators and researchers. Environmental communicators need a new public engagement strategy that recognizes people's emotional complexities, creates a positive vision for the future, shifts the focus from individual to collective action, and truly inspires people.

Acknowledging the depth of emotional responses to climate change and other environmental crises means taking people's emotional responses seriously. Instead of acting from an Enlightenment reasoning frame and blaming people for their apparent inaction, communicators need to recognize the emotional conflicts within concerned citizens. As Lertzman (2010, 2012) argues, we need to be careful about using the language of gaps between values and actions to explain why people are not engaging in environmental actions because such language can belie a deeper reality of a tangle of emotional and cognitive complications. Adopting this ecopsychosocial perspective in this research has suggested a potentially deeper reality of emotional and cognitive complications. Adopting this ecopsychosocial perspective in

environmental communication could mean a radically different approach to public outreach. Instead of focusing on specific, individualistic behaviour changes, we can help people confront their emotions and their worldview assumptions. Worldview transformation or transformational learning is a dynamic process involving awareness of a problem in the world or one's way of seeing the world, self-examination, critical reflection on one's assumptions and beliefs, reinterpretation of meaning, exploration of new roles and options, and a plan for action, and incorporation of new attitudes, beliefs, or behaviours (Moore, 2005). We can help people reconcile their inconsistent thinking by accepting that individual actions have a place, but a limited place, within the solutions for climate change. Based on Deborah's positive approach, starting by giving a voice to these emotions and recognizing them as real and valid may help people build their capacity to cope. It may also help people to know that they are not alone in experiencing these emotions (Randall, 2009). We can empower people to acknowledge these emotions and their worldview assumptions. We can help people channel their emotions into collective action, like Deborah has. In fact, some environmentalists may even become environmental counsellors rather than environmental communicators. I found I often felt like a counsellor with my participants during the interviews; as I listened to them without interrupting, I sensed that it was a relief for them to talk about these issues and express their emotions.

In addition, taking people's emotional reactions seriously may mean environmental communicators should be more careful about being overly negative. As we saw, participants already felt an array of negative emotions, namely, feeling frustrated, overwhelmed, and solastalgic, based on both systemic environmental issues and their perceived lack of power at the collective level. Given this, environmental communicators may want to reconsider using 'doom and gloom' language that creates a dire or apocalyptic picture of environmental issues, as this is

likely to simply compound the existing emotions. Environmental communicators need to experiment with new ways of honestly explaining climate change science and the need for urgent action without resorting to fear appeals or this type of language. As O'Neill and Nicholson-Cole (2009) argue, fear appeals "must at least be used selectively, with caution, and in combination with other kinds of representations in order to avoid causing denial, apathy, avoidance, and negative associations that may come as a result of coping with any unpleasant feelings evoked" (p. 376). Other research has already shown that such negative images have a limited effect (Leiserowitz, 2006).

In addition to avoiding using doom and gloom language about environmental issues, environmental communicators ought to be careful about which social norms they promote. In particular, we need to avoid the idea that other people are not active or doing anything. As we saw, the participants who held negative social norms, such as the ideas that other people are not environmentally conscious or concerned, seemed the least willing to engage collectively. From the assumption that others are doing little, it follows that since other people are part of the problem, we must work against, rather than with, these other people. During the interviews, I sensed that this idea made participants feel lonely, as if it was them against the world, and they were all alone. I think we need to encourage people to connect with others, so they can see that they are not alone and that there are large numbers of people both conscious of and concerned about environmental issues. This may well be through social media, but perhaps more significantly through face-to-face and community contact. Then, people can also experience collaborating for solutions, and start to see that collective action is an effective strategy. Through these experiences, these social norms can begin to transform into more positive ones that are more conducive to collective and political engagement.

As we saw, many of my participants clung to individualism in the face of a large, systemic problem. This is in part due to the dominant cultural worldview where the individual has primacy over the collective, part due to a sense of powerlessness except at the individual level, and part due to a lack of systemic thinking about solutions. Many people seemed unable to escape individualism because of hypocognition, a lack of alternative frames. Currently, many campaigns rely on positive spillover, the notion that getting people to adopt simple and painless actions will lead to commitment to more ambitious, more environmentally significant behaviours (Thøgersen & Crompton, 2009). With this assumption, campaigns encourage people to 'take action' in their individual lives. However, Thøgersen and Crompton (2009) show that spillover only has a limited effect in specific cases. Yet in the context of these campaigns, participants seemed to waver between overconfidence and underconfidence in the impact of individual actions. Their inconsistencies usually meant they focused on either doing individual actions or not. However, given the urgent reality of climate change, we need environmentalists to be active at a collective level. Environmental communicators need to build up a new frame of effective and powerful engagement. We need to help people accept the limitations of individual actions and reconcile their double lives so they can more effectively conceptualize a variety of solutions for climate change mitigation.

Instead, environmental communicators *en masse* need to shift the focus of campaigns onto greater, collective actions that deal with systemic change within our democratic institutions, with the messages that together, our power expands exponentially. We need to convey collective and political engagement as a systemic solution to a systemic problem. Perhaps this can start as simply as calling others "citizens" or "people" as I have, rather than "individuals," "consumers," or "taxpayers". The words "people" and "citizens" have connotations of collectivism and social

and political responsibility respectively, which may help to enact systemic rather than individualistic frames.

It is interesting to note that two of my participants expressed dismay at signing online petitions or form letters. Such a low-commitment active citizenship type of political engagement is probably the main type of political engagement most encouraged by environmental organizations now. While they said they often filled in their name, they admitted that they saw little value in doing so and questioned what impact it had. I think environmental communicators need to create more opportunities for citizens to be more directly involved with political advocacy. After all, many people do want to get more involved, as exemplified by how these participants filled in their names in online petitions despite reservations about the effectiveness. I suspect that because environmental communicators do not provide more opportunities for real engagement, people feel as though the only role they have is with small-scale, individual actions and low-involvement political action. Instead, I think we should focus on bigger actions, so people can see that they can be part of systemic solutions. I think environmental communicators should empower people and ask them how they want to be involved in policy and systemic changes.

Another recommendation is to create a positive vision of environmental and social harmony. Instead of pushing people to avoid negative outcomes, which can result in negative emotions and psychological denial (O'Neil & Nicholson-Cole, 2009), a positive vision pulls people towards goals. For example, Deborah noted how her volunteer group was making this shift. Instead of talking about climate change, which has many negative connotations, her group is talking about sustainability, which includes climate change, but frames the issue more

positively. For her group, sustainability portrays a positive future we want to strive towards, not a negative future we want to avoid.

Implications for Further Research

This study, along with the preceding implications for environmental communicators, provides many opportunities for researchers to further this work. It would be interesting to conduct a similar study with environmental communicators – what emotional and cognitive complications do they face when thinking about climate change, and when working and encouraging the public to engage? I wonder if many environmental communicators hold similar worldviews to my participants, such as a belief in individualism, a sense that individual actions add up and spillover into other areas, and an acceptance of the Enlightenment reasoning frame. Since environmental communicators deal with the facts of ecological issues every workday, I imagine that they would have intense emotional pain to confront. Have they dealt with these emotions, or are they also splitting themselves from them? After all, if they cannot confront, cope, and channel their own negative emotions, how can we expect them to encourage others to do so?

In addition to studying how environmental communicators conceptualize and emotionally respond to environmental issues, environmentalists may need help aligning their new outreach strategies with these insights into people's potential cognitive and emotional complications. Further research could elaborate how specifically we can go about opening people up to exploring their emotional reactions to environment issues, examining their worldview assumptions about nature, and counselling people to cope with their emotions. Empowerment is also an important aspect to research – how can environmental communicators effectively empower people to engage with systemic change? Further research could also illuminate how

environmental communicators can build up new frames of collective, political action, and can help them transition away from an Enlightenment reasoning frame and individualism. More research into effective communication strategies that avoid fear appeals and overly negative language can also help environmental communicators shift their messaging.

In this study, I had a wide age range of participants. My oldest participant, Deborah, was the most politically and collectively engaged, which contrasted sharply with the younger participants, such as Amber, Robert, and Ann. It would be interesting to expand the research questions of complications affecting activism across demographics such as age, gender, and race to see if there rae significant differences. For example, does more life experience lead to more engagement?

Imagine a world with an active, engaged citizenry. Imagine how much we can move forward and how much we can change our cultural perspectives by acknowledging our connection to the rest of nature, confronting our denial, healing our emotional pain, and engaging systemically for change. Imagine feeling empowered to heal our relationships with ourselves, each other, and the world. Imagine striving towards a vision for a better future for everyone on this amazing little green and blue planet. I believe this future is possible.

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Appendix A: Selection Survey Questions

Using SurveyMonkey.com, I sent out the following survey via the David Suzuki Foundation's Facebook page and the Sierra Club of B.C.'s Twitter feed to select participants.

The survey can be viewed here: http://www.surveymonkey.com/s/HF6FRV6

Survey Text

Hi! Thanks so much for checking this out. This short survey is designed to select participants for two face-to-face interviews in Vancouver, BC. The research is part of a master's thesis project about potential barriers to political activism for climate change. As someone interested in being updated about what environmental groups are up to, you're probably an ideal fit. If you're interested in participating in the interviews, simply fill in your contact info in the last question; if not, just leave that question blank. Thanks and have fun!

Climate change refers to an overall increase in Earth's average temperature and the resulting effects on local climates. Assuming that climate change is happening, what do you think is causing it?

- Mostly natural changes in the environment
- Mostly human activities
- Human activities and natural changes
- Nothing because climate change isn't happening
- Don't know
- Other (please specify)

How often do you think about the issue of climate change?

- Never
- Depends on events (including news coverage)
- Occasionally
- Seasonally
- Frequently

Do you think that climate change impacts your decisions (ex. about your actions, habits, purchases, activities)?

- Yes, often
- Yes, somewhat
- Yes, rarely
- Maybe
- No, never
- Don't know

Do you try to reduce the impact your lifestyle may have on the environment?

- Yes, often
- Yes, somewhat
- Yes, rarely
- Maybe
- No, never
- Don't know

Do you engage in any sort of political action regarding climate change?

- Yes, often
- Yes, somewhat
- Yes, rarely
- Maybe
- No, never
- Don't know

Over the past 12 months, how many times have you volunteered with or donated money to an organization working to reduce climate change?

- Many times (5+)
- A few times (3-4)
- Twice
- Once
- Never
- Can't remember

How strongly do you feel the following emotions when you think about the issue of climate change?

	Very	Somewhat	Not very	Not at all
Interested				
Frustrated				
Hopeful				
Angry				
Helpless				
Sad				
Afraid				
Guilty				
Depressed				
Motivated				

Optional: If you have any comments about the survey topics, please share your thoughts below.

Optional: If you're interested in learning more about participating in face-to-face research interviews in Vancouver, B.C., please enter your contact information below. The researcher, Ashley Knapp, may choose to contact you and ask you to participate in two interviews. At that time, you will have the option to say yes or no.

- Name:
- Phone number:
- Email address:

Appendix B: Consent Form

Consent Form for Participating in Ashley Knapp's Research:

Exploring Barriers to Political Activism for Climate Change

Hello! Thank you so much for agreeing to participate in this thesis project for Royal Roads University's Master of Arts in Environmental Education and Communication program. The purpose of this project is to identify the potential barriers to engaging in political activism for climate change. Dr. Rick Kool, Associate Professor at Royal Roads University, can verify the authenticity of this research project (available by phone at (XXX) XXX-XXXX or 1 (XXX) XXX-XXXX or email at email@address.ca).

This research consists of two face-to-face interviews. The researcher is available to answer any questions before proceeding, and during the interview. The first interview will have just one question asking for stories about your experiences. The researcher will listen and occasionally prompt for more information. The second interview will begin with one to two follow up questions based on the first interview, then five specific questions about to climate change.

The researcher will take notes during and after the interviews and audio record the interviews to help the researcher recall important information; however, you can stop the tape recorder anytime you like. You are also free to end the interviews at any time. You can decide to withdraw your data after the interviews, or after reviewing the transcripts, and all related data will be deleted.

The researcher doesn't have any conflicts of interest. Your privacy will be protected. The researcher will use pseudonyms and codes (like your initials) so that your name won't appear in the results. The thesis supervisor, Dr. Liza Ireland, will be the only other person who will be able to see/hear the raw data. The findings will be summarized in the researcher's thesis and potential academic articles. You will be provided with transcripts of the interview to ensure accuracy, and are welcome to request copies of the research findings. The researcher will remind you via email when the thesis is published.

The researcher will delete the data 5 years after the thesis is complete. If this data is to be used in any other way, such as presentations or publications, the researcher will get your permission.

There is no foreseeable harm in participating in these interviews. The benefits include exploring your own thoughts and contributing to both academic research and the environmental movement.

If you accept these terms and want to go ahead with the interviews, please sign below:

Participant's Name	Participant's Signature	Date

Appendix C: Interview Questions

Here are the interview questions. As mentioned, I asked two participants a different single question aimed at inducing narrative (SQUIN), before editing it for the remaining participants.

Questions for the First Interview

Preamble

This interview might be different than what you'd think of as a typical interview because I actually just have one question about your experiences of doing something about environmental issues. It's really big and broad question and should give you lots to talk about. I'm really interested in your experiences. Say whatever comes to mind. You can take your time, start wherever you like, and I can repeat the question. I'll listen and won't interrupt, but may prompt for more information. I'll take some notes. We've scheduled and hour and I want to respect your time, so I'll let you know when we have 15 minutes left. Do you have any questions before we start?

SQUIN for Ann and Robert

Can you please tell me everything that is personally significant to you about what you did or still do to help the environment?

SQUIN for Deborah, Rachael, and Amber

Can you please tell me about some experiences or examples of things that you do about environmental issues?

Questions for the Second Interview

After asking two or three questions following up specifically on what participants had mentioned in the previous interview, I asked all participants the following set of questions:

1. What makes you care or feel concerned about nature?
2. Can you think of a time you engaged in or experienced politics?
3. Can you remember coming across a message from an environmental group? What did it say? What did you think? How did it make you feel?
4. What comes to mind when you hear the term climate change? What about global warming?
5. What power – if any – do you think you have to create or initiate change? What's limiting?

Appendix D: Participant Comparison Data Analysis

	Deborah	Rachael	Amber	Ann	Robert
Engagement (1=high, 5=low)	1 Individual: gardens, recycles, write letters, etc. Collective: career as feminist activist, attends rallies, volunteers with group: mounted forum, election flyer, organized group, encouraged elders	2 Individual: bikes, local food, grew up on farm, no grocery store (4 months), writes letters Collective: studied biology and environmental health, air quality assessment, volunteered UBC farm	3 Individual: recycles, composts, carpools/bus, persuades friends Collective: job at township convincing people to compost, volunteered at salmon hatchery, volunteered school waste convincing people to compost/recycle, pilot to compost paper towels	4 Individual: reduce waste, recycle, local food, no elevators (past), biked (past), repurpose, buy used Collective: petitions/letters with church (past), volunteered UBC farm	5 Individual: less meat, organic food Collective: volunteers as receptionist
Double Life (Denial)	No inconsistencies	Systemic actions best for others, while individual actions for herself	Everyone recycles as much as she does, despite waste audits	Individual actions as solution (big impact), but questions whether worthwhile (no impact)	Individual actions are insignificant (no impact), yet most important way to spread change
Power	Lots of power Within – starts here (think/emotions), translates into actions (power to), join group (power with), exponential growth	Lots of power – individual Collective solutions are for others to implement Lack – stuck on people she can't persuade To – tangible, individual actions Within – authenticity, live her values	Lack – has to do it all herself and can't reach everyone To – all individual – her choices and (overtly) influence others Within – information strengthened resolve	Lack – dedication to behaviours waned over time; possible solutions are for others only To – specific individual actions she's decided to take on (goal); conscious effort	Powerless Lack – defeated, no role for participation, defined by what he doesn't do, passive receiver of motivation To – individual acts and choices, optimistic for future career With – network helps him be more active

	Deborah	Rachael	Amber	Ann	Robert
Individualism/ Individual Action	Lots of power Both individual and collective action/power Model lifestyle, don't force	Lots of solutions Convince others without being too negative Important to be authentic Connection to food Favours Individual action Power with individual actions, less with systemic solutions No satisfaction from form letters/petitions	Conscious decisions Personal responsibility Individual choices adds up Convince (force) people – one-on-one, takes responsibility for friends	Conscious decisions to change behaviours Response to systemic problems is individual action No collective solutions to help her with individual actions	Assumes he has to act on his own to count, can't join others Focus on easy individual actions, yet knows they don't offset, aren't effective, doesn't know what else to do Incremental changes makes people more conscious and leads to more and bigger changes No satisfaction from signing petitions
Collective Action	More effective in groups Adds up – starts with individual, connect with others, movement grows exponentially Importance of being organized with common purpose, collective voice Empower people to stretch Learn from others – mutuality of exchange Feels at home in group, has role, she benefits	Solutions for groups out there, no personal connection (passive voice)	Less control in group, less power to make choices Works one-on-one, on her own on team Relationships are problematic	In pre-established community of likeminded people – former social justice oriented church	Lacks power Volunteer work doesn't count – no specifics, only encouraging others Protests are ineffective Limited – must work within system Questions effectiveness of organizations

	Deborah	Rachael	Amber	Ann	Robert
Systemic Thinking	Mostly solutions Depth – appreciates information she can act on, go deeper to act more effectively Problems and solutions have depth, grey area Far-reaching consequences	Policy solutions – but for others to implement Beyond appearances/labels Critiques society's logic Far-reaching consequences	Very little Problems only	Problems only	Nature is complex set of systems with goal (provide services) Focus on equal opportunities Connects environmental, social, economic issues – high level
Emotions	Mostly positive Spirituality – eco-centric, sense of place, motivation, intrinsic value, energized by nature Awe at interconnectedness (emotional, intellectual, spiritual) Negative – grief is motivator, strength and ability to cope with loss, guarded exposure to negative images (ocean) Refuses to let negative emotions take energy away from solutions	Both Positive – we are nature Awe and wonderment at beauty and existence (intellectual more than spiritual) Appreciation for biodiversity Negative – frustrated at lack of action, overwhelmed with issues Idealistic, high standards, gets disappointed Solastalgia – loss connection to food	Very frustrated, especially with convincing others and when people act irrationally Project loss onto others – she makes sure people don't get too sad Cure is hope Solastalgia – apocalyptic view of climate change	Very negative: paralyzed, frustrated, fearful – both individual changes and systemic problems Solastalgia – asks whether what she's doing is hurting the environment? Overrun with trash Pessimistic	Very negative Hard to see destruction Positive – cherishes nature, peace Negative – doesn't have role, frustrated with emotions/ideologies clouding debate Overwhelmed – defeated by scope of problem
Intrinsic Values	Social justice, care for others Intrinsic value of nature, interconnectedness	Community – connect with food producers Invest in quality food, fair wage Inner peace	Responsibility to care as basis for choices Empathy for nature	Peace, social justice, care	Social justice Care for next generation

	Deborah	Rachael	Amber	Ann	Robert
Anthropocentric Worldview	Manage environmental impacts to reconcile environmental with social justice issues	Eco-technocrat: (policy) change is easy and for best Control impacts	Eco-technocrat: reusables solve problem Nature has no voice/power	Concern for environmental is human-centered (our survival and enjoyment)	Frames climate change as problem for humanity for other people Eco-technocrat: we can take care of climate change – technology? Manage environmental impacts
Enlightenment Reasoning	Weak belief Difficulty understanding scientific mode of reasoning Emotions inform decisions and beliefs – sense of wrong and right not solely based on fact Reach out to people emotionally – science, spirit, storytelling	Moderate belief People need to be more aware – if they only knew Gap – something is missing, sees that people know information yet aren't acting upon it	Strong belief Choice assumes rationality Overconfident in power of individual choices, which are important and conscious, frustrated when people act irrationally Important for people to understand – just need options and info – so they'll act	Moderate/strong belief Being environmentally conscious is simply logical Choice assumes rationality	Moderate/strong belief Wishes people were rational, but emotions get in the way Because of scientific consensus, climate change will be dealt with
Social Consciousness	Collaborative/Resonant Self-aware, expects others think differently Group has power that transcends Individual Sense of belonging in group, community	Self-reflexive/Engaged	Embedded (reinterprets and selectively remembers) Refuses to believe people don't recycle despite evidence Problem is selfishness, not worldviews	Self-reflexive Becoming aware, no follow-up action, unsure what to do	Self-reflexive Own worldview is problematic People pay attention to different facts

	Deborah	Rachael	Amber	Ann	Robert
Social Norms	Positive Many environmentalists Accepting of others and their limitations to action	Negative Since she's busy, others are too People stuck in society's worldview – environment is not priority	Negative People are selfish (opposite of caring), don't take responsibility for choices	Negative Being environmentalist means she's minority People stuck unaware (as she used to be), part of problem	Negative Like him – make world better, struggle at bottom, doesn't know what to do People stuck in society's worldview
Government Action/Inaction	Action at municipal and provincial, inaction at national Civic engagement is necessary ongoing work – communications and relationship building	Action at municipal, lack of leadership at national and somewhat provincial	Not significant factor Municipal, focus on local level	Not significant factor – no information	All government (especially national) lacks leadership
Recruitment	Once ready, decided to stretch, searched for group she felt at home with, persistence Suggestions from friends Support from father, not brother	Starts with issues she already cares about Craves more involvement than form letters – writes own Some likeminded friends Support from family – not significant	Support from family Fell into job, led to volunteering afterwards	Starts with interest, information leads to commitment, spiral to related issues	Specific, small, quick and easy actions only Suggestion to volunteer with group from friend
Overall	Engagement from emotional connection, group is home, civic engagement is crucial	While she thinks about systemic solutions, she doesn't connect personally to them, and focuses on individual actions	Stuck in Enlightenment reasoning and individualism – wants to reach everyone one-on-one by herself, adds up	Pessimistic, individual actions are solution to systemic problems	Powerless, doesn't know role