THE ENVIRONMENTALLY AWARE AND THE CARS THEY DRIVE:  
A PSYCHOSOCIAL ANALYSIS OF THE DOUBLE BINDS AROUND PERSONAL TRANSPORTATION CHOICES

By

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ABSTRACT

The purpose of this thesis was to explore if there are emotional dilemmas in environmentally aware individuals, stemming from conflicts, resulting in their environmental personal transportation behaviour. This study uses the dialogic, relational interview method to explore possible conflicts in participants’ personal transportation choices. The analysis seems to indicate that there is an apparent emotional tangle in individuals when confronted with possible double binds that put their environmental beliefs in conflict with other important aspects in their lives. The personal dilemmas they feel revolve around social pressures and their personal identities and leave them feeling conflicting emotions and strong amounts of guilt. The findings show the importance of reframing pro-environmental activities in ways that help negate the secondary injunctions that may people feel.
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CHAPTER 1: FOCUS AND FRAMING

As an energy efficiency program manager in the transportation domain, I am responsible for looking at ways to motivate and encourage people to take more action on environmental issues around their personal transportation. Typically, plans focus on target audiences our program wants to engage, the possible outcomes we want to achieve, and what tools and methods should be used. It tends to take a very quantitative approach to these issues, as we try to figure out carbon dioxide reductions per dollar spent per activity. There is a focus on surveying attitudes that suggests as if everything is reduced to a Likert scale we can determine what areas will have the greatest chance of success. Looking at the more subjective aspects of how people think, feel, and make meaning are not regularly discussed in our sector. While psychologically-oriented aspects of environmental engagement are increasingly recognized as important (Fisher, 2002; Lertzman, 2012b; Norgaard, 2006, 2011) in academic circles, they are not currently in use where I work. Based on my sense of something missing from much research conducted on personal transportation choices, I decided to design a research project to investigate what may inform decisions people who are environmentally aware make about how they get around.

The program models I work from often assume people think, act, and make decisions rationally in response to environmental information, despite research that suggests otherwise (Randall, 2005; Stoll-Kleemann, O’Riordan, & Jaeger, 2001; Whitmarsh, 2009), and years of environmental engagement around the science of the situation have proven ineffective to mobilize broad action towards sustainability. People who are environmentally aware seem to know and understand the situation and what
needs to be done. Clearly communicating the messages of “doom and gloom” (O'Neill & Nicholson-Cole, 2009) without regard for the psychological reception of this information, is unlikely to create desired program change goals (Moser, 2007).

Some researchers and program developers are not willing to accept the simple assessment that the general public is unable to understand issues or unwilling to understand issues (Lertzman, 2012b; Milbrath, 1995; Norgaard, 2011). As a result, there is a growing field of research that is examining how and why people respond to environmental complications using psychoanalytic and psychosocial methods to look at the emotional dilemmas around environmental values and non-environmental actions. A psychosocial approach is proving useful for understanding the concept of environmental complications. It is psychosocial studies that joins the broader social and political contexts with the largely unconscious processes that play such an important part in how people manage and respond to environmental concerns (Lertzman, 2009).

**Environmentally Aware Individuals’ Emotional Dilemmas**

Environmental topics can often arouse strong emotional responses in people, including anger, despair, fear, and anxiety (Lertzman, 2009; O'Neill & Nicholson-Cole, 2009; Searles, 1972). Even though these emotions affect people on an unconscious level, they can have a large impact on how people feel and react to most situations (Walkerdine, Lucey, & Melody, 2001). Environmental messaging can often trigger unconscious emotions that can make it difficult or feel impossible for people to adopt pro-environmental behaviours (Feinberg & Willer, 2011; Randall, 2005, 2009; Stoll-Kleemann et al., 2001). Similar to Aesop’s fable (Aesop, n.d.) of the wind and the sun, where the harder the wind blew - the more the man fought against the wind, people can
employ psychological defences such as denial, dissociation, and splitting to protect them from emotional dilemmas that they are feeling when they hear environmental messages. It is these defence mechanisms and others that can be restricting or preventing pro-environmental personal transportation behaviours (Mnguni, 2010; Randall, 2005, 2009; Stoll-Kleemann et al., 2001).

Researchers (Randall, 2005, 2009; Stoll-Kleemann et al., 2001) have argued that many environmentally aware people have emotional reactions to pro-environmental messaging that activates psychological defence mechanisms that impair people’s ability to adjust their behaviour in the way the messengers intended. The impacts of double bind (Bateson, Jackson, Haley, & Weakland, 1956) situations where environmental intentions come into conflict with other strong pressures could also be causing strong emotional reactions in people.

I decided to conduct my research with environmentally aware individuals who are not taking pro-environmental options with their personal transportation. Since emotional dilemmas are often connected to the unconscious experience (Lertzman, 2012b; Mnguni, 2010; Randall, 2005; Walkerdine, Lucey, & Melody, 2001), I felt I would need to use appropriate methods and techniques to help bring those emotions to a conscious level. To explore the experiences of my environmentally aware participants, I needed to develop an understanding of how their experiences may be informing their pro-environmental behaviours around their personal transportation choices. I framed my study with the inquiry, “Are there conscious and unconscious emotional dilemmas that are affecting the negative driving choices that environmentally aware individuals make?” And if so, the following sub-questions:
1. What elements may contribute to their emotional dilemmas?

2. What impacts do these dilemmas have on the participants?

3. What limits the participants’ ability to respond to these dilemmas in a pro-environmental manner?

**Research Focus**

With such high levels of understanding of climate change (Leiserowitz, Maibach, & Roser-Renouf, 2009; Milbrath, 1995) and the need to take action, a key question that presents itself is why are people not making greater efforts in their everyday lives when they understand what they could be doing? I explored possible sources of conflicts between professed beliefs and actions within a select group of participants.

My thesis was an inquiry into the role of emotion in personal transportation of those who are environmentally knowledgeable. Specifically, I was interested in those who are taking more environmentally damaging options in their personal transportation than the available alternatives. I suspected that there are strong emotional anchors that are complicating or impeding the ability to align these people’s desires with their actions.

I was interested in investigating what lies beneath the surface (Clarke & Hoggett, 2009) of participants’ stories to better understand their values-action gaps (Kollmuss & Agyeman, 2002) concerning their personal transportation behaviours. I felt that psychoanalytic approaches to looking at environmental concerns would help me investigate with my participants unconscious aspects of engagement that may include denial, ambivalence, and anxiety (Lertzman, 2012b; Mnguni, 2010; Randall, 2009). I suggest that by better understanding the emotional dilemmas that environmentally aware people face, researchers and practitioners can more effectively (a) identify how
environmental messaging is being interpreted, (b) appreciate how to make use of the information gained from a better understanding of psychosocial elements, and (c) create more effective programs that will support behaviour change.

**Purpose of the Research Study**

The purpose of this thesis was to explore if there are emotional dilemmas in environmentally aware individuals, stemming from conflicts, resulting in their environmental personal transportation behaviour. My project sought to fill a gap in current research approaches and provide insights that could potentially inform policy and engagement strategies in the Canadian transportation field. Specifically I was looking into why climate change aware individuals continue to be reluctant to adopt environmentally friendly practices. I focus on individuals who accept that anthropogenic climate change is real, and indicate an understanding of what should be done at the personal level, to explore potential emotional dimensions of apparent disconnection between worldviews and understanding, and potentially contradictory transportation actions.

As a result of this research, I am hopeful that it will assist me in designing more effective driver education programs in my position with Natural Resources Canada (NRCan). This thesis was my attempt to capture and relate the emotional elements from my research participants’ life stories to the body of academic thought, to help build a better understanding of how to help people shift their behaviour closer to their environmental beliefs. This research project was the first step toward that goal, and I found it to be an essential step.
CHAPTER 2: LITERATURE REVIEW

For my literature review, I examine four related areas that shed light on why some people who believe in climate change and see a need to take action, do little or nothing around their personal transportation. I review relevant quantitative populations analysis; eco-psychology and related disciplines’ study of the separation of humanity from nature and its implications; emotional causes and results of dilemmas and complications around decision making relating to environmental issues; and the role of identity and social norms in shaping the choices that people make.

A Quantitative Prelude

Early in my literature review, I noted that survey results and analysis from Yale’s Six Americas (Leiserowitz, Maibach, Roser-Renouf, & Smith, 2011; Maibach, Leiserowitz, Roser-Renouf, & Mertz, 2011) had found that there was a large number of people who were aware of the impacts of climate change and who expressed a willingness to alter their lifestyle to reduce their environmental footprint. However, the apparent lack of notable activity in environmental choice around personal transportation seemed to be in conflict and became a driving force for my research project and my literature research.

The Six Americas survey (Leiserowitz et al., 2009; Leiserowitz et al., 2011) provides a rich data set and relationships within general American society that is applicable to my research context. Additional analysis is helpful in unveiling correlations in population groups to help identify and segment each population’s attributes (Leiserowitz, 2011b). Understanding the psycho-graphic profiles of the Six Americas groupings is important to focusing my quantitative survey and helping to identify my
qualitative groupings. However I find these findings did not adequately address what may be underlying these findings; hence I have turned to psychosocial and psychoanalytic research concerning unconscious dimensions of ecological crises.

**The Unconscious Mind**

**The unconscious connections to the environment**

Psychoanalyst Harold Searles (1972) first put forth the assertion that the environmental crisis is linked to unconscious human emotions. Searles postulates that the development and maintenance of our sense of being human is tied to an ecologically healthy relatedness to our nonhuman environment. He argues that ecological deterioration is evoking unconscious anxieties and that unconscious ego defences to these anxieties is creating general apathy toward the environment. Amongst his assertions are that the knowing the environment will be lost removes the desire to protect it; and that by polluting the world people have nothing to lose by dying (Mishan, 1996; Searles, 1972).

Kidner describes the decontextualized individual who is separate from the environment, and people’s reactions to loss of the natural world in industrialized countries as being masked through geographical separation and social and ideological mechanisms that portray destruction in positive terms of *progress* and *development* (1994; 2007). Schultz, Shriver, Tabanico, and Khazian (2004) find that “an individual with less of an association between self and nature can still be concerned about environmental issues, but these concerns are more narrow, and focused on issues that directly affect the individual” (p. 40). Separation from nature could be leading to a self-serving reductionist world that is suffering distress.
Both Kidner (1994) and Searles (1972) write about psychological distress from the destruction of the natural world leading to a depressive state. Kidner (1994) also emphasizes the need for people to rebuild a connection to nature or this will continue to bring about environmental destruction. Fisher (2002) expands the critique by asserting that there is a problem with normal within ecopsychology and deep ecology to understand the dualism of outer, objective, and inner, subjective reality. He writes about people’s views that the environmental crisis out there limits their ability to recognize that this crisis is happening to them. Ecopsychology has to bridge the gap in belief that people are separate from the natural world, so that environmental psychology can assist in solutions (Fisher, 2002).

Mishan (1996) addressed the internal-external duality as he parallels the past responses to the threat of nuclear war with what he describes as the current paranoid/schizoid relationship between humans and nature. He writes about psychoanalysis being an ally of the environmental movement “by separating what is internal fantasy and what is really happening” (Mishan, 1996, p. 67). Mishan emphasizes the environmental movement’s efforts to reinforce the connections between nature and mortality will be important to halting environmental destruction.

**The gap**

The differences between people’s positive environmental attitudes and their less than pro-environmental behaviours is looked upon by behavioural and cognitive psychological researchers as a values action gap (Kollmuss & Agyeman, 2002; Lertzman, 2012b; Stoll-Kleemann et al., 2001) and as a dilemma by ecopsychological and psychosocial researchers. In the face of successful information campaigns, the lack of
action seems to indicate a paradox where individuals are aware of the issues and understood the measures that they could be taking but are not taking action. Kollmuss and Agyeman (2002) refer to a complex called “pro-environmental consciousness” (p. 256) as being made up of environmental knowledge, values, and attitudes together with emotions. While this complex may be presupposed to pro-environmental behaviours, it is a part of a larger system of broader personal values and personal traits that are affected by other internal and external factors. Their complex model of pro-environmental behaviour outlines how knowledge and beliefs are influenced by a host of other factors that creates a gap.

Lertzman (2012b) notes that “the ‘gap’ becomes more like a ‘tangle’ of anxieties, fears, losses, anticipation, and desires” (p. 98). Milbrath (1995) recognized that resolving the tangle likely would require simultaneously resolving many of the emotionally generated barriers, rather than being able to resolve them one at a time. Lertzman (2009); (Lertzman, 2012a, 2012b) looks at the mix of emotions that are influencing an individual’s action as they are confronted with dilemmas. She asserts that rather than not taking environmental actions because of being apathetic and feeling a lack of affect, that individuals could have a surplus of affect (such as guilt, anxiety, fear or sense of loss). So, as Mishan (1996) notes, it is the avoidance of these feelings of loss, guilt, and subsequent mourning that acts as the greatest barrier. Randall (2009) feels that “people can feel they are hastening the death of a loved one by preparing for its aftermath” (p. 125).


**Emotional Dilemmas and Complications**

Recognizing the emotional ties that are linked to the unconscious connection to nature fosters research that examines possible connections that prevented environmental action (Leiserowitz, 2006; Lertzman, 2009; Stoll-Kleemann et al., 2001). These researchers look at the link between unconscious psychological defences to emotional angst that contribute to a lack of action and a variety of other behaviours that avoid or contribute to environmental damage. Randall (2009) comments that getting people to transition to pro-environmental behaviours “is often dependent on whether the elements that are lost can be mourned and let go of” (p. 125).

Research into these defences identifies that environmental dilemmas (Lertzman, 2009) can also leave people feeling overwhelmed, hopeless and powerless (O'Neill & Nicholson-Cole, 2009; Stoll-Kleemann et al., 2001) “when they try to comprehend their own relationship with the issue” (O'Neill & Nicholson-Cole, 2009, p. 375). Norgaard (2006) in her influential work on social production of climate denial, examined responses to climate change where people are using emotional defences such as denial to manage their feelings of fear, guilt, and hopelessness.

To protect themselves from experiencing the negative emotions associated with the complications of our dilemmas, Randall (2005) notes that people use the defence mechanism of denial. In addition, she explores how denial leads to splitting off of negative emotions where the “individual’s own powers and abilities are projected into others who, it is hoped, will take care of the problem and can be criticized and attacked if they do not” (Randall, 2005, p. 167). This denial and repression of these negative
emotions, tends to block our personal development and ability to achieve solutions (Fisher, 2002).

Stoll-Kleemann et al. (2001) also identify people using a variety of psychological defences to create barriers that increased that cost of transitioning to pro-environmental behaviours, which serves as justification for their inability to engage in such behaviours. They find people feel helpless and are unwilling to make personal sacrifices while feeling distrust that government would effectively manage the problems. They find that people engage in denial viewing society as the problem rather than themselves (Stoll-Kleemann et al., 2001). Frantz and Mayer (2009) find that people feel they are helpless and that it is someone else’s job to deal with combating environmental problems. Milbrath (1995) also notes that if people do not appreciate that they are harming the environment, they are not responsible for making sacrifices to protect it.

One of the other defences that is being noted is to engage in “hyperbolic discounting,” which gives current outcomes more weight than temporally distant outcomes, even when the latter are of greater value (Swim et al., 2011). This often causes people to perceive climate changes as affecting people in the future and in far-away places (Leiserowitz, 2006, 2011a; Lorenzoni, Nicholson-Cole, & Whitmarsh, 2007; O'Neill & Nicholson-Cole, 2009). This insulating in time and space can be coupled with people’s “tendency to distort information or events so as to verify or sustain the prevailing view of self” (Markus & Nurius, 1986, p. 963). It is important to understand this view of self, or identity, in understanding people’s actions around environmental issues.
Identity and Social Norms

Whitmarsh and O’Neill (2010) investigate the role identity, values, and attitudes have on behaviour and actions. They feel that “self-identity and past behaviour are important influences on behavioural intention” (Whitmarsh & O’Neill, 2010, p. 311) and that behaviour is related more strongly to identity than values. “If the gap between desirable behaviour and pro-environmental behaviour becomes too great, individuals change their attitude towards the environment, rather than their lifestyle” (Whitmarsh & O’Neill, 2010, p. 312). The inability to shift to new behaviours would require a sufficient psychological safety to be created or the disconfirming information from the gap will be denied or in other ways defended against (Schein, 1996).

Mnguni (2010) notes that people tend to prefer the safety of groups with similar views and comparable emotional needs. In these groupings, people collude to use organizational processes and norms to reinforce their individual defence mechanisms. Seu (2011) highlights that in these groupings people become “reliant on socially available ‘good stories’ to justify their inactions” (p. 535), which makes it harder to break out of the established social norms.

Within a societal grouping, these ‘good stories’ create a requirement to maintain an alignment between “individual and collective defenses; a significant gap between the two levels will most likely lead to relational ruptures” (Mnguni, 2010, p. 123). Aligning behaviours within the groups makes responding to climate change difficult, as “what is normal to think and talk about is not given, but is socially structured” (Norgaard, 2011, p. 405). Whitmarsh (2009) notes that “since climate change is a social dilemma, and the public perceives little mitigation action being taken by others, this is a further
disincentive to individual energy conservation” (p. 14). Stoll-Kleemann et al. (2001) address an overall lack of action as providing people with cues to justify continued negative environmental behaviours, this despite the establishment of a socialized moral norm to the contrary.

The strength of societal behavioural norms and individuals’ reluctance to stray from them poses a barrier to bringing about societal change. Randall (2009) notes that change will be difficult to achieve if there are not socially accepted alternatives to the roles of activist or green campaigner that people could feel safe adopting. Failing that, “many who might take personal action will feel excluded and retreat” (Randall, 2009, p. 123).

Summary

In this chapter, I have reviewed what I perceived as the relevant literature to my study of personal transportation behaviours of environmentally aware individuals. I started with a strong quantitative understanding of the population I would draw from and my study participants within the greater population. I have looked at the research into the separation of individuals from nature and its negative impacts on emotional development. I have reviewed the role of ecopsychology, social-psychology, and psychoanalytic approaches to looking at the inner and outer relationships as they relate to personal conflicts. I have examined how those emotions are tangled as people face dilemmas around their beliefs, attitudes, and values. I have reviewed the effects of identity within a social norm on pro-environmental behaviours. This review has provided me with a strong grounding to analyze and contextualize my research and discern relevant meanings in Chapters 4 and 5 of this paper.
CHAPTER 3: METHODOLOGY

This research project has focused on the question, “Are there conscious and unconscious emotional dilemmas that are affecting the negative driving choices that environmentally aware individuals make?” As noted above, my inquiry was supported by three sub-questions:

1. What elements may contribute to their emotional dilemmas?
2. What impacts do these dilemmas have on the participants?
3. What limits the participants’ ability to respond to these dilemmas in a pro-environmental manner?

In this chapter, I outline my research approach, describe my project participants, outline my methodology including my data collection tools, study conduct, data analysis and trustworthiness, and outline the ethical issues.

Inquiry Approach

My research explored the emotional connection participants have to their personal transportation choices using explanatory sequential design with a participant selection variant (J.W. Creswell & Clark, 2007; John W. Creswell & Plano Clark, 2011; Ivankova, Creswell, & Stick, 2006). The primary purpose of the quantitative survey portion was to identify potential qualitative participants while simultaneously situating them within a broader cross section of an environmentally active target population. The intent of the qualitative interviews was to both build on the limited knowledge of interrelationships of environmental activities gained in the quantitative portion, and to dig deeper into the personal stories that shape the participants’ behaviour. I selected a narrative interview
process to improve understanding of the emotional connections that may inform participants’ transportation choices.

**Project Participants**

I drew the quantitative research population from self-identified environmentalists living in the Ottawa, Ontario area. Initially, I planned to identify environmentalists through their membership or affiliation with various environmental groups within the National Capital Region. However, the most supportive and responsive group that had expressed an interest in my project closed down before the start of my research. Other environmental groups were either nonresponsive, unwilling to assist, noncommittal, or reneged on prior commitments. To overcome this problem, I contacted environmentally aware people I knew and asked them to forward on the email request (Appendix A) to participate in the research to other like-minded individuals. By snowballing, asking potential participants to also forward the online survey (Appendix B) to other like-minded individuals, I was able to engage survey takers, most of whom completed the survey. From the responses, I was able to find sufficient potential participants for the qualitative portion of the research.

I drew the qualitative population exclusively from the quantitative participants who self-identified that they were willing to participate in follow-on one-on-one interviews. The research cluster for my qualitative subjects were car owners who had been driving for more than 20 years, rarely if ever car pooled, sped when driving, regularly drove to work and activities, and who felt that it would be difficult or impossible to live car free. They also indicated that they had a good understanding of climate change and believed that action needs to be taken soon to reduce local impacts.
The quantitative research produced nine potential participants, one of whom later declined to participate in the interviews. From those people who fit the main profile, I chose to select only one member of a family, choosing the 76-year old father as he appeared to be from a different demographic group than the rest of the participants.

I had hoped to have between 100 and 200 participants complete the online survey. With this large population, I would have been able to have a cross section of subgroups that include one that fit my profile for my qualitative research phase. I would have had to succeed in getting greater than 200 quantitative survey respondents to start to reach a point of statistical significance relative to the expected subpopulations (Krejcie, 1970). As I had 40 survey takers and 33 respondents who completed the survey, I was not able to effectively identify relationships of any significance.

As the prime purpose of my survey was to identify qualitative participants, I was not overly interested in nuance, so I designed key questions to allow for strong differences to easily appear.

**Quantitative data collection**

In addition to the general identifier/demographic data, I designed a survey to help situate potential qualitative participants within a broader context. Most questions were adapted from a selection of questions taken from the Six Americas survey (Leiserowitz et al., 2011). Questions were aimed to establish clarity on participants’ views on climate change. Given the limits of the survey size, these few questions were direct and meant to affirm that the survey respondents were part of the intended survey population or help to remove them from consideration for further surveys. I followed with a number of questions (a third of the survey) regarding areas where respondents practice non-
transportation environmental behaviours. The questions focused on food, housing, and lifestyle. I was interested primarily in exploring environmental trends in one or more areas that did not extend to transportation. The bulk of the survey was focused on transportation-related questions. Questions explored both factual insight and subjective insight. These questions were intended to stratify the responses relative to my thesis questions and help identify potential candidates for the qualitative portion of the survey. I limited the survey to 35 questions to increase the likelihood of a high completion rate.

The survey was pilot-tested on a group of coworkers and friends to ensure that the questions were clear and easily understood. Based on their feedback, I revised the questions and answer options to ensure I was able to collect data that were meaningful to my research study. I retested the survey on a different group of coworkers and received feedback that the questions were clear and understandable.

**Qualitative data collection**

I recruited my qualitative participants from those who had participated in the quantitative survey, who had self-selected that they were willing to participate in further research including the qualitative portion, and who were part of the thesis-question cluster. I selected seven participants and conducted two one-on-one interviews with them.

To gather meaningful qualitative information, I chose to use a psychoanalytically informed interview method called *dialogic, relational interview* (Lertzman, 2009). Similar to the broader psychosocial research, this approach consisted of a cluster of methodologies (Clarke & Hoggett, 2009). The psychosocial methodology focuses on what “lies beneath the surface” (Clarke & Hoggett, 2009), including unconscious influences, interpretations, and motivations through narratives and free association where
the researcher and the researched are co-constructing meaning (Cartwright, 2004; Hollway & Jefferson, 2000).

Initially, I had planned to develop an interview protocol that drew considerably from Wengraf’s 2001 biographic-narrative interpretive method (BNIM), which was focused on a single question to induce narrative (SQUIN). However, following my pilot interviews, it became apparent that given my strong personality and my lack of qualitative experience, and the complexity of the emotional dilemmas around personal transportation, that I needed to rework my approach. Hoggett, Beedell, Jimenez, Mayo, and Miller (2010) had warned that those who were unfamiliar with psychoanalysis could experience instances of strong counter-transference; my reaction to what I was hearing in the pilot caused my participant to completely shut down and become highly defensive. As I did not want to change my research focus, I needed to adjust my methodology. With coaching and direction from my thesis supervisor, I moved closer to the free associative narrative interview (FANI) method. I was still conducting dialogic, relational interviews with FANI; however, I just expanded my questions from one to six. The inclusion of initial questions aimed at focusing the participants in the subject area helped them feel safe as they became comfortable talking. It also allowed us to develop a safe rapport prior to delving into the more emotionally charged portion of the interviews.

To allow for consistency during all first interviews, I used the same six questions (appendix C) while keeping them as open-ended as possible. The advantage of a narrative-based interview over a structured interview is that narrative “is not structured according to conscious logic, but according to unconscious logic; that is, the associations follow pathways defined by emotional motivations, rather than rational intentions”
The value of the interviews was gained from emotional narratives. My interview questions were designed using four principles of psychosocial approaches (Hollway & Jefferson, 2000). First, I used open-ended questions to reduce the chance of yes or no answers. Second, questions were structured to encourage the participants to answer with a story from their life. Third, interviews did not use ‘why’ questions as it could steer them away from the unconscious narrative and feelings. And fourth, I was attentively listening during interviews so that my follow-on questions recognized the sensitivities of the participants’ answers. The attention was important in building rapport with the participants as they could visibly see me attending to their stories and reflecting back thoughtful questions (Lertzman, personal conversation, November 26, 2011). I had anticipated that this fourth point was going to be difficult for me as I have a strong personality, and I had to control my natural urge to join the conversation. Following my disastrous pilot, I became more aware of my nonverbal cues and word choices in my clarifying question and the participants’ potential to influence the interview outcomes. This awareness improved my interview technique.

The first interviews focused on having participants explore their relationship with transportation and the emotions that were tied to the narrative that they described. I observed these emotional aspects they expressed to see if they progressed and made connections in their stream of consciousness. I held back commenting as much as possible so that participants could make less conscious connections as they told their stories. I was looking for participants’ stories to be as broad as they felt appropriate so that they would not become defensive and shut down. By coming at their difficult
emotional stories from the side, rather than frontal or directly, participants seemed to be comfortable talking about very sensitive topics and emotionally charged narratives.

As the participants may not have actively thought about these experiences in a while or through an emotional lens, they did not always make the conscious connections with their experience during the first meeting. My goal at the subsequent interviews was to explore particular narratives, or stories that appeared to have emotional interactions for participants. During the interval between interviews, I reviewed the material to identify specific points, questions or themes I wished to discuss further.

The focus of the second interviews was to revisit stories previously raised and to flesh out the experiences for deeper meaning. I adjusted the interview format to a more structured, semi-structured interview. The lead question was specific to an event in their first narration, yet broad enough to allow a participant to tell his or her story. I was careful to use the participants’ word choices and phrases in the questions. By using their language, I had hoped to reactivate their thought processes and trigger related memories. I endeavoured to ask questions in the order that respondents had used. However, at times I had had participants jump around in their narratives and return to previous questions during their answers. While their flow was probably more reflective of their unconscious linkages, I felt that, given my minimal qualitative experience, I was best to regroup responses into question areas rather than risk confusing participants.

Study conduct

I recorded the interviews with a video camera to capture nonverbal cues so that I could review them at a later date if I missed cues during the interview. The first
interviews ran between 35 and 70 minutes in length while the follow-on interviews were between 20 and 40 minutes.

Throughout the interview process, I took field notes both of what I observed the participant doing and saying and my reactions to the participant’s stories (Hollway & Jefferson, 2000). Immediately following my interviews, I recorded my thoughts and feelings from the experience. Where possible, I transcribed my interviews within 24 hours aided by Dragon® speech recognition software. I then annotated interviews with my field notes.

Clarke and Hoggett (2009) described the importance of self-awareness to the here-and-now and “to be suspicious of one’s own presuppositions” (p. 17). Walkerdine et al. (2001) advised that “in order to examine other people’s unconscious processes you must be willing and able to engage with your own” (p. 85). Because I was a member of my research cluster, I felt that there would be an element of affinity; while this helped me connect with participants and helped me to understand and relate to what they were saying, I had to consider how that could also result in my emotions and feelings clouding my interpretation of my data. To help guard against this, Clarke and Hoggett (2009) recommended researchers keep “a reflexive diary during the process of doing the research, a diary that includes fieldnotes and immediate post-interview reflections.” (p. 17). Due to the distraction of keeping a running journal during the pilot interview, I chose not to keep notes during the interview process. Instead I wrote my journal comments within 30 minutes of my interviews to try to capture as much of my thoughts and feelings.

**Data analysis**
I revisited the transcripts and re-read and re-listened to the interviews to identify key themes and to build an understanding of the relationships between themes. I was also listening for additional markers that relate to the identified emotional themes to see if I could identify additional connections. This was an iterative process where reading and reflecting on one point while thinking about different contexts or themes allowed me to consider other possible connections. The process was repetitive and challenging as I reconsidered words and phrases in light of a multitude of different meanings beyond the literal connotations that the participant originally was using. In some instances, I was considering the imagery they used; at other points I considered the participants’ tone or physical movements, and still at other times I was looking at their word choices.

I also used the narrative-based qualitative analysis methodology, which recognizes that “interviews are constituted through stories that are told about life, rather than the life as it’s lived” (Hollway, 2009, p. 4). In addition to listening to participants’ emotional reactions to events that they were recalling, I needed to be conscious of my emotional responses to their stories. My worldview acted as both a conscious lens and an unconscious lens reviewing what I heard. The preparation for successive interviews focused on reviewing the audio and video recording, my field notes, and transcripts to appreciate the participants’ emotions tied to their stories and to appreciate my reactions. The conscious recognition of the duality that exists helped identify additional layers to the stories being shared by participants and enhance the interview process. Reviewing the material helped me prepare for elements that could elicit a noticeable reaction in me and risk creating issues with counter transference that had undermined my pilot interviews.

Trustworthiness
I worked to ensure rigour of the research by satisfying (Guba, 1981) four main criteria for trustworthiness:

1. Credibility: I assembled a collection of referential materials in the form of video tapes, field notes, memos and transcripts of my interviews.

2. Transferability: I prepared a description of all contextual factors relating to the data collection from the participants to assist external reviewers to independently assess their applicability.

3. Dependability: The materials and methods used to collect them were auditable.

4. Confirmability: During the interview process, I allowed for the possibility of future researchers to review my work by recording my reactions, my thoughts, and my emotions during data collection.

**Inducements**

To entice participants, I offered a chance to win a pair of Ottawa Senators hockey tickets for those who completed the online quantitative survey and said that they were willing to participate in follow-on interviews. Those who were interviewed were given a chance to win an on-board car computer reader that monitors driving performance.

**Ethical Considerations**

For the participants in the quantitative portion, there were some ethical concerns. Participants were informed that the study was looking at transportation choices and the barriers that people may face. Prior to taking the online survey, I reminded participants of their right to opt out, and I made them aware of the Patriot Act implications of using Zoomerang’s US-based survey tool. At the end of the survey, participants were given
another opt-in choice to participate in the qualitative portion of the research. I also
provided participants with an Internet address for a Google© site where the survey results
would be posted should they wish to view them, although no one asked for any of the
research materials.

For those selected to participate in the qualitative portion, they were given an
opportunity to opt out of the study when they were contacted. At the start of the first
qualitative interview, I gave participants an informed consent form (appendix D) that
detailed the nature of the qualitative interview and outlined their right to withdraw. One
participant elected to withdraw at that point. I gave all study participants the option of
receiving a copy of the audio file or transcript of their personal interview.

I informed participants that research elements and results would be shared with
NRCan to assist in potential program development without further requests for
permission. I also informed participants that the data set and interviews would be stripped
of personal identifying information and pseudonyms would be used prior to anything
being shared with other researchers. They were also made aware that materials could be
used for further academic or programmatic work by me.
CHAPTER 4: ANALYSIS

Through my analysis I was able to identify three key themes that are discussed in the following sections. As they made their transportation choices, the first theme of dilemmas pressuring and pulling them in different directions seemed to be woven through their narratives. The second common theme was how participants talked about issues around their identity and their perception of constraints that social norms were putting on their choices. The third shared theme was around participants experiencing and managing a range of related feelings, predominantly guilt.

I approached this project from a psychosocial theoretical perspective that examines both the conscious and unconscious dimensions of how the research participants experienced the situations that they shared with me during the research. I utilized Hollway and Jefferson’s (2000) methodology to better understand participants within the context of their own background stories. Psychoanalytically informed methodology tends to concern “researching beneath the surface” (Clarke & Hoggett, 2009, p. 2) and looking at not just what is being said, but the psychodynamic processes that inform what is being said.

As a person who had minimal exposure to qualitative methods in general and the psychoanalytic methodology specifically, I approached the data collection process of my research study with some trepidation. As I conducted my interviews, I came to understand and trust the process as I became a partner in the co-creation of meaning. The stories that my participants shared came from what I felt was an earnest desire to both help me complete my studies and to help me find an understanding that could improve the knowledge base around the problem of anthropogenic climate change. The
experiences that make up the stories described throughout this chapter are drawn from two interviews that I have conducted with each of the research participants. As a prelude to analysing the themes from the interviews, I have prepared profiles of my research participants that give context to their experiences.

**Research Participants**

Through the recruitment process, all of the participants were either known to me, or were known by someone I know. They are all people who were identified in the quantitative portion of the research and who self-identified as environmentally minded. With the dialogic, relational interview methodology (Lertzman, 2009), personal context can play an important part in building meaning. Knowing details about study participants and my reflexive perception of them provides important context for how I interpreted their narratives. Hollway and Jefferson (2000) developed the pen portrait idea as a means of sharing a view of research participants within the study’s frame of reference. While the pen portraits provide an understanding of the participants, their names have been replaced with pseudonyms out of respect for their privacy.

**Peter**

Peter is a married father of two young girls living in a suburban single-family home with two cars, in his late forties. Both Peter and his wife work in the technology sector. He is proud of his highly energy-efficient home that was designed with integrated systems to minimize the heating, cooling, and electrical demands. He has two cars that are both fuel-efficient models. Peter is heavily involved in his children’s lives serving as a coach on their sports teams and shuttling them to school, sports, and other activities.
Peter grew up in urban Montreal where he had easy access to public transit the entire time he lived there. Peter only got his driver’s license at age twenty-five due to the ease of using public transportation. He resents having to take a car to get to work and to most activities. He longs for the simplicity of his childhood where taking the bus, biking, or walking would get him where he needed to go. He’s enjoying having his children use their bicycles to get to activities rather than driving them.

Peter expresses sadness as he talks about the loss for his childhood way of life and dramatic changes to the physical places of his youth. He is very upset about physical changes to natural spaces both from his childhood and around the world in general. He talks about societal progress leaving the world much worse than when he was a child. He feels that his children are being disadvantaged, and society as a whole is creating a system where children learn dependency rather than independence, in part by car use. He uses the physical chipping away of rock formation in Montreal’s Mount Royal Park as a metaphor for the changes that he sees in other natural places over time. He laments seeing his history chipped away and unappreciated. He is upset that environmental choices are not also economic choices. He blames economic externalities for allowing people to make bad environmental choices.

Most of Peter’s environmental efforts have been around large fixed purchases. His home, while spacious and suburban, is amongst the top percentile for energy efficiency consuming less than a third of the energy to operate than similar houses in his neighbourhood. Likewise, his home appliances are all ENERGY STAR® rated models. His vehicles are fuel efficient and well suited for his family’s everyday driving needs.
Peter talks about his environmental commitment from an economic frame. He considers his pro-environmental choices as fiscally prudent.

**Bob**

Bob is in his early fifties. He is a married father of three teenage girls living in a single-family home with a car and a minivan. Both vehicles are reasonably fuel-efficient for their class. Bob works as a technology worker, and wife is a teacher. Bob’s children excel in high-level competitive soccer so he has chosen to serve as their coach. He regularly transports them to and from sports and other activities.

Bob grew up in Toronto where he had reasonable access to public transit; however, his parents provided him with access to an automobile as soon as he turned sixteen. Bob now enjoys camping with his family using a tent trailer. Bob had been an avid cycler, traveling more than 15 km to work most days. During the past few years, Bob has considerably reduced his cycling for a variety of work-related reasons.

Bob had worked for an international telecommunications company in the section responsible for producing products that enabled telecommuting. For many years, he enjoyed the flexibility of telecommuting and the environmental benefits that this brought.

Bob’s environmental efforts include his support of alternative power generation for electricity and natural gas by purchasing his needs from higher cost alternative fuel suppliers. He has been willing to experiment with new technological options to improve the fuel efficiency of his house, including aftermarket window treatments to reduce summer solar heat load. As an engineer, Bob looks for technical solutions or enhancements to lessen his environmental impact.
Justin

Justin is in his mid-forties and is a married father of two teen boys living in a single-family suburban home with a car and a minivan. Both vehicles are reasonably fuel-efficient for their class. Justin works as a government technology worker. He drives his children to and from activities and sports commitments. Justin is relatively sedentary in his discretionary activities, aside from playing soccer with his friends.

Justin expressed a strong desire for situations to be fair. He participates in his children’s carpool where the parents alternate taking the children to shared activities and is more than willing to do his fair share. He views himself as successful and willing to help out others but feels uncomfortable asking for help. Consequently, he doesn’t mind driving an extra turn if someone in the carpool is unable to, but wouldn’t feel comfortable asking other people drive for him.

Justin’s environmental views make him keen to reuse found objects. He is very angered by people throwing out perfectly working items. He feels it is a great waste, especially as he sees things that other people could use going to the landfill. He gets angry when he sees the disposal of usable goods and the missed potential benefits they could bring instead of their environmental impacts from filling a landfill. He is prepared to rescue items from the garbage for his personal use or for those he knows would be able to make use of them.

Deepak

Deepak is in his mid-forties; he is a married father of two teenage boys living in a single-family suburban home with two cars. Both vehicles are fuel-efficient, and one of them is a hybrid. Deepak works in the technology sector. He’s very involved in his
children’s lives, including helping them with their homework, driving them to activities, coaching their sports teams, and taking them on long family trips.

Deepak grew up in India and immigrated to Canada during high school. In his youth, access to motorcycles and cars was limited. Deepak has fond memories of cycling to school and taking the train for long trips.

Deepak’s new reality is as the “common taxi-service parent” taking his children to activities. He laments all the driving that his family does and has strong reservations about the value of all the extracurricular activities children are engaged in. He feels trapped in part by the lack of alternatives if he were to opt out. If he were to pull his children out of their current activities, he fears that there would be no one around for his children to play with given all the other children their age are enrolled in structured activities.

Deepak is distressed at the development occurring in his immediate neighbourhood. During recent preparations to build a new house behind his home, he found that the cutting down of visible trees bothered both him and his children, despite the fact he knew it had been a planned event for more than a decade. The visible destruction of the trees served as a metaphor for the negative aspects of development that he found unpleasant.

Deepak is fairly certain that climate change is happening and is trying to lessen his impact on the environment. He and his wife gave a great amount of consideration to the purchase of their last car around what would do the least harm. He admits that his efforts to have his family turn down the heat and shut off unneeded lights is as much about cost reduction as it is about reducing environmental impacts.
Sandy

Sandy is in her mid-forties and is a married mother of two teenage children living in a large single-family suburban home with a car and a minivan. Both vehicles are reasonably fuel efficient for their class. Sandy is an author/publisher of children’s books focusing on children with disabilities. Her husband is the owner of several printing companies that employs over 500 people. Sandy is very involved in their children’s activities; she supports them through shuttling them to various activities. Sandy is active in an advocacy group for people with Tourette’s syndrome.

Sandy and her family are vegetarians and eat restricted diets by choice. Sandy is extremely conscious of the impacts of the chemical composition of food, cleaning products, and personal-care products that are used in and around her family.

Several times in our interviews Sandy expressed deep guilt at her use of her vehicles. The emotional impact of the environmental damage is pitted against her desire to give her children the best possible start in life. Because of her financial position, she’s able to ensure that they go to the best schools and have access to whatever programs they feel they need. She’s able to afford the healthiest food and least damaging products. However, to obtain these goods, she often has to drive a lot.

Sandy’s environmentalism aligns itself with her concerns for her family. They eat an organic vegetarian diet that is local when in season. While she lives in a 5,000 square foot home, she only uses lights when needed and maintains the home climate settings at more environmental levels. Despite her family wealth, she does not engage in conspicuous consumption.
Louis

Louis is in his mid-seventies. He is a married father of three children in their mid-to-late forties. He lives in an urban condo apartment and has two cars. One of the cars is small and highly fuel-efficient; the other is a larger less efficient vehicle. Louis is retired and has recently seen his pension earnings cut in half. Louis is still active in his family’s lives as he travels to visit his children and grandchildren and his brothers.

Louis feels profound guilt at the way his generation has treated the planet. He blames environmental damage on collective ignorance of the problem. He prefers to take a collective view rather than a personal view of his actions looking to attribute his personal actions to the broader social context.

Louis is a very articulate person who can clearly define his alternatives to driving, but can also come up with reasons why he will not use them. He indicates that they would be appropriate when he moves into a retirement residence. He strongly associates driving a car to work with a person’s status. When he talked about how he had not been able to carpool, he positions these constraints in terms of how important the work was he was doing. He supports alternative transportation choices, but felt he was not able to take advantage of them. Louis seems unable to even comprehend why a person could live car free outside of medical reasons.

Louis’s environmental beliefs seem to be rooted in his views of changes that he has seen over his lifetime. This longer view of trends that he has experienced has informed his beliefs that climate change is real and needs to be addressed. It is hard to tell if his choice to live in an apartment where his minimal use of heating and lighting is a function of his environmental views or his economic state.
Charles

Charles is in his mid-fifties and is a transportation policy professional. He is married with grown children who have left home. He lives in an urban townhouse with three cars. One of the cars is fuel-efficient; the other two are less fuel-efficient. Charles likes to go on trips with his wife in their modified camper van. He feels guilt at his use of the car and the fact that his family of two has three cars.

Charles takes pride in his ability to take the bus. However, he rationalizes it as being more efficient as he does not have to look for parking. He sees the environmental benefits of it as well. He talks about the joy from going for a walk or bike riding, but takes his car to go local library or shops. He laments not using his bike more.

He holds negative views about those who live car free. He sees them as imposing on other friends and colleagues. He views those who choose to live car free as only able to do it in select circumstances—circumstances that he does not find himself in.

Conflicts and Dilemmas

While each participant has unique biographical attributes and contexts, their stories share common themes concerning personal transportation dilemmas and the emotional dimensions involved with driving. In this section, I will share some of the commonality that the research participants expressed during the study. I have identified three key theme areas and related sub-themes where multiple participants described similar experiences:

1. While participants desired to make environmentally friendly transportation choices, they faced dilemmas when they felt pressures pulling them in a different direction. This included concerns over physical Infrastructure,
perceived paradoxical situations, their expressed fear of the alternatives, their inability to make meaningful results, and their perception that they were in a transitional state.

2. Participants talked about issues that seem to indicate that their identity and their perception of social norms constrained their choices and that appeared to lead them to less environmentally desired choices. This included issues around stigmatization, acting as a bystander, and conforming to expectations.

3. Their responses to their transportation dilemmas were causing them to experience a range of feelings, predominantly guilt. This included expressions of remorse, their feelings of personal affluence triggered self-blame, their description of unfilled aspirations to do better, their identification of secondary negative consequences of their choices, their use of rationalization, and their use disavowal to help them cope with their choices.

**Theme 1: Personal Transportation Dilemmas**

Through the course of my interviews, the research participants were expressing a measure of angst concerning numerous transportation-based emotional dilemmas that they faced. There were a number of consistent areas that recurred within my interviews. They focused on the sub theme areas of (a) limitations of physical infrastructure, (b) the role of paradox, (c) fear of engaging in the alternatives, (d) perceived inability to make meaningful impact, and (e) their perception of being in transitional situations that they felt would soon pass.
**Physical infrastructure**

All participants cited infrastructure as a constraint on their ability to make environmentally appropriate personal transportation choices. Infrastructure can be difficult for people as the alternatives may be much harder to find and significantly less appealing. For example, Louis viewed them as an absolute when he talked about limited options at his long time workplace:

I was working on Pink Avenue. Pink Road. I’m sorry not Pink Avenue. There was no bus transportation 34 years ago. Thirty years ago, there’s no bus. I retired in 1989. There was no bus transportation. I had to use a car. There was no way. There is no way to work. (Louis 1)

Louis could rationalize (McWilliams, 2011) that single-occupancy driving was his only legitimate option. Louis had described how he had driven into the office only when he was younger, when he was one of the select few people working on very important material, and that when he was a manager on Pink Road he could not participate in alternatives to single-car use because he was an important manager. It seemed Louis did not want to challenge his identity of a successful manager by participating in alternatives to single-occupancy driving in to work that he viewed as acceptable for his staff.

Similarly, Sandy’s experience was that her shopping could only be practically done in her minivan:

When I go grocery shopping, there’s a whole bunch of bags; there’s no way to put that on a bike. There’s no way. With all my produce too and it’s heavy stuff. So I’m not about to, ahh I can’t imagine going all the way to the end where Farmboy is coming back with one bag of groceries then going back again with bags of groceries coming back, that just wouldn’t be efficient use of my time either. (Sandy 2)

For Sandy, her specialized organic vegetarian gluten-free diet was very important to her, and she felt it was very important to provide this to her family. She fully
understood that this required regularly shopping for bulky fruits and vegetables to provide fresh choices for her family. While she tried to incorporate trip planning so that she would pick up groceries when she was already driving places, the specific food choices that she shopped for were only available at limited stores. When she was younger, she had been able to take advantage of transit to shop for herself, but now felt the sheer volume of groceries and time required meant that driving was the only realistic option for her.

For Peter, even shopping for a more typical range of family groceries poses infrastructure dilemmas:

But to go to buy groceries, everything is more than two miles away. It is just a little bit too far away. You would have to carry four to five bags of groceries. There are no small stores. There is no real fruit or vegetable stores around here. (Peter 1)

While Peter did not have to adhere to a specialized diet, he felt that his regular shopping at any grocery store would require the use of his car.

Paradox

The feeling of being trapped was described by participants through a number of paradoxical situations that created dilemmas around their personal transportation choices. For example, Charles had rationalized (McWilliams, 2011) owning three vehicles for two drivers as prudent, based on their use. He was further confronted with a dilemma over how he used his camper van:

You have to drive there to get there. So yeah. Yes we want to be out in nature. It’s kind of perverse you live in the city so you have to drive to get to nature. [Shoulder shrug] So we are going to drive and go out to nature. And enjoy the environment. (Charles 2)
The engagement with the natural environment by driving their least efficient vehicle made their dilemmas most obvious to several participants. As Bob expressed, “There is probably the beast, the monster. But with three kids and a dog and having a tent trailer. We do a lot of camping. . . . I think next time we might consider something else” (Bob 1). For Bob, the loading his family and all their possessions into their van was an absolute requirement for them to be able to enjoy the natural environment.

Participants experienced paradoxical situations where they held conflicting views about their relationships towards cars. For Justin, carpooling was a topic that elicited strong emotions for and against the practice. When he was talking about the concept, he described it in strongly negative terms:

> How do I feel [about car pooling]? Not happy. I would have to change my life and have less time for my kids and less time for me. Less time here. So no, I wouldn’t be happy. Or be less happy than I am [laugh]. (Justin 1)

However, later when he was thinking about his actual practice and interactions with car pooling, Justin was able to appreciate many of the benefits that he was gaining from the practice:

> So I’m saving the one-fifth of gas; we’re saving one-fifth of the wear and tear on the car. Actually four-fifths. Actually, I am wrong. So we save four-fifths of each of those things. So yeah it’s good. I don’t think about it a lot. Not really. We’re not doing it for saving gas and such. We [are] doing it because we’re together. Yes, the five of us could talk in our car on the way back and forth to games. For the kids, they get to be together so it’s fun. So yeah. The gas is the main part of it. But we do it for the fun of it as well. (Justin 2)

**Fear of the alternatives**

Many of the research participants have experienced a shift into a behaviour that they felt trapped in and unable to break free from. Driving their cars seemed to alleviate a concern that participants had had and the thought of going without the benefit of their car
seemed to cause a measure of discomfort. For Bob, his transition from enjoying biking to work, then working from home and occasionally driving to work, to now driving full time to work seem to be leaving him trapped in a pattern of driving. Despite professing a love of biking and having a history of taking long cycle commutes, he has not been able to switch back to biking again. As he has stated,

So it comes down to the need for good paths, secure ones in terms of being isolated from the road. And in good shape. That really encourages people to ride. I think the turnoff is a couple of tense spots where you can get a bit dangerous. Where you’re on a busy road. As we know, it doesn’t take much to get clipped so on and so forth. You’re maimed or you’re dead. Whatever, you’re trying to do your bit. But, they can be risky. (Bob 1)

For Bob, he appears unable to move forward with his cycling plans out of a pronounced fear of being hit by a car. Bob’s fear was possibly enhanced by a recent high profile incident within a few hundred metres of his house where five experienced cyclists were run down by a driver despite the fact they were wearing bright reflective clothing while riding single file in a bike lane on a clear sunny morning (this incident was referenced by most participants concerning biking). Given that Bob’s calculated route includes the collision point, it is reasonable to assume that he is facing a dilemma around returning to cycling and his concern for his safety and his feelings of fear around cycling.

For Deepak, he had tried to return to his youth where he rode his bicycle everywhere he wanted to go. However, like Bob, he spoke about his concerns for his safety during the commute:

Just down Eagleson, some of the traffic is going in and out. When you’re going, especially when you go by the highway. It’s . . . there’s a lot of traffic. I don’t think that it is healthy. Especially going down that [road, you] take in all the fumes as you’re biking. Maybe if I biked more on trails or something. I don’t, I don’t find it, I don’t find that safe; these cars are traveling pretty fast. Going down that road. (Deepak 1)
Deepak had wanted to try cycle commuting; he had enlisted a friend to ride with him but he still found the experience too unnerving to try it a second time. While he had ridden bicycles extensively as a youth in India, his descriptions of those trips were devoid of any motor vehicle traffic, vehicle traffic that proved to be unnerving in his failed attempt to shift to cycle commuting. According to Maslow (1943) hierarchy of needs, the need for safety could be outweighing the need to engage in more environmental transportation.

Sandy was concerned about switching from using her van to do the shopping to a more environmentally appropriate transportation choice. For her, there was no immediate threat that could kill her; for Sandy, it was the impact on her food choices if she did not use her vehicle:

I would have to use public transit more often to go to different locations. Which means it would take up more of my time. I’d spend less time working. I would not have time to go to karate. I would not have time to do volunteer work. Less time to basically prepare the food that I need for my family. That’s what it would mean. . . . Maybe we’d convert, not be vegetarian anymore and we’d eat crappy food. That’s another option. (Sandy 1)

It is easy to see why a person like Sandy would be reluctant to shift her grocery shopping from using her personal vehicle to an alternative. Part of Sandy’s self-image is tied to providing her family with safe and healthy food options. Her description of “crappy food” underscores her strong dislike of options that would affect how she cares for her family.

**Perceived inability to make meaningful impact**

While participants did not quite feel like fabled Greek character Sisyphus, where their efforts were meaningless, there was a fatalistic sense that participants perceived that they were not doing enough and that they were not making meaningful contributions. There
seemed to be a sense of fatalism and that their contribution by itself really was not going to have a noticeable impact. As Justin noted, “Because it’s a worldly thing and there is nothing I can do about it anyway. As a single person. Changing the air pollution” (Justin 1). That feeling was echoed by Charles as he told me, “You know. Humans are human. [Shoulder shrug] I really, it’s unfortunate, but like a lot of things I wish more could be done. But I am not expecting them to be done” (Charles 1, lines 194–196). Sandy was more blasé as she expressed, “I gotta do what I have to do so there’s no point in me feeling guilty. If have to go run my errands” (Sandy 2).

Deepak tried to look at the problem from a higher vantage point as he considered what changes needed to take place in his neighbourhood for his actions to have meaning. “If we were the only one doing it, it’d be a lot harder. Because there would be nobody else out. Everyone else would be gone somewhere else” (Deepak 2). Deepak seem to feel that his personal changes require more macro level changes.

While Charles spent most of his time looking at the overall macro level of humanity during his interviews, in the second interview he looked more closely at his personal ability to effect change: “I consider there is a limit to what I can do personally. What I can do is what I can do personally. How much difference it makes is another story” (Charles 2). As Charles explored deeper into his experiences of what he does and does not do in support of his environmental beliefs, he began to show physical signs of distress.

But I know small things, like that you know for sure when we, when we try, when we buy appliances, we try to buy reasonably, you know, economical appliances. We don’t leave a lot of lights on generally. We have our thermostats set low in the winter and high for the air-conditioning. So you know. All those sorts of things but, yeah, I know I am aware that it’s kinda playing at the, playing at the margins in a way. We haven’t retrofitted our house to put on solar or wind or anything like
that. Still take holidays at times that involved, you know, jet travel, which is, you know, horrendous horrendously destructive for the environment. umn So this, anyway. There’s anyway, there is a limit, I’ve come to recognize my limits. And so, I think I, I try and leave it, I’m, I'm kind of aware of the whole footprint thing. And I am um, personally, you,-u-u, s-s-sort of the same thing applies. in a way. You know, you go out. You don’t want to litter, you want to take in what you need to take out what you need and those kind of things. . . . I still wouldn’t put my finger on some huge thing that I, [head shake] yeah,[tapping the side of the table with his foot] gee I decided,[shoulder shrug] seems kind of in a way, a modest way of living in a way. (Charles 2)

As Charles expressed angst at his actions and fatalistically described the effects that he could be having, I felt that he was trying to resolve the many dilemmas around his actions and that this rationalization was not fully providing him with a mental defence against what he seemed to be feeling. Adapting a psychosocial approach, that is less structured and directed, I allowed him space to try to work through his dissonance and confront his potential maladaptations (O'Neill & Nicholson-Cole, 2009) before continuing. After a brief pause, Charles switched the topic of conversation to talking about his respect for those who are able to make a difference, specifically those crusading for bicycle lanes in the downtown core and how much he respected their work. I am not certain, but I believe he may have been trying to move away from his feelings of inadequacy and talk about more positive items.

**In transition**

A common theme around participant vehicle use related to participants’ rationalization that, while they felt trapped into using their vehicles more than they wanted to, it was a transitional phase that would run its course. They felt that, in time, they would be able to live a life closer to their environmental beliefs once they progressed to the next stage. Sandy was already starting to conceptualize the changes:
Spencer will be at University. I won’t have to be dragging hockey bag everywhere. Charlie will be older, as well. I don’t know if she’ll be so much into the dance in, I won’t be using dance bags. But they, they are huge. They’re bigger than hockey bags. And so lugging that damn thing around requires a lot of room. So. When she’s, like a couple years from now when she’s going to be older. Hopefully she will not be so focused on dance as much as academics. Hence I may not need the big trunk that I have with the van that I need today. (Sandy 1)

All of the study participants appeared to feel trapped in their current circumstance but that things will improve in the future. Participants seem to be engaging in self-deception by failing to account for automotive needs of the next phase of life (Meyer, 2011). It could be that the rationalized (McWilliams, 2011) brighter future is providing a measure of emotional protection that prevents the more depressive associations of a feeling of being trapped.

It was interesting to note that 76-year-old Louis felt he was finally close to a transition to more environmentally friendly transportation in the future. Louis expressed that

our bodies are good to go. So we don’t have to move into the [retirement] residence. And ahh I’m sorry to say that there few people this building that should not be here. Because they’ve reached the point of no return. And they should move out into the residence. (Louis 2)

While Louis could see the benefits for others, he seemed to want to hold off making lifestyle changes away from driving, such as moving into a retirement residence, for as long as possible.

Peter found that he had waited too long to make transitional changes and allow his children to transition from being driven to having his children ride their bicycles unsupervised to activities and events. He noted that their recent use of bicycles was a good thing. “Personally I think it’s long overdue. Um. They should have been doing this a long time back” (Peter, 1). He seemed happy with the outcome, but regretted not
recognizing that his children had been ready to move on to what he felt was the next stage in their lives.

**Theme 2: Social Norms**

In reviewing many of the emotional dilemmas that research participants discussed, I noticed that many narratives reflected perceptions of social norms and their place within them. Participants described how social norms played a role in how they described (a) their self-worth and the negative implications of being seen as dependent by others, (b) how they spoke about feeling relegated to a position of bystander in social contexts; they described the pressure from social expectations, (c) the types of social paradox they felt confronted by, and (d) their difficulties resisting the expectation to conform to the established social norm.

**Stigmatization**

The participants expressed a number of sentiments that seemed to indicate that they were being confronted by strong social norms around driving and that they were linked to self-worth. The comments seemed to indicate a sense that there had to be something wrong with you for you not to drive. For example, when Louis was asked about not driving, he immediately assumed the only way to give up driving would be under circumstances where he was no longer capable, either by age or infirmity. He had trouble imagining why anyone would do that: “No I don’t know anyone who’s given it up on their own. Just for the sake of saying I do not to have a car anymore I would take bus transportation. I don’t know why I would like that” (Louis 1). Louis could explain in detail how he would live his life when he stopped driving, but in the world Louis lives in, it made no sense to stop driving. This sentiment is consistent with research that suggests
discrepancy between a person’s actions and stated beliefs that they would look for cues to justify continued behaviour (Stoll-Kleemann et al. (2001).

Louis, who felt bad about the environmental impacts of driving and that something had to be done, seemed to be oblivious to an alternative to the social norm of driving until a person can no longer do so. He recognized that he was going to have to transition to a lifestyle where he would not drive, but that would only come when he could no longer drive and live independently. Perhaps the thought of accepting that he was getting old was eliciting fear, and that by continuing to drive he was able to defend his personal identity of himself as a capable man with many years left before he dies.

When participants discussed situations where they or those they knew lived without a car or ability to use a car, they generally described them using strong negative affective terms. They talked about people “freeloading”, being an “unfair burden”, or forcing others to provide for them. There was an overwhelming view that not driving creates a situation of dependence. In instances where temporary circumstances left participants unable to drive, they seemed to describe those situations where their self-images were under attack. For Peter, an injury left him unable to drive, and the lack of the ability to use a personal vehicle left him feeling dependent.

I definitely prefer being independent. I don’t mind, if it was an exceptional case, I don’t mind too much, but it’s not my preferred way of doing things. . . . I do not want to rely as much on people. Because there is a difference between occasionally versus this ongoing. You don’t want to be a burden on others. Too much. (Peter 2)

The sudden shift from driving his children to coordinating rides for his children’s many activities left Peter feeling as if he was taxing the good will of his friends. He also noted
that it required additional planning and resulted in missed opportunities for his children.

He did not want to face the stigma of being seen as a taker.

Justin talked about his relatives that have could not afford a car:

We have a relative who was very poor. They make very little money. But their son has a car so the son takes them around. . . . So they are constrained with what they do, they are constrained with what they can access, they’re constrained with everything. (Justin 1)

When I probed to see how he would feel if he lived car free, Justin became highly defensive and strongly said, “I would not feel good, no. Because I’m not the type to ask for assistance like that. Cause it’s basically asking people – can you help me. Because I don’t have a car” (Justin 1). I sensed that participants felt that they were successful and good people that would not burden those around them. The idea of living car free could both challenge their self-identity as a successful giver and change them into a failure and a taker while opening them up to social shame.

**Bystanding**

While Louis was trying to hold on to an identity of an independent man, many other participants seemed to have reluctance to identify as an activist or green campaigner—an association seemingly made with the limiting or curtaining of driving behaviour (Randall, 2009). Deepak was quite certain that he was reluctant to be seen as the one to stand up and be identified as an eco-leader. “I wouldn’t call myself an outright environmentalist [laugh]. I’m concerned but if given an option I will choose, a more efficient, and, and a less harmful option” (Deepak 1). He was willing to take personal action, but not to be seen as a leader in doing so.

There was a common thread across participants’ narratives of frustrations at having knowledge of what people needed to do, but a reluctance to take action when they
saw people engaging in environmentally harmful activities such as idling their vehicles, poorly maintaining their vehicles, or littering. In talking with the participants, they clearly expressed an understanding of the problem and the corrective action they could take, but as those actions invariably involved taking a public action, it was interesting to see a reluctance to step outside of what appears to be a nonconfrontational norm to draw attention to another’s transgressions.

For Louis, challenging the social norm seemed to manifest as an irrational fear of physical attack or a social attack:

I feel that. I don’t have the guts to do, not because, I’d likely get a punch in the nose. And I don’t want to be punched in the nose. I’m sorry. But they might tell me to mind my own business. What you do then? (Louis 2)

Peter also expressed fear: “I’m not brave enough or stupid enough to go out and actively intervene and say don’t do that” (Peter 1). For Sandy, she considered action when she saw trucks belching out too much pollution. “I should take the license plate and call them. Whoever I’m supposed to call should get the truck checked out because it stinks” (Sandy 2). However she is quick to add that “no, I’ve never done that” (Sandy 2).

As Randall (2009) noted, people are more likely to withdraw and retreat rather than step up and take on a more activist identity. Participants had developed sophisticated plans for taking action, but chose not to do anything that could cause them to be seen as an environmental activist. It appeared that in the conflict between their stated values and their identity within the social norm, they had chosen to stay safe, do nothing, and feel guilt for their inaction.

While the participants identified as being environmentally conscious and aware of actions that harmed the environment, none described himself or herself as an activist.
Confronting people for minor transgressions would likely have required participants to act in a way that was not aligned with their self-image. From the interviews, I perceived indications that participants would likely support someone who did confront transgressors, but they did not see themselves as the type of person who did the confronting.

I felt that their expression of fear at physical attack if they took minor action was unrealistic. I suggest that participants are transforming their fear of the consequences of breaking the social norm into a more justifiable fear of physical attack to rationalize their inactions.

**Conforming to expectations**

Participants reported social pressure to participate in activities ranging from long family car vacations, to participating in youth activities, and elite activities which required long drives. Bob was feeling a great amount of social pressure to have his daughter play on a high-level soccer team with extensive travel:

Well she’s been part of that team before. She played with him last year. In the Ontario league. She’s been injured, but the thought is that she would be back, and the team’s got a spot in the OYSL [Ontario Youth Soccer League]. That’s putting on pressure. To have her rejoin the team. (Bob 2).

Bob felt a strong expectation for him to enrol his daughter in the team despite his desire not to. As he talked about the pros and cons of his choice; he kept returning to the expectation that she would play on the team. He described the expectations as coming from both outside and inside his family. Bob was wrestling with being seen as a good parent and providing opportunities to his talented daughter and his desire to be a good father against his desire to end the large driving commitment. As previously mentioned, Randall (2009) metaphorically talked about the feeling of “hastening the death of a loved
one by preparing for its aftermath” (p. 125) to describe the feelings people could be experiencing as they look to transition to a new norm. Bob may have been struggling with the known loss of his child not playing high level soccer for an ill-defined benefit of her participation in activities with her that do not necessarily involve as much driving.

While Deepak did not report pressure from his children to participate, he did face a dilemma of taking his children to activities he felt he should be taking them to, but that his children were not interested in doing. As he commented in our first interview:

I don’t think they care, I don’t think they would care. I don’t think I would care too much. It feels like, that we drive them everywhere because we’ve asked them to do stuff. I don’t think they would, I don’t think they’re that actually they actually, they actually don’t have this burning desire to go somewhere and do something. And, and if they didn’t do it, then that wouldn’t be the end, you know. They just, you know, they might just be is happy playing, outside basketball, or play in the park. (Deepak 1)

Part of Deepak’s expressed rationalization for continuing to enrol his children in activities was out of a stated concern that there would not actually be other local activities that his children could engage in. “If we were the only one doing it, it’d be a lot harder. Because they’re ‘d be nobody else out, everybody else is gone somewhere else” (Deepak 2). Deepak went on to talk about his concern of depriving his children of social activities. The inability to break out of the social norm could be related to two linked issues: the strength of the social norm is limiting contrary activities and a general desire not to take action when others are not also doing (Lorenzoni et al., 2007; Whitmarsh, 2009). Due to all the activities that Deepak enrolled his children in, he felt the need to purchase a new car to shuttle them around.
Theme 3: Guilt and Defences

As participants told their stories, they were quite honest about the guilt that they were feeling. Participants spoke of (a) the remorse they felt for their actions and inactions in their lives, (b) the guilt that seemed to come from the excess from affluence, (c) their unfulfilled aspirations to change and the guilt that they are left with, (d) deflecting their recognized guilt by focusing on the secondary negative consequences of their negative environmental choices. I felt that participants tried to employ mental defences of (e) rationalization and (f) disavowal to lessen the guilt that they felt for the choices that they were making in their lives.

Remorse

Both Louis and Charles accepted responsibility for what they described as their poor environmental choices during their lives; however, they engaged in splitting—that is, they seemed to split off competing or contradictory desires or commitments (McWilliams, 2011). For example, during an interview with Louis, he stated, “I feel bad because we are responsible for part of it. If you go back to the nearly 40-50 years ago . . . we didn’t worry about the environment. Remember . . . when I was your age we didn’t worry about environment” (Louis 1); in the second interview, Louis went on to say, “They are gonna blame our generation for wasting, what you think? [Laugh]” (Louis 2). Louis demonstrated remorse and visibly showed signs of angst at his generation’s actions and failures to mitigate the impacts. He appears to use broad terms such as “we” and “our generation” as the vessels for his guilt. In contrast, the language that Charles used was more general than Louis, as Charles seems to be separating himself from society as a whole: “It’s unfortunate that, that’s just, in a word, humans are very fallible people. They
are very fallible, they are capable of delusion, the capable rationalization” (Charles 1).

While he identifies with humanity, Charles identifies the separate larger group of humanity as the problem. As well, Sandy says, “So I feel guilty. That’s a long-winded answer to say I feel guilty” (Sandy 1).

**Affluence and self-blame.**

Participants’ guilt seemed to manifest itself into self-blame. As Louis reflected on his life, he lamented, “It’s a waste of, good resources. It’s the waste of nature. That’s what it is” (Louis 1). Louis had described his general high levels of consumption in general and his extensive use of personal automobiles. His reflection that this had been wasteful seemed to indicate guilt at his life lived in excess. Charles too felt a measure of material comfort as he noted, “Three cars for two people is a bit indulgent. One of them, one of them could well go” (Charles 1). I felt that Charles’s bringing up the point was recognition that he felt his personal transportation options were excessive and that he felt a measure of guilt because of this.

As Sandy reflected on the guilt she was experiencing, she talked about how she felt “a bit sad. I think I mostly feel about it.[Lower voice] I feel like it almost says sometimes that, not that I have. I mean that my lifestyle maybe a little bit too luxurious” (Sandy 1). It seemed like Sandy was rationalizing that without her family’s wealth she would not be able to afford the opportunities that required so much driving. Peter had concerns that wealth is distorting peoples’ views of the world:

And they think, ahh the sense of what is normal is a little bit skewed because were out in the suburbs, relatively well-off compared to most people in Ottawa. . . . So ahh, I think they have a bit of the skewed sense of what normal people do [Laugh]. (Peter 2)
As I talked with participants, they seemed to be conflicted between their being well enough off to afford to participate in activities that required vehicle use and their guilt from the recognition they were contributing to climate change. Not only could they afford the activities, but they could afford to use a car versus using mass transit or other more environmental options.

**Unfilled aspirations**

Participants also seemed to blame themselves for the alternatives they opted not to do when they made less environmental personal transportation choices. There seemed to be noticeable guilt around the lack of bicycle use by most of my research participants. Charles showed guilt at his limited bike use. “No. No the bike is been terribly underutilized this year. Terribly underutilized. Still. One trip out this year. It’s not very good” (Charles 2). Charles talked fondly about bike riding which could have been part of his guilt at not riding. Bob spoke at length about his love of riding and the joy he had felt in taking his bike into work, but had also only been out once in 6 months.

I considered biking to work, but haven’t started doing that just yet. I used to bike to work. I probably should get back into it. I'm just getting back into biking this year. I've actually, actually, in terms of biking into my work it’s 10 km it’s been awkward getting across the highway there time that I have surveyed the route. There’s a kind of route that is reasonable, not too risky. So I’m investigating that. I haven't actually rode to work get this year. So it's an aspiration to have. Maybe they'll start this weekend. I had a bit of initial, I wanted to do it. (Bob 1)

Both Bob and Charles seemed to display guilt over not using their bikes. They both professed a strong fondness for riding, but could not seem to work it back into their schedules.
Secondary negative consequences

Participants seemed to feel that by taking less environmentally friendly personal transportation options, they were committing moral transgressions that had negative outcomes for themselves or those around them. Charles professed his shortcomings as he explained “I’m a flawed human being (laugh) [pause] (laugh). I try not to work too much on the guilt side. We should all do more. We should all do more healthy things.” (Charles 1). Rather than focusing on the negative affect from his personal car use, Charles expressed his guilt at the health implications of his responses to his dilemma. Similarly, Sandy focused on the immediate impacts on the health of her family:

But it starts to make you think when you have kids and you know that pollution can affect the health of your children and your family. um, At least for me it made me think a little bit differently about, what are we doing out here. (Sandy 1)

For Peter, he seemed to feel that his driving of his children was limiting the cognitive development in his children and delaying their development of their sense of independence. “But I, I like the idea that they’re more independent. I think it’s overdue actually. I think people are still very afraid of what, of the evils that are out there preying on their children. Therefore people overcompensated”. (Peter 2)

Rationalization

Most of the participants appeared to be engaging in intellectualization, rationalization and to a degree moralization (McWilliams, 2011) or rational distancing (Kollmuss & Agyeman, 2002) to protect themselves from negative feelings stemming from their personal transportation dilemmas. For example, Charles recognized his perceived excesses and seemed to frame it in terms of his lifestyle requirements: “Three
cars for two people is a bit indulgent. One of them, one of them could well go. But what we’re enjoying, our van, camping around. We decided to keep it” (Charles 1).

In contrast, Sandy’s emphasis on supporting her family led her to express that she was “always trying to get from one point to another under time constraints. Which means I would use up more fuel” (Sandy 1). Throughout the interviews with Sandy, she demonstrated an understanding that her actions were in conflict with her stated environmental beliefs, but that the needs of her family were an overriding priority. She framed her discussion around her being a good mother, providing for her children in what seemed to be an effort to rationalize her choices.

For Deepak, automobile use represents the most efficient option compared to taking the bus:

It, it’s, it feels like you wasted a lot of time. You could, you could do more things in life, rather than sitting on a bus, or waiting for the bus at the bus stop. So yeah, it’s just umm, it’s, it’s yah it’s, I think you could use your time better if you get a car. (Deepak 2)

He recognizes the negative environmental implications but is able to justify them by considering the time savings. These rationalizations are in agreement with the findings of Whitmarsh (2009) where she noted how “perceived personal costs and benefits, and habit, determine car use” (Whitmarsh, 2009, p. 15).

Disavowal

Amongst the participants, I noticed instances where, given their professed environmental stance, they were describing situations where their capacity to cope appeared to be overwhelmed and they were negotiating tensions through a process of disavowal. “Disavowal permits the maintenance of two contradictory ideas without one’s influencing the other” (Bass, 2002, p. 20). With strong double bind situations it is not
surprising that participants, who were unable to satisfy both pressures, resorted to feeling that both were correct. They were able to acknowledge and fully understand their duality and continue with their desired course of action. When Sandy was asked about what she felt every time she starts her vehicle, she described it as, “Okay guilt. Guilt. But then I quickly push it out of my mind” (Sandy 1). She needed to consciously push the guilt she was feeling away in order to function. Bob referred to his minivan as a beast and a monster and felt “Having the van is probably the biggest mistake” (Bob 1). However, he further went on to state, “I know as a family we need, we certainly need two cars. So, so, it is what it is for now” (Bob 2). And Peter considers suppressing the emotional elements important to making decisions. “I tend to be very rational person. I tend to not let these things bother me too much. I never let anything bother me too much. . . . Keep things rational wherever possible. . . . I don’t go emotional I go rational instead” (Peter 2).

**Conclusion**

Throughout my analysis, I noted that my research participants were cognizant of their environmentally poor choices and genuinely felt guilt about their actions. Although they recognized their guilt and its sources, they had engaged a variety of protective strategies in order to deal with the cognitive dissonance that was created. My research participants were relying on techniques that included rationalization and isolating their affect to help manage the guilt that they were experiencing.

As my research participants were expressing concerns about their feelings of feeling trapped by social norms that were leading them to make poor environmental choices, a subtheme developed about the concern over additional negative impacts from their choice. Multiple participants talked about the negative developmental impacts on
their children. Despite what they felt was tangible proof of harm, they still continued to engage in the same pattern of activities.

As a member of my research cluster, my interviews had the effect of dredging up feelings inside me about my choices and actions. What were my dilemmas? What were my social constraints? How was I defending against them? And was I doing any tangible harm as a result?
CHAPTER 5: DISCUSSION

When I conceptualized this research, I was looking for emotional keys that could help me better understand what was preventing environmentally aware individuals from translating their concern into (transportation) actions. I had anticipated there would be barriers that could be identified, programs could be developed to address them, and a process could be laid out for others to replicate to bring about widespread behaviour change. I had hoped that the process would be simple and a community-based social marketing (McKenzie-Mohr, 1999) approach could be applied and bring about wide-scale change. As I delved into my research and the body of work around my inquiry, I quickly learned that emotions are far more complex than I had hoped, and that the ‘tangle’ of emotions surrounding environmental practices (Lertzman, 2009) would not be easily undone by a single effort.

In this final chapter, I present the implications of my findings; I discuss the complicated interrelationships between personal environmental dilemmas that appear as value action gaps (Kollmuss & Agyeman, 2002) creating a “double bind” (Bateson et al., 1956), and the guilt that people appear to be struggling with. I conclude with suggestions for future research.

My research cluster was comprised of people who not only were aware, but who also knew what they should be doing to lessen their contribution to anthropogenic climate change. Their attributes were reflective of what the Six Americas (Leiserowitz et al., 2011) had termed “Concerned”, thus raising the question, “Why were they not driving less?”
The Double Bind

Participants described feeling trapped by their choices when it came to discussing their personal transportation habits. They expressed that they understood that climate change was real and that action was needed—including action by them personally. However, they reported feeling various competing pressures that created a feeling of what Bateson et al. (1956) referred to as a double bind. Bateson et al. described a double bind as a repeated situation where a victim has a primary negative injunction and a secondary conflicting injunction with the first, and has no means of escaping from the double bind. I feel that for my research participants their primary negative injunction is to not harm the environment through personal transportation, and that social norms repeatedly provide a host of secondary injunctions that produce emotional responses through the double-bind dilemmas.

Given the participants recognized that the environment was in distress and needed attention, I felt what Latane and Darley (1970) referred to as a five-step process for determining if a person was going to take action was a relevant lens for looking at how participants were negotiating their double bind. The first four steps are concerned with awareness of the problem and a corrective course of action that establishes a primary injunction of the double bind. The fifth step, as Frantz and Mayer (2009) noted, calls for “an overarching cost/benefit analysis that impacts whether or not a person will engage in helping [or taking action]” (p. 206). The impacts of the cost-benefit calculus left participants feeling trapped and triggered various defences to manage potential emotional conflicts (i.e., the desire to address the problems, whilst responding to various pressures) (Randall, 2009).
The double binds seemed to rise from the participant dilemmas including (a) physical infrastructure, (b) paradox, (c) fear of the alternatives, (d) perceived inability to make meaningful impact, (e) in transition, (f) social norms, and (g) personal identity.

This situation of a double bind suggests a reluctance to confront one’s lifestyle. Lorenzoni et al. (2007) also wrote about this as a significant barrier “to taking action on climate change concern[ing] the prospect of having to change one’s lifestyle” (p. 453). This is perhaps because many participants seemed to consider that changing their lifestyle would only be achievable with great discomfort and sacrifice of standards of living and social image. Participants tended to be reluctant to consider changing many of their routines and habits and to consider alternative options, even when these may be overall more individually and environmentally beneficial.

When confronted with what was perceived as physical infrastructure barriers, participants gave the impression of feeling trapped in a double bind and faced the dilemma of wanting an alternative, but not believing they had one. They rationalized that the barrier was too great (McWilliams, 2011). Indeed, with infrastructure-related dilemmas, it was rare to find examples in my interviews where participants ever acknowledged that there were different solutions, let alone attempting any alternatives.

Guilt

As a result of the double binds and the pressure to conform to social norms versus acting on their pro-environmental beliefs, I observed what I perceived as strong personal dilemmas between participants’ stated pro-environmental views and self-professed poor environmental actions. I felt that participants appeared to exhibit a great amount of guilt stemming from their choices. They appeared to engage in several mental defences to
minimize the impacts of cognitive dissonance and to try to minimize the negative effect they felt. This was not always successful as I often sensed strong feelings of guilt in participants’ descriptions of their choices. I felt that this guilt had a tangled (Lertzman, 2012b) emotional relationship to the broader concerns of this investigation.

**Disavowal**

From the interview comments, I feel that the participants were conscious of their actions not being aligned with their stated beliefs. Further, their actions had elicited guilt that was causing them discomfort. Faced with this dilemma, they were forced to make a choice, be it conscious or unconscious, to either moderate their behaviour or to mentally protect themselves from the distress that their actions were causing. The engagement in ego-defensiveness (Stoll-Kleemann et al., 2001) versus changing behaviours or actions is not surprising. Kollmuss and Agyeman (2002) noted “that fear, sadness, pain, and anger are more likely to trigger pro-environmental behaviors than guilt” (p. 255). Whitmarsh (2009) identified that “since climate change is a social dilemma, and the public perceives little mitigation action being taken by others, this is a further disincentive to individual energy conservation” (Whitmarsh, 2009, p. 14). There was a lack of willingness by participants to be the only ones taking action around their transportation options. In addition to the lack of movement by others not encouraging people to change, Stoll-Kleemann et al. (2001) found that, “Participants regarded consumption as a social as well as an economic good, so found it too difficult to accept that any personal sacrifices would be worth the social gain” (Stoll-Kleemann et al., 2001, p. 113). The participants in my study had difficulty conceptualizing what it would take to stand up to the social pressures,
and instead they had developed coping strategies that worked to protect them from feeling guilty about their circumstances.

**Summary**

While each major theme that I found was pronounced in its own right, I felt that there was regular overlap as themes meshed together in a ‘tangle’ (Lertzman, 2012b) of emotions and feelings within my participants’ stories. As Hollway and Jefferson (2000) suggested, looking at themes as a whole allowed for respective nuances to emerge while maintaining linkages that helped me build understanding. In my research, I was looking for potential personal dilemmas around research participants’ personal vehicle use and the nature of their values action gaps (Kollmuss & Agyeman, 2002).

Participants in my research expressed that they felt strongly that the environment was important and that action needed to be taken soon to reduce the impacts of climate change. To varying degrees, they aligned their beliefs with their actions as they made their homes fuel efficient, they tried to eat local foods when in season, they upgraded to high-efficiency appliances, and they agreed to purchase green power for their homes. Participants expressed pride and talked about their comfort with their environmental lifestyle choices where their stated beliefs were strongly aligned with their actions. However, when they talked about their personal driving habits, the conversations became less positive.

I felt that participants had not really considered why they did what they did around their use of their cars. They still had an environmental desire; it just was not manifesting in their actions. Their decisions were being shaped by the social dynamic around them—everyone else drove to free parking at work, so they drove too; everyone
else enrolled their children in soccer, dance, piano, and hockey and drove them to these activities, so they did too. When the social norm pressed up against their strong environmental beliefs, the participants felt trapped in a double bind (Bateson et al., 1956). Participants employed a host of mental defences to help cope with the decisions they were making. Despite having engaged in splitting, dissociation, and rationalizing, the participants were still experiencing guilt.

I found it interesting that participants were very aware of the impact that their driving was having on the environment, the need for people to change, and the social pressures to drive, and the guilt that they felt around their driving. Maibach et al. (2011) identified the cluster that my research participants were drawn from as the most likely to change their habits to reduce the effects of climate change. Yet the dilemma was created when their self-images risked confrontation with the social norm; they chose to resolve their inner conflict by maintaining status quo and accepting the guilt rather than risking transformation of their personal identity.

Implications for the Programmers

As a program manager in the government, I am required to design programs that have rigor and are based on best practice. There is a regular requirement to support approaches with case studies and academic research. The section I work in became an oft-cited leader in Community Based Social Marketing as a result of its great success in anti-idling campaigns (which succeeded by nullifying the good parent secondary injunction in the double bind by framing idling as a child health issue). There is a pressure to repeat the single-issue campaign approach to the more complex issues around personal vehicle use. While an appreciation of the tangled emotions will not allow for the
creation of a sure-fire single-action campaign that will bring about changes, I hope that it will inform planners of the need to appreciate a broader picture.

When developing future programs, practitioners would have to appreciate the risks of creating defensiveness though programs that either attack activities or objects where people have attached a great deal of affect. They also need to be aware of people’s need to feel secure during a program of change. Any program that elicits emotions of helplessness and guilt could be viewed subconsciously as a threat and attack on people’s identities (Norgaard, 2006). As with my data collection, new programs would have to come at the problems from the side.

Six Americas (Leiserowitz et al., 2011) has postulated that there is a large group of people ready and willing to make changes, that the nature of the emotional complications can be placing many of them in double binds (Bateson et al., 1956), and the social constraints could be holding them back. Until the emotional cost of inaction is increased or the cost of action is decreased (Frantz & Mayer, 2009), most of this group will likely remain as bystanders. While Rogers and Beal (1957) recommended that encouragement be given innovators, care must be given to ensure that a strong green stigma is not attached to taking overt public action, or potential early adopters could recoil if they cannot identify with the new driving behaviours (Randall, 2005).

It is important to be aware of which issues innovators and early adopters are already concerned about. Randall (2005) noted that “to some extent we all choose which social and cultural issues we attune ourselves to, which ones we treat like the air we breathe, and which ones we come to question” (p. 14). Looking at the issue of concern, Schein (1996) talked about “all forms of learning and change start with some form of
dissatisfaction or frustration generated by data that disconfirm our expectations or hopes” (p. 60). Identifying dissatisfaction could start by looking for the double binds within the population. From my data, there was a strong desire by participants to be socially seen as good parents. Although changing the view of a good parent to include less driving will be a large task, my research seems to support it as a path to success.

Designing successful campaigns or programs that encourage early adopters and innovators to take action is complicated. Wolf and Moser (2011) felt that “campaigns should target opinion leaders—individuals considered particularly trustworthy by specific segments of the population” (p. 17). While this is an effective tactic, I feel that opinion leaders will be just as aligned with the social norm as the rest of the group they are a part of and as concerned with violating norms if the leaders are not able to change them.

As a program manager in the transportation domain this study provides me with a guide to use when approaching new projects. While it does not divine a clear path to a single solution, it offers boundaries within which I should be able to prepare program initiatives with the best chance for success. Likewise, it provides me with warnings of the areas which could undermine programs should I disregard the research.

**Implications guide**

There is strong evidence to suggest that there are significant numbers of people ready to adopt more environmental choices (Leiserowitz et al., 2011) and that focusing on leaders (Wolf & Moser, 2011) will likely be the best place to demonstrate change. However, in planning new programs, managers will need to consider possible double binds (Bateson et al., 1956) that could be holding people back from taking actions they are inclined to support. New programs will need to consider how best to reframe the
issue to nullify the secondary injunction will allow for the greatest chance of success. They will need to consider what the social norm is around activities and what are the costs to transgress the norm (Latane & Darley, 1970). Managers will have to look for respected champions who can lead early adopters (Rogers & Beal, 1957) on a path that others will be comfortable following.

**Real world application**

Using the implications guide, I can imagine challenging the “good parent” driver norm in my community. I will need to address the double bind (Bateson et al., 1956) without attacking individuals. I feel that I can reframe the secondary negative injunction from “good parents drive their children” to “good community members walk their children” if I can create an effective community-based alternative. As the former vice-president of the second largest soccer club in Ontario, I feel I can function as the kind of leader that Wolf and Moser (2011) called for. I feel that I can design and implement a community-based soccer program at local fields within walking/biking distance. By collaborating with my community association, I will anchor my messaging around community. Additionally, I will highlight health benefits of the walk and the emotional benefits of talking with children during the stroll to the soccer field. If successful, I will be able to share the approach as a way of strengthening communities with a spill-over benefit of reducing double binds.

**Lessons Learned**

This was a small-sized study that evaluated participants to a modest level of detail. As such, it is difficult to infer findings to the larger population. However, my analysis of the materials has identified key themes that resonate with other work in the
field (Bristow, Tight, Pridmore, & May, 2008; Kollmuss & Agyeman, 2002; Leiserowitz et al., 2011; Randall, 2009; Stoll-Kleemann et al., 2001; Whitmarsh, 2009).

As I noted earlier, my strong personality and views led to difficulties during my pilot interview. While my precautions prevented a disastrous outcome in the main portion of my study, my personal style may have contributed to counter transference (Cartwright, 2004) as I was conducting my interviews. My subtle cues could have altered the responses given by participants as I reacted to their narrative. As an avid cycle commuter, I felt very conscious of defensive replies during stories of how cycling was a challenge for participants.

While counter transference may have been the area I was most conscious of influencing my findings, I also recognize that I am new to using qualitative methods in general and the psychoanalytically informed methodology, specifically. Although I read through a number of key methodology thought leaders in the field (Cartwright, 2004; Hollway & Jefferson, 2000; Lertzman, 2009; Wengraf, 2001), I recognize that I have more to learn about the techniques of this interview method. That said I feel that this is a valuable piece of research.

**Recommendations for Future Research**

While my research was limited in scope, I feel that it is an important area if real action on human-made climate change is to continue to make inroads in people’s automotive practices. I feel that further study of environmentally motivated individuals’ personal transportation habits would help triangulate my findings and potentially identify additional areas that have relevance to understanding the tangle of emotions (Lertzman,
2012b) that appear to be preventing individuals such as my research participants from taking action around their use of their personal motor vehicles.

While the Six Americas (Maibach et al., 2011) studies have identified segments of the population who have shown an interest in being innovators and early adopters (Rogers & Beal, 1957), convincing them to act on this interest in the realm of personal transportation is proving difficult. An improved understanding of the perceived values action gap (Kollmuss & Agyeman, 2002) would assist in the development of policy and infrastructure planning. Research into identifying the types of emotional supports that would allow environmentally engaged individuals to work to change their personal transportation habits would be beneficial for the development of new environmental programs.

This small study has begun to identify psychosocial elements that seem to be limiting action amongst a key segment of the population in the transportation domain. It is important to follow up with additional study so that a better understanding of the emotional connections specific to personal vehicle use can be learned. Developing new approaches to effectively respond to social pressures that affect individuals’ identities would be important to achieving results.

**Conclusion**

I have come to appreciate that people’s relationships to personal transportation are highly complex and emotionally grounded. By listening to my research participants and hearing their struggles with their dilemmas, I have come to better understand that the values action gap (Kollmuss & Agyeman, 2002; Stoll-Kleemann et al., 2001) is definitely more of a tangle of emotions (Lertzman, 2012b). I have learned that my interpretations of
outward signs of apathy around people’s driving choices may be a sign of too much emotion rather than apathy towards the environmental damage. I have seen that people use a wide array of emotional defences to reduce the effects of emotional pain from what people feel is their being trapped in situations of double binds (Bateson et al., 1956). I have come to recognize the constraints that social norms place on any program that I prepare and that individual identities are heavily guarded and will enact strong defences to protect them. For most people, overcoming these barriers will not be easy or happen quickly.

My research into the emotional lives of my participants was as much an exercise in understanding my field as it was an auto-ethnographic study in understanding myself. I am grateful to my research participants who co-created my understanding and travelled with me on my voyage of discovery. I look forward to continuing my own personal work with a renewed confidence that comes with knowledge, including the knowledge that I need to know more.
References


Behavioral Science, 1(4), 251-254.


Appendix A: Email invitation

Greetings,

My name is Andrew Pope, and this research project on personal transportation is part of the requirement for a Masters of Arts in Environmental Education and Communications at Royal Roads University (RRU).

As a part of my research I am asking you to take this survey or forward it on to someone that you feel would consider themselves to be environmentally aware or active.

The research will consist of this survey and is foreseen to take 15 minutes to complete. The questions will primarily refer to personal transportation habits and views.

For your efforts in completing the survey, your name will be entered into a draw for a pair of Senators tickets.

With your permission, I will be conducting some follow on interviews with some people focusing on your experiences with personal transportation. If you are interested and available for interviews, please fill in your name at the end of the survey.

Thank you again for your consideration.

Cheers

Andrew Pope

To reach the survey, please follow the link:

http://www.zoomerang.com/Survey/WEB22FMPFKQZFP
Appendix B: Personal Transportation Survey

Question 1

My name is Andrew Pope, and this research project on the barriers and complications to personal transportation change is part of the requirement for a Masters of Arts in Environmental Education and Communications at Royal Roads University (RRU). My credentials with Royal Roads University can be established by emailing Dr. Rick Kool. The research will consist of this survey and is foreseen to take 20 minutes to complete. The questions will primarily refer to personal transportation habits and views. In addition to submitting my final report to Royal Roads University in partial fulfillment for a Masters of Arts, I will also be sharing my research findings with my employer, Natural Resources Canada. Depending on the findings, the information could be used for transportation related programs. A copy of the final report will be published and archived in the RRU Library. The information you provide will be summarized, in anonymous format, in the body of the final report. At no time will any specific comments be attributed to you unless your specific agreement has been obtained beforehand. All documentation will be kept strictly confidential. The anonymous data will be shared with other researchers conducting similar research. Due to the difficulties removing an individual’s submission once it has been made anonymous, submitted data will not be removed from the study. As the survey responses are processed and stored in the United States, you are advised that its governments, courts, or law enforcement and regulatory agencies may be able to obtain disclosure of the data through the laws of the United States. You are not compelled to participate in this research project. If you do choose to participate, you are free to withdraw at any time without prejudice. Similarly, if you choose not to participate in this research project, this information will also be maintained in confidence. Your completion of this survey will constitute your informed consent.

I agree and accept to participate
I decline to participate

Question 2 - What is your gender?

Female
Male

Question 3 - What is your age?
**Question 4** - Please indicate the highest level of Education you have attained:

Elementary School (up through grade 4)
Grade School graduate (up through grade 8)
Some High School
High School Graduate
Some College
College Graduate
Some Graduate School
Post Graduate Degree
No Formal Education or Schooling

**Question 5** - How sure are you that Climate Change (is happening/is not happening)?

Extremely sure Climate Change is happening
Very sure Climate Change is happening
Somewhat sure Climate Change is happening
Somewhat sure Climate Change is not happening
Very sure Climate Change is not happening
Extremely sure Climate Change is not happening

**Question 6** - I could easily change my mind about Climate Change.

Strongly agree
Somewhat agree
Somewhat disagree
Strongly disagree
Don't know

**Question 7** - How important is the issue of Climate Change to you personally?

Extremely important
Very important
Somewhat important
Not too important
Not at all important
Don't know
**Question 8** - How worried are you about Climate Change?

- Very worried
- Somewhat worried
- Not very worried
- Not at all worried
- Don't know

**Question 9** - When do you think Climate Change will start to harm people in Canada?

- They are being harmed now
- In 10 years
- In 25 years
- In 50 years
- In 100 years
- Never
- Don't know

**Question 10** - The actions of a single individual won't make any difference in Climate Change.

- Strongly agree
- Somewhat agree
- Somewhat disagree
- Strongly disagree
- Don't know

**Question 11** - New technologies can solve Climate Change, without individuals having to make big changes in their lives.

- Strongly agree
- Somewhat agree
- Somewhat disagree
- Strongly disagree
- Don't know

**Taking action in your own life**

**How likely are you to:**
**Question 12** - Install new insulation in the attic and/or walls

- Already have done this
- Like to/probably will
- Like to/probably won’t
- No intention to do this
- Not applicable

**Question 13** - Caulk and weather-strip the home to reduce drafts

- Already have done this
- Like to/probably will
- Like to/probably won’t
- No intention to do this
- Not applicable

**Question 14** - Purchase an energy-efficient home furnace

- Already have done this
- Like to/probably will
- Like to/probably won’t
- No intention to do this
- Not applicable

**Question 15** - Purchase an energy-efficient home air conditioner

- Already have done this
- Like to/probably will
- Like to/probably won’t
- No intention to do this
- Not applicable

**Question 16** - Change most of the light bulbs in your home to high energy-efficiency LEDs or compact fluorescents (CFLs)

- Already have done this
- Like to/probably will
- Like to/probably won’t
- No intention to do this
- Not applicable
Question 17 - Turning Off Lights

Always do this
Often do this & intend to do more often
Often do this & intend to do the same
Sometimes do this & intend to do more often
Sometimes do this & intend to do the same
Rarely do this & intend to do more often
Rarely do this & intend to do the same
Never do this & intend to do more often
Never do this & intend to do the same
not applicable

Question 18 - In the summer, set the thermostat to 24 degrees C or warmer (76 degrees F), or use less air conditioning …

Always do this
Often do this & intend to do more often
Often do this & intend to do the same
Sometimes do this & intend to do more often
Sometimes do this & intend to do the same
Rarely do this & intend to do more often
Rarely do this & intend to do the same
Never do this & intend to do more often
Never do this & intend to do the same
not applicable

Question 19 - In the winter, set the thermostat to 68 degrees or cooler …

Always do this
Often do this & intend to do more often
Often do this & intend to do the same
Sometimes do this & intend to do more often
Sometimes do this & intend to do the same
Rarely do this & intend to do more often
Rarely do this & intend to do the same
Never do this & intend to do more often
Never do this & intend to do the same
not applicable
Question 20 - Do you regularly compost or use a municipal compost collection service?

Always do this
Often do this & intend to do more often
Often do this & intend to do the same
Sometimes do this & intend to do more often
Sometimes do this & intend to do the same
Rarely do this & intend to do more often
Rarely do this & intend to do the same
Never do this & intend to do more often
Never do this & intend to do the same
Not applicable

Question 21 - Do you eat local food (100 mile diet, Community Supported Agriculture, community garden)

Always do this
Often do this & intend to do more often
Often do this & intend to do the same
Sometimes do this & intend to do more often
Sometimes do this & intend to do the same
Rarely do this & intend to do more often
Rarely do this & intend to do the same
Never do this & intend to do more often
Never do this & intend to do the same
Not applicable

Question 22 - Would you walk or bike instead of drive …

Always do this
Often do this & intend to do more often
Often do this & intend to do the same
Sometimes do this & intend to do more often
Sometimes do this & intend to do the same
Rarely do this & intend to do more often
Rarely do this & intend to do the same
Never do this & intend to do more often
Never do this & intend to do the same
Not applicable
Question 23 - Would you use public transportation instead of driving ... 

Always do this
Often do this & intend to do more often
Often do this & intend to do the same
Sometimes do this & intend to do more often
Sometimes do this & intend to do the same
Rarely do this & intend to do more often
Rarely do this & intend to do the same
Never do this & intend to do more often
Never do this & intend to do the same
Not applicable

Question 24 - Would you use a car pool instead of driving alone ... 

Always do this
Often do this & intend to do more often
Often do this & intend to do the same
Sometimes do this & intend to do more often
Sometimes do this & intend to do the same
Rarely do this & intend to do more often
Rarely do this & intend to do the same
Never do this & intend to do more often
Never do this & intend to do the same
Not applicable

Question 25 - Would you use efficient driving techniques (avoiding speeding, hard accelerations and hard breaking)

Always do this
Often do this & intend to do more often
Often do this & intend to do the same
Sometimes do this & intend to do more often
Sometimes do this & intend to do the same
Rarely do this & intend to do more often
Rarely do this & intend to do the same
Never do this & intend to do more often
Never do this & intend to do the same
Not applicable
Question 26 - Would you purchase a car that that averages 30 miles per gallon or more (7.8L/100 km or less)

Already have done this  
Like to/probably will  
Like to/probably won’t  
No intention to do this  
Not applicable

Question 27 - Would you consider regularly carpooling

Already have done this  
Like to/probably will  
Like to/probably won’t  
No intention to do this  
Not applicable

Question 28 - Would you join a car-sharing service (VirtuCar, Zip Car, CommunAuto)

Already have done this  
Like to/probably will  
Like to/probably won’t  
No intention to do this  
Not applicable

Question 29 - How many drivers are there in your household?
1  
2  
3  
4  
5  
6+

Question 30 - How many motorcycles, cars, and light trucks are there in your household?
1  
2  
3  
4  
5  
6+
Question 31 - How much of an inconvenience for your family would it be to live car free?

I already live car free
Extremely easy adjustment
Very easy adjustment
Somewhat easy adjustment
Somewhat difficult adjustment
Very difficult adjustment
Extremely difficult adjustment
I could never live car free
Don't know

Question 32 - How much of an inconvenience for your family would it be to live with only one car?

I already live with one car
Extremely easy adjustment
Very easy adjustment
Somewhat easy adjustment
Somewhat difficult adjustment
Very difficult adjustment
Extremely difficult adjustment
I could never live with one car
Don't know

Question 33 - How old were you when you bought your first car?

Question 34 - What were you doing when you started to regularly ride a bus (school bus or transit)?

Kindergarten
Primary (grade 1-3)
Junior (grade 4-6)
Intermediate (grade 7-8)
High school (grade 9+)
University or college
Other: _______________
Don't know

Question 35

If you would like to be entered into a draw for a pair of Senators hockey tickets, please provide your email address below. Your email address will only be used for purposes of the draw and will be deleted afterwards.

Email address
**Question 36** - Name and Address (U.S) If you are willing to participate in follow on interviews about your personal transportation choices, please provide your name, email, and phone number. You may elect to withdraw at a future date if you so chose.

Name
Phone number
Email Address
Appendix C: FANI Preamble and initial questions

Introduction

Thank you for participating in the interview portion of my research.

Your thoughts and experiences will be important my research. There are no right or wrong answers as everyone is struggling with difficult choices around personal transportation and the environment.

Because this relationship can be hard, I would like to keep an informal conversational style during the interview. However, given that what you say is important my research I will more be actively listening and talk.

Do you have any questions before we begin?

Questions

1. Have you ever had experiences where you couldn't drive?  
   If not, what do you think it would be like if you personally could not drive?

2. What would support you to drive less? Have you had any experiences with these?

3. Can you tell me of situations where your personal transportation choices made you feel uncomfortable?

4. When selecting a new car purchase, what sort of considerations have you made around the model options? How do you feel as you evaluate these options?

5. Can you think of a time when you felt that going car free would be an option? What would being car free mean for you?

6. What comes to mind when you think of environmentally friendly transportation?

7. Can you think of the time when you felt you had made a good environmental transportation choice?
Appendix D: Research Consent Form

RESEARCH CONSENT FORM

My name is Andrew Pope, and this research project, is part of the requirement for a Masters of Arts in Environmental Education and Communications at Royal Roads University. My credentials with Royal Roads University can be established by emailing Dr. Rick Kool.

This document constitutes an agreement to participate in my research project, the objective of which to understand the reasons ecological aware individuals are not taking action in their transportation choices.

The research will consist of two one-hour recorded interviews. The questions will refer to your transportation experiences and choices. In addition to submitting my final report to Royal Roads University in partial fulfillment for a Masters, I will also be sharing my research findings with Natural Resources Canada to aid the department in creating appropriate transportation programs.

Information will be recorded in hand-written format and videotaped. Where appropriate, the information will be summarized, in anonymous format, in the body of the final report. At no time will any specific comments be attributed to you unless specific agreement has been obtained beforehand. All documentation will be kept strictly confidential.

Interview recordings and notes will be held offline in digital format for a period of five years. If they are needed beyond that time, your permission will be sought or they will be deleted.

A copy of the transcript and video from your interviews will be sent to you after your last interview.

You are not compelled to participate in this research project. If you do choose to participate, you are free to withdraw at any time without prejudice. Similarly, if you choose not to participate in this research project, this information will also be maintained in confidence.

By signing this letter, you give free and informed consent to participate in this project.

Name: (Please Print): __________________________________________________

Signed: _____________________________________________________________

Date: _______________________________________________________________