SOCIALLY CONSCIOUS CONSUMER BEHAVIOUR: THE ROLE OF ETHICAL SELF-IDENTITY IN THE USE OF MENTAL ACCOUNTING

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Abstract

Consumers are becoming more socially conscious in their purchasing behaviours (Freestone & McGoldrick, 2008), and for some it is becoming a more salient aspect of buying criteria (Memery et al., 2005). Individuals' conceptions of themselves can influence behaviour (Aquino et al., 2009). An on-line experiment demonstrated the importance of consumers' ethical self-identity (ESI) in the mental processing of socially conscious consumer decisions. Findings reveal not only how individuals process decisions, but how they react to external stimuli. This study categorizes consumers into three levels of ESI, and shows differences and similarities between them. Individuals who feel an ethical orientation is part of their core self-identity were more inclined to mentally consult upon their previous behaviours when considering their current choice. Additional findings indicate that an assimilation effect took place; priming the environment led to more environmental purchase intentions (Herr, 1989). This study provides important insight into socially conscious consumer behaviour.

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1. Introduction & Problem Statement

Companies are increasingly responding to society's demands for more socially responsible goods (D'Astous & Legendre, 2009; Mohr, Webb, & Harris, 2001). There has recently been a shift toward socially and environmentally conscious purchasing behaviours by many consumers (Freestone & McGoldrick, 2008), and for some consumers it is becoming a more salient aspect of buying criteria (Memery, Megicks, & Williams, 2005). This type of consumer behaviour is becoming an increasingly important concept for marketers today.

The question that this research addresses is: what factors play a role in determining an individual's decision to partake, or not to partake in socially conscious consumer behaviour, and what are the underlying processes that guide this decision?

Focusing on individual consumer behaviours "reveals competing priorities, paradoxical outcomes, and the nature of compromises reached in real decision processes" (McDonald, Oates, Young, & Hwang, 2006, p. 529). These inconsistencies, characterized by consumer compromises and tradeoffs between products, behaviours and domains (Memery et al., 2005), are the main focus of this research. "Emphasizing the plurality and diversity of each consumer" is important to move the discussion forward (McDonald et al., 2006, p.529). Understanding which underlying forces, situations and individual differences play a role in consumer decisions is an important step in fully understanding socially conscious consumer behaviour.

Individuals' conceptions of themselves can influence their behaviour (Aquino, Reed, Felps, Freeman, & Lin, 2009). In this research, consumers' views of their ethical

self are examined as a driving force in determining socially conscious behaviour. Furthermore, consumers are thought to make mental calculations and trade-offs in order to justify their failure to behave in a socially conscious manner. These mental processes are examined in conjunction with ethical self-identity in order to illuminate the process through which consumers choose or reject socially conscious consumer behaviour.

The framework of this research is as follows: (1) literature in the areas of socially conscious consumer behaviour, ethical self-identity, neutralization, and mental accounting is reviewed, (2) hypotheses are constructed and presented, (3) an experimental design to test the hypotheses is presented, (4) the results of the pilot study and the main study are presented, and (5) the results and implications of this research are discussed.

2. Literature Review

2.1 Socially Conscious Consumer Behaviour

Even though a shift towards more socially conscious consumer behaviour seems to be occurring, there are still many inconsistencies between expressed consumer attitudes and consumer behaviours, and even between behaviours in different situations (D'Astous & Legendre, 2009). This inconsistency in consumer behaviour has been addressed in previous research, and is especially obvious in the lack of a consistent definition of socially conscious consumer behaviour.

Socially conscious consumer behaviour can be found under various labels in the literature, many of which were considered for this research. Socially responsible, ethical, and moral have all been used interchangeably with the term socially conscious (Caruana, 2007; Chatzidakis, Hibbert, & Smith, 2005; D'Astous & Legendre, 2009) (See Table 2.1). Socially responsible consumer behaviour has been defined as "the perceived effect of consumer choice on social, environmental and safety matters" (Leigh, Murphy, & Enis, 1988, p. 5), or as striving to "protect and improve the social quality of life" (Davis, 1975, p. 24). The term ethical can be defined as "a decision that is both legal and morally acceptable to the larger community" (Jones, 1991, p. 367), and it is important to emphasize that this definition encompasses more than only legal issues. Generally speaking, ethical consumer activity usually involves positive choice behaviours or negative consequence avoidance behaviours (Szmigin, Carrigan, & McEachern, 2009). Ethics are often considered to involve moral undertones (Memery et al., 2005). This may be why, often, issues of morality and moral decision making are also used in the

consumer behaviour context (Caruana, 2007). "Morality is concerned with the norms, values and beliefs embedded in social processes which define right and wrong for an individual or community" (Crane & Matten, 2004, p. 11). Because consumer behaviour may have negative consequences in some capacity, there is an implied moral quality to these decisions (Caruana, 2007). Also, since ethical consumption is considered to be moral in nature, it should follow a moral decision making process (Caruana, 2007). The moral decision making process consists of four steps. An individual must "a) recognize the moral issue, b) make a moral judgment, c) resolve to place moral concerns ahead of other concerns, and d) act on the moral concerns" (Chatzidakis et al., 2005, p. 695). When consumers recognize the moral issue and make a judgment, it does not necessarily mean that they will choose the more moral option, or be able to act on it. Social processes and norms, and how they are internalized by the individual, play a significant role in defining what it means to be a responsible consumer (Caruana, 2007).

Table 2.1 Summary of Labels

Label	Defined as:
Socially responsible	"the perceived effect of consumer choice on social, environmental and safety matters" (Leigh et al., 1988, p. 5) Or as striving to "protect and improve the social quality of life" (Davis, 1975, p. 24)
Ethical	"a decision that is both legal and morally acceptable to the larger community" (Jones, 1991, p. 367)
Moral	"Morality is concerned with the norms, values and beliefs embedded in social processes which define right and wrong for an individual or community" (Crane & Matten, 2004, p. 11)

2.1.1 Defining socially conscious consumer behaviour. Often, the first step in investigating an emerging type of consumer is to create a demographic profile of that individual. Webster (1975) tries to do just that, and defines the socially conscious consumer "as a consumer who takes into account the public consequences of his or her private consumption or who attempts to use his or her purchasing power to bring about social change" (p.188). While this definition suggests it is the *action* and not the individual that defines the consumer behaviour, an attempt is made to place consumers into a socially conscious profile by measuring personality, attitudes and socioeconomic variables. Unfortunately, the results of this study are very weak. Leigh, Murphy and Enis (1988) also attempt unsuccessfully to find an appropriate measurement tool to summarize demographic and psychographic characteristics of the socially conscious consumer in a consistent way. Their recommendation is that research in the area should not focus on individual characteristics, but on the perceived consequences of consumer decisions (Leigh et al., 1988). Again, this places the emphasis back on the *actions* of the consumer, and not on individual demographic characteristics.

A systematic review of the literature regarding socially conscious consumerism to date was conducted by the Network for Business Sustainability (Cotte & Trudel, 2009). This review finds that demographics cannot explain how attitudes towards socially conscious consumption are formed by consumers, and that past research shows no consensus whatsoever in this area (Cotte & Trudel, 2009). The review did find that there are some personality variables that can be predictors of positive attitudes though generally there is little consensus in the findings on psychographic variables. This was attributed, by the authors, to the multitude of ways that socially conscious consumer

behaviour has been measured over time. The review also supports the idea that there is no clear consensus in the literature on the definition of socially conscious consumer behaviour. Since little consensus exists on how to define and measure this concept, a closer look at a sample of definitions from the literature is taken in the following paragraphs in order to gain a better understanding of the depth and complexity of socially conscious consumer behaviour.

Obviously, the level of an individual's socially conscious consumer behaviour can occur on a continuum from low to high. At the high end of the continuum, consumers known as voluntary simplifiers are defined as having "a belief system and a practice of an alternative culture to conspicuous consumerism. Voluntary simplifiers' lifestyles and practices center on the reduction of consumption. They pursue nonmaterial satisfactions and value nature, people, and self-growth above material possession" (McDonald et al., 2006, p. 531). Consumers with a slightly more lenient view of socially conscious consumption that focus specifically on environmental concerns are labeled as green or environmental consumers and are defined as consumers that avoid any product that might "endanger the health of the consumer or others; cause significant damage to the environment during manufacture, use or disposal; consume a disproportionate amount of energy; cause unnecessary waste; use materials derived from threatened species or environments; involve unnecessary use or cruelty to animals [or] adversely affect other countries" (Elkington & Hailes, 1989, p. 93). Anti-consumerism and environmental concerns are not the only types of ethical consumer behaviour, and more comprehensive definitions attempt to accommodate additional domains. A broader definition takes into account social aspects as well, "ethical consumers make decisions that are economically,

socially and environmentally responsible" (Shaw, Grehan, Shiu, Hassan, & Thomson, 2005, p. 196), or ethical consumer behaviour "refers to decision making, purchases, and other consumption experiences that are affected by the consumer's ethical concerns" (Cooper-Martin & Holbrook, 1993, p. 113). These definitions may be more comprehensive, but they are also quite vague and difficult to conceptualize. A more specific definition of ecologically and socially conscious behaviour is, "consumer behaviour undertaken with the *intention* of having a positive (or less negative) effect" on the environment and on other people, "and relates to issues such as labour rights and the impacts of businesses on the communities in which they operate" (Pepper, Jackson, & Uzzell, 2009, p. 126). The focus here is on the intention of the consumer.

A different approach to defining socially conscious consumer behaviour has been by defining the socially conscious good; any consumer who *intentionally* purchases such goods would be seen as exhibiting socially conscious consumer behaviour (Cotte & Trudel, 2009). Again, there is an emphasis on the intention of the consumer for the behaviour to truly be socially conscious. With this understanding, ethical consumption can be considered "the *conscious* and *deliberate* decision to make certain consumption choices due to moral and personal beliefs" (Megicks et al., 2008, p. 639).

Examples of potential socially conscious good choices include: green products, ethical investments (Chatzidakis et al., 2005), organic produce, fair trade products, and products that address animal welfare, societal concerns, or human rights issues (Shaw et al., 2005). Other behaviours that reflect socially conscious consumer behaviour are consumer boycotting, pressure groups (Freestone & McGoldrick, 2008), and consumer citizenship (Caruana, 2007). This list is by no means exhaustive, but shows the vast array

of ways that a consumer can exhibit their socially conscious consumer behaviour (See Table 2.2).

This small sampling shows that socially conscious consumer behaviour can be defined in many different ways, and by many different activities. For this research, this type of behaviour will go above and beyond legal obligations, and it will take into account a range of issues relevant to society, the environment, the welfare of others or some combination of these issues. More simply put, and the way it will be defined here is: consumer behaviour can be considered socially conscious when the social or environmental impact of the behaviour is consciously and deliberately taken into account when making a consumer decision. Deciding to behave in a socially conscious way is dependent on the consumer being aware and informed about the consequences of their decisions beforehand (Caruana, 2007).

Regardless of what definition is used, consumers who exhibit socially conscious tendencies may not always choose the most ethical option. Social and economic forces put pressure on consumers who wish to purchase ethically, and so behaviour is not always consistent and sometimes it is quite contradictory (Szmigin et al., 2009). Socially conscious consumers will probably display a mixture of different behaviours across situations. There are many sources of information about ethical consumption available, and so not only do researchers define it differently, but each individual will have their own ideas and opinions on how to consume consciously (Szmigin et al., 2009). There are many external influences that also affect purchase decisions other than the desire to behave ethically including contextual influences, and obligations to other relationships such as family and community. Individuals will also have different cognitive capacities

that influence their choices. They must make compromises in the face of all of these forces, as every individual has different circumstances. Bearing in mind all of the factors mentioned above will help in understanding why consumers sometimes buy ethically and sometimes not (Szmigin et al., 2009).

Table 2.2 Sample of Definitions

Entity:	Term used:	Definition:
Consumer	Socially conscious consumer	This is "a consumer who takes into account the public consequences of his or her private consumption or who attempts to use his or her purchasing power to bring about social change" (Webster Jr, 1975, p. 188)
	Voluntary simplifiers	These consumers have "a belief system and a practice of an alternative culture to conspicuous consumerism. Voluntary simplifiers' lifestyles and practices center on the reduction of consumption. They pursue nonmaterial satisfactions and value nature, people, and self-growth above material possession" (McDonald et al., 2006, p. 531)
	Green or environmental consumers	These are consumers that avoid any product that might "endanger the health of the consumer or others; cause significant damage to the environment during manufacture, use or disposal; consume a disproportionate amount of energy; cause unnecessary waste; use materials derived from threatened species or environments; involve unnecessary use or cruelty to animals [or] adversely affect other countries" (Elkington & Hailes, 1989, p. 93)
	Ethical consumers	"Ethical consumers make decisions that are economically, socially and environmentally responsible" (Shaw et al., 2005, p. 196)
Intention	Socially conscious behaviour	This is "consumer behaviour undertaken with the intention of having a positive (or less negative) effect" on the environment and on other people, "and relates to issues such as labour rights and the impacts of businesses on the communities in which they operate (Pepper et al., 2009, p. 126)
	Ethical consumer behaviour	This "refers to decision making, purchases, and other consumption experiences that are affected by the consumer's ethical concerns" (Cooper-Martin & Holbrook, 1993, p. 113)
	Ethical consumption	This is "the conscious and deliberate decision to make certain consumption choices due to moral and personal beliefs" (Megicks et al., 2008, p. 639)
Goods		Green products, ethical investments (Chatzidakis et al., 2005) Organic produce, fair trade products, and products that address animal welfare, societal concerns, and human rights issues (Shaw et al., 2005) Consumer boycotting, pressure groups (Freestone & McGoldrick, 2008) Consumer citizenship (Caruana, 2007)

2.2 Self-Identity

Although demographic and psychographic characteristics have not proven fruitful in creating a profile of the socially conscious consumer in the past, other individual characteristics may still play a role in the consumer decision making process. One such characteristic is the self-identity of the consumer. Self-identity is defined "as the pertinent part of an individual's self that relates to a particular behaviour" (Michaelidou & Hassan, 2008, p. 164). Self-identity has been looked at in the consumer context in the past (Cherrier, 2006; Hustvedt & Dickson, 2009; Michaelidou & Hassan, 2008; Valor, 2007). Consumer self-identities were able to aid in predicting attitudes and purchase intentions involving organic apparel and food consumption (Hustvedt & Dickson, 2009; Michaelidou & Hassan, 2008), as well as non-plastic bag consumption (Cherrier, 2006). These examples show the applicability of this concept in a socially conscious consumer context.

The term self-identity is interchangeable with terms such as self-concept and self-perception (Hustvedt & Dickson, 2009). Individuals may have many self-identities, or a network of self-identities, some more salient than others (Aquino et al., 2009). Self-identities can be influenced and shaped by many different things including, values, motivations, goals, and life experience to name a few (Aquino et al., 2009). Although self-identities are generally thought of as relatively enduring over time (Hustvedt & Dickson, 2009), they can be considered to be flexible entities that transform to incorporate changes in the individual's priorities, circumstances or an array of other influencing factors. "Identity is not something that is constructed and then finished but is instead always under construction" (Cherrier, 2006, p. 520). For example, in a study

involving new parents as consumers, participants were awakened to ethical issues with the birth of their child which led to their ethical self-identities becoming more self-important (Carey, Shaw, & Shiu, 2008). Being ethical consumers was included in the construction of their new identities as parents. This ethical self-identity is just one of the many identities a person may or may not include in their network of self-identities. An ethical self-identity, like any other self-identity, can become part of an individual's overall self-definition, and is of special interest to this research (Aquino & Reed, 2002). As we have seen, the term ethical often implies moral undertones, so the concept of moral self-identity is also relevant to this discussion and may generally be used interchangeably with the term ethical self-identity.

Moral self-identity is defined as "a self-conception organized around a set of moral traits" (Aquino & Reed, 2002, p. 1424), and often reflects how individuals perceive themselves morally (Detert, Treviño, & Sweitzer, 2008). Different traits can be more central, or peripheral to an individual's self-identity; individuals who have salient moral or ethical traits will have a moral self-identity that is more central to their overall self-definition (Aquino & Reed, 2002). From a social-cognitive conception, Aquino et al. (2009) describe the moral identity as being a "complex knowledge structure consisting of moral values, goals, traits, and behavioural scripts" that have been acquired through individual life experiences (p. 124). Because each individual has experienced different things, the centrality of their moral identity to their overall self-identity will vary accordingly. When an individual has a more salient moral identity, this identity will be more influential on cognitive processes and behavioural outcomes than other self-identities (Aquino et al., 2009). In a consumer context, consumer attitude and intention

were shown to have adjusted as a result of ethical issues becoming more central to an individual's dispositional ethical self-identity (Michaelidou & Hassan, 2008).

When it comes to self-identity, individuals will attempt to maintain consistency between their behaviours and their own self-conception (Aquino & Reed, 2002). Cognitive dissonance theory explains that because of this tendency to pursue cognitive consistency, individuals will attempt to reconcile any inconsistencies amongst attitudes and behaviours to avoid feelings of dissonance (Festinger, 1957). Dissonance occurs when "a situation creates inconsistency between the self-concept and behaviour" (Szmigin et al., 2009, p. 226). Authenticity to one's own self-identity should lead to a pattern of consistent behaviours that support the salience of the individual's dispositional ethical self-identity.

2.2.1 Influence of ethical self-identity (ESI) on decision making. Conscious moral reasoning, as described by the moral decision making process, is not always necessary for a moral behaviour to occur. There is a degree of automaticity, or habit, in some individual's behaviour, and an absence of inner cognitive processing and conflict when trying to determine the best course of action (Trevino, Weaver, & Reynolds, 2006). If being a socially conscious consumer is strongly bound to a person's self-conception, it should be reasonably stable over time. This may be because when the identity is salient "desires are so strong and unconflicted, so central in the actor's motivational system, and so identified with their core identities, that moral action follows from a kind of spontaneous necessity" (Blasi, 2005, pp. 84-85). A similar degree of automaticity, due to a comparable lack of cognitive processing, may be seen in those with a non-existent or non-important dispositional ESI. If an individual with a less salient ESI does not

perceive an ethical or moral obligation in the situation, no conflict of the self-identity will occur. It is when ambivalence arises that the person may feel cognitive dissonance in regards to their self-identity (Valor, 2007). Consumers will use a wide variety of techniques to cope with dissonance and maintain their self integrity including rationalization, self-justification and self-affirmation (Szmigin et al., 2009).When individuals behave in ways that contradict their ethical concerns, they may attempt to create cognitive consistency by employing neutralization techniques in order to mitigate the feelings of guilt and dissonance caused (Valor, 2007).

2.3 Neutralization

Neutralization has been defined as "a defense mechanism through which people downplay the repercussions of their behaviour" (McGregor, 2008, p. 261). Neutralization theory stems from research in deviant behaviours and delinquency (Sykes & Matza, 1957), and over time has been applied to many other fields to explain individuals' rationalization of immoral or harmful acts when called into question by others, or themselves (McGregor, 2008). Neutralization has also been referred to as moral self-regulation (Zhong, Liljenquist, & Cain, 2009) or moral disengagement, and it essentially inhibits normal self-regulatory processes that would typically control non-ethical behaviours through feelings of guilt and self-censure (Detert et al., 2008). Individuals usually behave in a way that is consistent with their own internal moral standards through self-regulation. The need to self-regulate must be brought into awareness, in order for it to function properly. These neutralization mechanisms stop this activation from occurring and allow the individual to disengage from the situation and/or its consequences (Detert et al., 2008). For example, justification tendencies have been looked at to explain self-

perceived behavioural inconsistencies in consumers (D'Astous & Legendre, 2009). McGregor (2008) explores unethical consumption behaviours in terms of neutralization theory and describes a number of techniques used to downplay the negative consequences of consumer behaviour. A summary of neutralization techniques and possible consumer perspectives are shown in Table 2.3. They have been organized into the following categories: denial of responsibility and/or consequences, comparison and/or balancing and necessity and/or individual choice, but could also be organized in a different manner.

Overall, these neutralization techniques can be seen as defense mechanisms that allow an individual to remove themselves from the consequences of their actions in one way or another (McGregor, 2008). The realization that there are consequences to individual behaviours is a precursor for neutralization to occur; the individual must perceive an ethical dilemma to exist if they are to attempt to counteract it (D'Astous & Legendre, 2009; Detert et al., 2008; McGregor, 2008).

Table 2.3 Summary of Neutralization Techniques

Technique	Consumer Perspective
Category: Denial of responsibility and/or consequences	
Denial of responsibility[1,2]	I could not help it, it is not my fault[1]
Displacement and diffusion of responsibility[4]	It wasn't my idea, I was just following orders[4]
Government dependency[3]	If it is so bad, then the government should create laws against it, it's not up to me to fix it[3]
Economic development[3]	This is how our society had to develop to reach this standard of living, so I have to go with the flow[3]
Disregarding and distorting the consequences[4]	There's no way this small behaviour can have an effect[4]
Justification by postponement[1]	I will act now and deal with my feelings later, by then there will be nothing I can do about it[1]
Moral justification[4]	It's not as bad as it seems[4=]
Euphemistic labeling[4]	Rephrasing something so it doesn't seem as bad[4]
Denial of injury[1, 2]	It's not a big deal, no one got hurt[1]
Denial of a victim[1, 2]	They deserve what they get[1] It's their fault this happened[2]
Attribution of blame[4]	They brought it on themselves[4]
Dehumanization[4]	It's not the same for them, they aren't like us[4]
Condemn the condemner[1, 2]	Everyone else, including you, is doing it (don't call the kettle black)[1]
Justification by comparison[1]	It could be more serious. This is nothing compared to "stealing"[1]
Advantageous comparison[4]	At least I'm not as bad as others[4]

Category: Comparison and/or balancing	
Metaphor of the ledger[1]	My lack of consuming judgment is more than made up for by rightness in other parts of my life[1]
Licensing[5]	I have done good, so I can do bad[5]
Category: Necessity and/or individual choice	
Deny necessity of a law[1]	We don't need laws for this behaviour, it's not a fair law to me as an individual[1]
Appeal to higher loyalties[1, 2]	I did it to protect, or take care of, someone[1] A higher order value took precedence[2]
Defense of necessity[1]	When times are better, I will change my behaviour. Right now it is necessary[1]
Claim of entitlement[1]	I know my rights, I work hard and deserve these things[1]
Economic rationalization[3]	The costs outweigh the benefits for me[3]
Claim of individuality[1]	I don't care what others think. Everyone for himself[1]

Note. Multiple sources as summarized in (1) (McGregor, 2008), (2) (Chatzidakis et al., 2005), (3) (D'Astous & Legendre, 2009), (4) (Bandura, 1986), (5) (Sachdeva, Iliev, & Medin, 2009).

2.3.1 Licensing. One specific type of neutralization that has been used to explain inconsistencies in behaviour and attitudes is licensing and compensation (Khan & Dhar, 2006; Mazar & Zhong, 2009; Monin & Miller, 2001; Sachdeva et al., 2009; Zhong et al., 2009). As opposed to removing the consequences of guilt and dissonance of an action or thought, this technique allows an individual to perform a sort of internal balancing of ethical and less ethical behaviours. This process has also been referred to as moral licensing and compensation (Zhong et al., 2009).

In research by Sachdeva, Iliev, and Medin (2009) participants' moral behaviour was affected by the priming of positive or negative traits. Afterwards, participants either felt morally licensed or morally debased, and partook in compensatory behaviour in order

to account for this deviation from a neutral reference point. Moral licensing can be thought of as saving up moral credits in a mental account which would be followed by a decrease in prosocial or moral behaviour. Individuals will feel licensed to act immorally when their moral self-identity has previously been affirmed (Sachdeva et al., 2009). Moral compensation behaviours that repair the moral self-image may symbolically compensate for the individual's immoral behaviour, but do not necessarily repair the actual damage done by the initial offense (Zhong et al., 2009). There is a diverse range of behaviours that allow an individual to compensate for less ethical behaviours, and contextual similarity is not always necessary in order for it to occur (Zhong et al., 2009).

Monin and Miller (2001) apply the concept of licensing in their study regarding prejudiced behaviours. They found that individuals will save up moral credentials in a *mental account* when behaving in a non-prejudiced way and use them to establish themselves as non-prejudiced individuals. These moral credentials give participants the confidence to speak more freely later on and feel secure that their politically incorrect behaviours, such as sexism or racism, would be attributed to some other, less stigmatized factor. "It is as if prior good acts earn points in a mental account that subsequent immoral acts can spend" (Zhong et al., 2009, p. 83). Also, "it is not critical that others know of one's credentials for them to have a licensing effect" (Monin & Miller, 2001, p. 39). This implies that moral credentials are an internal affirmation of one's own self-identity. The more secure someone is with their self-identity (non-sexist, non-racist) based on past behaviour, the less they will worry about their actions being perceived as prejudiced (Monin & Miller, 2001). One important thing to note is that even when the behaviour that the credentials are based on is not necessarily indicative of non-prejudiced attitudes, the

credential will still increase the individual's willingness to express a prejudiced attitude. This means that it does not matter if the credentials are genuine or not, as long as the individual perceives them as non-prejudiced; both types will serve the same purpose. Also, it does not matter why a person was motivated to obtain moral credentials in the first place. Individuals will have different motivations for using moral credentials, such as internal motivations, external motivations, both or neither, and it was found that moral credentials affect individuals equally regardless of what the initial motivation was (Monin & Miller, 2001). This rationalization process is an internal process that mainly acts to benefit the individual by reducing feelings of dissonance and perhaps even increasing feelings of entitlement to be more lenient in moral behaviours (Zhong et al., 2009). Previous credentials liberate individuals to perform ambiguous behaviour because they are less concerned that they will be viewed negatively. Monin and Miller (2001) suggest that moral credentials should play a similar role in other domains where individuals are concerned that they will be seen by themselves or others negatively by acting in an ambiguous manner. This extension should include socially conscious consumer behaviour since consumers may experience ambivalence at times; they may be concerned with how others view their purchasing behaviours, and with how they assess their own behaviours.

Green purchase behaviour, which is one aspect of socially conscious consumer behaviour, has been studied using the concept of mental licensing (Mazar & Zhong, 2009). In this study, green purchasing behaviours by consumers led to an accumulation of moral credentials which made future unethical behaviour easier to perform. More specifically, while being exposed to green products in an online setting led to an increase

in pro-social behaviours, actually purchasing green products in an online setting led to an increase in cheating and stealing behaviours. While priming green purchasing through mere exposure increased pro-social behaviours, a licensing effect occurred when actual purchasing behaviours were performed which led to an increase in unethical behaviour. This study shows the direct applicability of licensing in a socially conscious consumer context. There was carryover from the purchasing domain to other domains of altruism and honesty as well, showing that this effect does not only affect future consumption behaviours, but behaviours in other domains. These findings suggest a "sense of moral self" that is more universal and encompasses a broad range of domains (Mazar & Zhong, 2009, p. 11). Mental credits stored up from an activity in one domain (purchasing) may be counterbalanced by activity in a different domain (honesty, altruism), so long as they are perceived to be associated with the same overarching moral category for that specific individual (Mazar & Zhong, 2009).

This idea of accumulating and withdrawing credits from some sort of mental account is recurring in the literature, and is becoming especially popular in the context of moral or ethical behaviours (i.e. Mazar & Zhong, 2009; Zhong et al., 2009). With this knowledge, a logical, yet unexplored extension of neutralization and licensing theory is mental accounting, especially in the context of socially conscious consumer behaviour. Mental accounting has been able to describe much seemingly inconsistent individual behaviour in other domains in the past, and certainly ought to be considered as a plausible explanation for socially conscious consumer behaviours, or lack thereof. Although not empirically tested, McGregor (2008) refers to the neutralization technique called metaphor of the ledger, and describes it as a "sloppy accounting" process (p.270). This

term clearly refers to a sort of mental accounting, and was essential in facilitating the current research. Past research has gotten close, but has not made the leap to empirically test whether or not mental accounting is used in neutralization efforts by consumers who face socially conscious consumer behaviour dilemmas.

2.4 Mental Accounting

The theory of rational choice assumes that human behaviour will be rational, and that individual choices should be somewhat consistent and logical. In human behaviour, especially consumer behaviour, individuals are often inconsistent and non-coherent in their choices (Tversky & Kahneman, 1981). This has been especially true of socially conscious consumer behaviour. Mental accounting is an approach that has been used to explain how consumers mentally budget for consumer purchase decisions (Heath & Soll, 1996), and can be seen as a substitute for the standard economic theory of the consumer where consumers should ideally maximize their expected utility (Thaler, 1985). The theory behind mental accounting says that there are separate mental accounts for different types of purchases, and expenses are tracked based on the budget set for that specific account. If a consumer reaches the limit on one account, they are likely to consume less (underconsume) of that type of good, whereas, if a consumer does not use up the entire budget allocated to an account, they are likely to consume more (overconsume) of that type of good than usual (Heath & Soll, 1996). Heath and Soll (1996) describe two steps in the mental accounting process: setting the budget which usually occurs before consumption, and tracking expenses where individuals must remember that they made a purchase and assign it to the correct account. Having a budget set in advance influences future consumer choices. Although this research focuses on economic consumer

behaviour, the authors believe that a similar process will take place in other domains such as time and effort (Heath & Soll, 1996).

The standard economic theory of the consumer assumes that when presented with the price and product characteristics, the consumer will make the optimal purchase decision (Thaler, 1985). This theory leaves no room for what is called framing, or the way in which a situation is presented. Tversky and Kahneman (1981) show the effects of framing on individual choice in the context of hypothetical and actual monetary outcomes, as well as in the context of the loss of human lives. They demonstrate reversals of preference for an outcome due to variations in framing (Tversky & Kahneman, 1981).

When using a mental account, individuals use previously set up accounts and view the current decision as a part of a larger context, rather than only considering the immediate consequences (Tversky & Kahneman, 1981). This has been shown to occur in licensing (Zhong et al., 2009), but the underlying process has yet to be examined from a mental accouting viewpoint. The outcome of the decision will depend on which type of account the consumer is using. The way that a decision is framed will also impact how purchases are categorized (Thaler, 1985) as well as consumer preferences which will influence the consumer's choice in the end (Tversky & Kahneman, 1981).

Due to the inflexible nature of budgets, mental accounting is also strongly related to self-control efforts (Heath & Soll, 1996). "The framing of acts and outcomes can also reflect the acceptance or rejection of responsibility for particular consequences, and the deliberate manipulation of framing is commonly used as an instrument of self-control" (Tversky & Kahneman, 1981, p. 458). Having a budget set in advance places limits on

the amount an individual can spend from any one account, thus controlling to an extent the decisions that will be made in the future. A manipulation of framing can be seen as a part of neutralization because it allows the individual to frame things in a way that is most likely to benefit them. For example, if a mental account's budget has been reached, feelings of cognitive dissonance for making an additional purchase in that category may be avoided if the purchase decision is framed so as to fit into a different mental account.

As mentioned previously, the literature on mental accounting has mainly been focused on economic decision making; however, mental accounting principles have been applied to other domains to explain other human behaviours. In a study by Linville and Fischer (1991), they were able to apply concepts from mental accounting to domains other than financial situations, specifically social and academic situations. Emotionally impactful events, and whether or not a person would prefer to experience two negative (positive) events at one time, or separately were considered (Linville & Fischer, 1991). The preferences were consistent through all three domains showing that the mental accounting principles can be applied in non-economic domains as well.

Mental accounting has also been applied in the area of health behaviour. Research has found that various health behaviours belong to one mental account, and that eating and exercise behaviours could be used interchangeably to compensate for transgressions in the other behaviour type (Basil, Maibach, & Basil, 1999). Individuals may seem inconsistent because of these apparently conflicting health behaviours. Individuals track their health behaviours and make compensatory trades through the use of mental accounting techniques. It is also suggested that mental accounting could be applied to related areas of dieting and nutrition label reading behaviours (Basil et al.,

1999). Again, this idea may be paralleled in the field of socially conscious consumer behaviour. Perhaps a person will be able to compensate for one form of socially conscious behaviour with another due to the fact that they both belong to the same mental account.

Another area where mental accounting theory has been applied is in the categorization of volunteer time. A study looked at how individuals mentally account for their time spent volunteering and whether work-time and personal-time volunteering are categorized differently (Basil & Runté, 2007). Work-time volunteering occurs when companies allow employees to volunteer during work hours, so it may be perceived differently than normal volunteering activities by employees. Both types of volunteering may be accounted for in the same category or separate depending on the level of involvement with the cause, and motivation of the volunteer. Context and coordination were shown to affect how volunteer time is mentally accounted for. These factors affect whether or not a person would be likely to decrease their overall volunteering because of work-time volunteering (Basil & Runté, 2007).

Based on the formerly mentioned research that shows the applicability of mental accounting in non-economic domains, it is logical to propose that at times, consumers partake in this internal accounting to keep track of their socially conscious consumer behaviours. When a consumer takes part in socially conscious consumption, they may accumulate psychological credentials that allow them to behave in a less ethical manner in the future without the typical consequences such as cognitive dissonance or guilt. Also, if a consumer makes a behavioural transgression, they may compensate for it by acting in a socially conscious manner. These less ethical behaviours may or may not be in the

domain of consumer behaviour. As shown by Mazar and Zhong's (2009) study, mental credits stored up from one activity may be counterbalanced by an activity in a different domain, as long as they are associated with the same mental account for that individual.

Mental accounting may be a very useful tool for describing the discrepancies surrounding socially conscious consumer behaviour found throughout the literature. Sometimes consumers have to make compromises, and individuals may use various rationalization techniques and mechanisms to mitigate any negative consequences of performing conflicting behaviours. Mental accounting is perhaps an intermediary step in the socially conscious consumer decision making process.

3. Hypotheses Development

The dispositional level of ethical self-identity (ESI) should play a role in how an individual manages their socially conscious consumer behaviour. More specifically, consumers who do not perceive an ethical dilemma because of lack of ESI altogether will not partake in mental accounting. Likewise, consumers with a high dispositional ESI are hypothesized not to partake in neutralization strategies, or mental accounting due to the lack of perception of an ethical dilemma which leads to automaticity of behaviours. Consumers are not always motivated or able to consciously process information related to the product they are purchasing (Bargh, 2002). Some behaviour is automatic, or completed out of habit. When a behaviour is automatic, the individual is usually unaware of the processes influencing their choice (Chartrand, 2005). This means that it is possible for an individual to pursue a goal, such as purchasing a certain type of product, and make a decision without being aware of the source of their behaviour. Individuals are usually unaware of the automatic process, showing that there is a lack of cognitive processing that occurs. While they are aware of making a choice, they do not necessarily know how the decision was reached (Chartrand, 2005). This lack of mental processing will allow the individual to make a decision without using mental accounting techniques. Individuals with a low or high dispositional ESI will not require a large amount of cognitive processing in making consumer decisions because they do not perceive a dilemma or experience any ambivalence when making a consumer decision.

Because they will likely use more cognitive processing when making a decision, individuals who have a mid-level dispositional ESI will be more likely to use mental accounting. They will try to balance their behaviours in an attempt to maintain

consistency between their behaviours and their dispositional ESI. Because their level of ESI is less definite than those individuals with a high or low dispositional ESI, they will be more likely to experience ambivalence when considering a socially conscious consumer decision. In order to avoid experiencing cognitive dissonance, it is proposed that mental accounting will be used to assess past behaviours and guide the decision making process. This suggests that individuals with a mid-level dispositional ESI will go through more cognitive processing, and consequently more mental accounting, than those with high or low dispositional ESI. An inverted U-shaped curvilinear relationship is proposed to exist between dispositional ESI and the use of mental accounting techniques (See Figure 3.1).

- H1: An inverted U-shaped curvilinear relationship exists between dispositional ESI and MA.
    - H1a: Individuals with an absent or extremely low dispositional ESI will be less likely to use mental accounting techniques, due to the non-recognition of an ethical dilemma in their consumer purchases. They will automatically perform the conventional behaviour.
    - H1b: Individuals with a mid-level dispositional ESI will be more likely to use mental accounting techniques to manage their socially conscious behaviour. Their intended outcome will be to balance their conventional behaviours and their socially conscious behaviours.
    - H1c: Individuals with a high dispositional ESI will be less likely to use mental accounting techniques, due to the automaticity of performing

socially conscious behaviours. They will automatically perform the socially conscious behaviour.

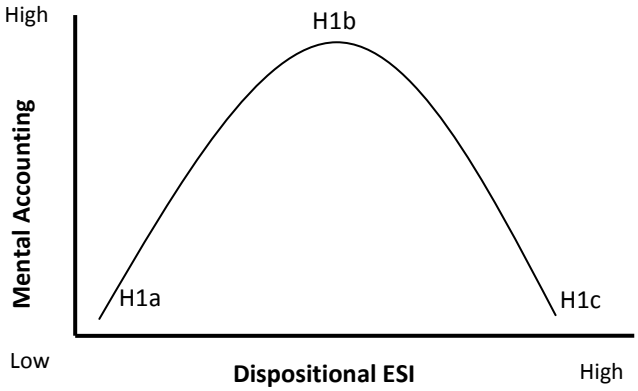

Figure 3.1. Proposed relationship between dispositional ESI and MA.

Alternatively, it is possible that individuals with a high dispositional ESI may use mental accounting, but with different outcome goals than those with a mid-level dispositional ESI. As stated above, while the goal of individuals with mid-level dispositional ESI may be to keep track of behaviours in order to balance their conventional and socially conscious behaviours; the goal of individual's with high dispositional ESI may be to keep track of behaviours in order to maximize socially conscious behaviours. Keeping mental track of their socially conscious consumer behaviours would allow them to reinforce their existing self-identity. In this case, the curve would no longer be U-shaped, but look more like Figure 3.2.

- H1d: Individuals with a high dispositional ESI will be more likely to use mental accounting techniques to manage their socially conscious behaviours. Their intended outcome will be to maximize socially conscious behaviours.

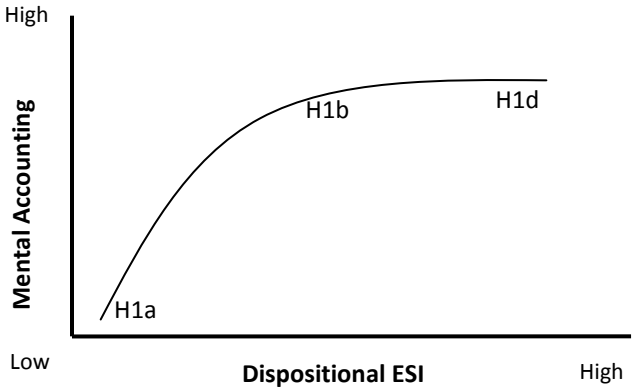

Figure 3.2. Alternative proposed relationship between dispositional ESI and MA.

As previously mentioned, depending on how motivated and able an individual is in a certain situation, the level of elaborative information processing activity that occurs will vary (Petty & Wegener, 1999). Consumers who are motivated to assess the various attributes of the product will be more likely to examine all of the relevant information before making a decision. The Elaboration Likelihood Model states that individual and situational factors will affect the amount of cognitive processing completed (Petty & Wegener, 1999). It is likely that the level of dispositional ESI is one individual factor that will affect this level of cognitive processing. It is proposed that those with a mid-level ESI will likely have a higher level of cognitive processing due to the conscious intent to balance their behaviours. When less elaboration occurs, there is a reduction in the examination of information (Petty & Wegener, 1999). Individuals with a low ESI will likely be at this end of the continuum. They will automatically choose the conventional product without much effortful consideration of other options. Individuals with a high ESI may also have less elaboration, or cognitive processing due to the automaticity of

choosing the socially conscious product without much effortful consideration of other options.

- H2: Individuals with a mid-level dispositional ESI will have a higher level of cognitive processing than those with high or low dispositional ESI.

In order to take into account the impact of situational factors on consumer decision making, positive and negative ESI will be primed. There is often a cost associated with performing more ethical behaviours, and individuals will use compensation and licensing in order to balance the costs of these behaviours with the desire to maintain their ESI (Sachdeva et al., 2009). Priming negative ESI, as described above, will elicit negative self-evaluations, likely leading to compensation through ethical behaviour (i.e. choosing an environmentally friendly product). Priming positive ESI will elicit positive self-evaluations and reinforce the individual's ESI, increasing the likelihood of the individual feeling licensed to choose a less ethical behaviour (i.e. choosing a conventional product). These primes will likely affect individuals in this manner when they have a mid-level dispositional ESI. Those with a high dispositional ESI will be less affected by the ESI primes because they will choose the more ethical option due to either the automaticity of the behaviour, or their desire to maximize ethical behaviours. Those with a low dispositional ESI will also be less affected by the ESI primes because they will choose the less ethical, conventional option due to automaticity of the behaviour. Because the effect of the prime will depend on the level of dispositional ESI, an interaction effect is expected. The anticipated effects of these primes are hypothesized hereafter (See Figure 3.3).

- H3: Individuals with an absent or extremely low dispositional ESI will not be impacted by the primed ESI, and so will choose the conventional behaviour.
- H4a: Individuals with a mid-level dispositional ESI who receive the positive ESI prime will feel licensed to choose the conventional behaviour.
- H4b: Individuals with a mid-level dispositional ESI who receive the negative ESI prime will compensate by choosing the socially conscious behaviour.
- H4c: Individuals with a mid-level dispositional ESI who do not receive an ESI prime will choose the behaviour that they would have normally chosen.
- H5: Individuals with a high dispositional ESI will not be impacted by ESI primes, and so will always choose the socially conscious behaviour. This outcome is proposed to occur regardless of whether or not they use mental accounting (H1c or H1d) due either to the automaticity of their socially conscious behaviours, or the desire to maximize socially conscious behaviours.

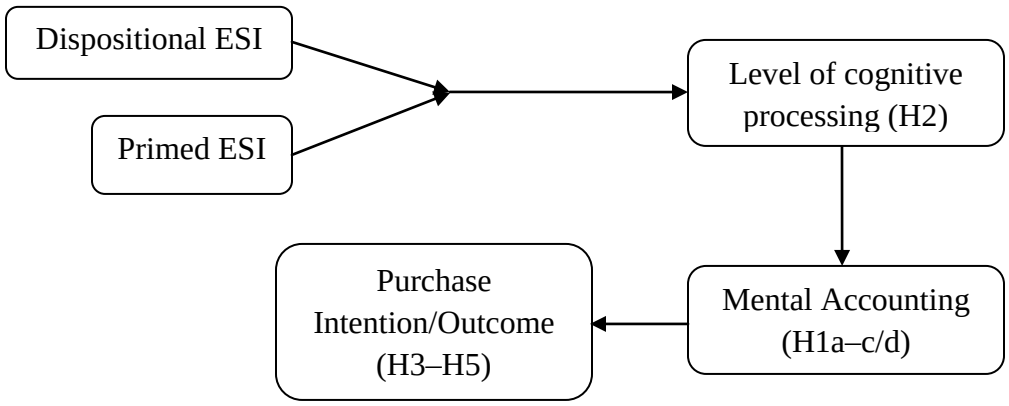

Figure 3.3. Model of hypotheses.

4. Exploratory Studies

Two preliminary studies were conducted in order to assess the promise of this line of inquiry. The findings from these studies are presented in the following paragraphs.

4.1 Focus Group

An exploratory focus group regarding socially conscious consumer behaviour was conducted prior to this research. This focus group consisted of five female participants from Lethbridge, AB, between the ages of 20 and 30. All had either completed some university or college or had a university degree. Of the group, two were full time students, one with a part-time job, and three were working full-time and had joined the workforce within the last five years. None of the participants owned their own home, and either still lived at home with their parents, or rented a room or an apartment. The discussion lasted approximately one hour and ten minutes. Pseudonyms will be used so as not to identify specific individuals. Standard focus group protocol was followed. An extensive introduction explaining the purpose of the research and the format of the focus group was followed by a discussion of broader issues narrowing down to more specific issues, as suggested by Eriksson and Kovalainen (2008).

There was an indication of support for much of what has been found in the literature, and evidence of mental accounting techniques being used alongside multiple other neutralization techniques. It was suggested by one participant that the level of a person's commitment to socially conscious behaviours ranges on a continuum, "*I think it's a wide range, you could be minorly socially conscious or you could go all out and do everything that you can to be socially conscious, so there's varying degrees of it"* (Julie).

This supports the existence of an ESI that can be more or less salient to a person's overall self-identity. Socially conscious consumer behaviour was defined earlier as the deliberate consideration of the social or environmental impact of the consumer decision. This issue was confirmed during the focus group. It was suggested that some socially conscious behaviours are not conscious because they have become habits over time that do not require much thought, *"I feel like, growing up I've sort of been bombarded by recycling, and turning off lights, and turning off the water when you're brushing your teeth…so I don't really feel conscious (emphasizes the word) when I make choices like that"* (Angela). This addresses the idea that if an ethical dilemma is not recognized while making a decision, then the use of neutralization techniques is not necessary. The use of mental accounting in particular is not always necessary if the individual uses a different neutralization technique in its place*, "I sometimes feel like I have to shut my mind off, because I can't afford it, and I can't do it, so I'm not going to think about it. I'm just going to do what I normally do and not think about it so I don't feel guilty"* and *"I don't have to compensate [for my less ethical behaviours] because I don't allow myself to feel guilty"*(Sarah). This is why mental accounting is not being proposed as an alternative to previously tested neutralization techniques, but as an additional step in the process that consumers use to handle their complex decision making environment. It is proposed to be a step in between the perception of an ethical dilemma and the final consumer decision. This additional step allows the consumer to account for previous behaviours in their decision making process.

4.2 Survey

In an exploratory quantitative study, the effects of ESI, socially conscious consumer behaviours, internal motivations and external motivations on the use of mental accounting techniques were looked at. The data for this study were collected using an online questionnaire. A total of 214 questionnaires were collected during this time for analysis. The four independent variables (ESI, socially conscious consumer behaviours, internal motivations and external motivations) and one dependent variable (mental accounting), were measured using multi-item Likert-type scales. These scales were then converted into standardized composite indices for use in the statistical analysis. In order to test the relationships of the independent variables with the dependent variable, a multiple linear regression was conducted. The relationship of interest for this research is the one between ESI and MA. When tested directly, the result was not significant. When ESI squared was included in the regression model to test for a curvilinear effect, the relationship was significant at the 0.05 level. More specifically, those who scored in the mid to high level of ESI were quite similar in their use of mental accounting and used these techniques more than those with low ESI scores. As anticipated, these preliminary findings indicate support for a non-linear relationship between mental accounting and socially conscious consumer behaviour.

The previous theoretical development, supplemented by these exploratory research findings, suggests relevance for the proposed hypotheses. An experiment has been elected as the appropriate method for testing the hypotheses. The following section describes this proposed method.

5. Methodology (Pilot Study)

5.1 Experimental Design (Pilot Study)

In order to test the developed hypotheses, an experimental design was used. The experiment was a 3 (ESI prime) x 2 (product scenario) fully crossed, mixed factorial design (See Table 5.1). ESI was primed at three different levels, negative, positive and no prime (See Table 5.1). The product condition was presented in an experimental scenario. All participants saw both product scenarios making this factor within-subject, but the order in which they were presented alternated.

In total there were six experimental conditions, and a seventh control condition. Participants were randomly assigned to each cell; this enhanced external validity. The use of a control group augmented internal validity (Hair Jr., Bush, & Ortinau, 2000). The scope of this study did not allow for examination of all aspects of socially conscious consumer behaviour; environmentally conscious consumer behaviour was the main focus of this experiment. The step-by-step experimental procedure is shown in Figure 5.1 and described thereafter.

Table 5.1 Experimental Design (Pilot Study)

Factors		Experimental Scenario	
		Scenario #1 first	Scenario #2 first
Prime	Positive	$\mathbf{X_1}$	$\mathbf{X_4}$
	Negative	$\mathbf{X_2}$	$\mathbf{X_5}$
	None	$\mathbf{X_3}$	$\mathbf{X_6}$

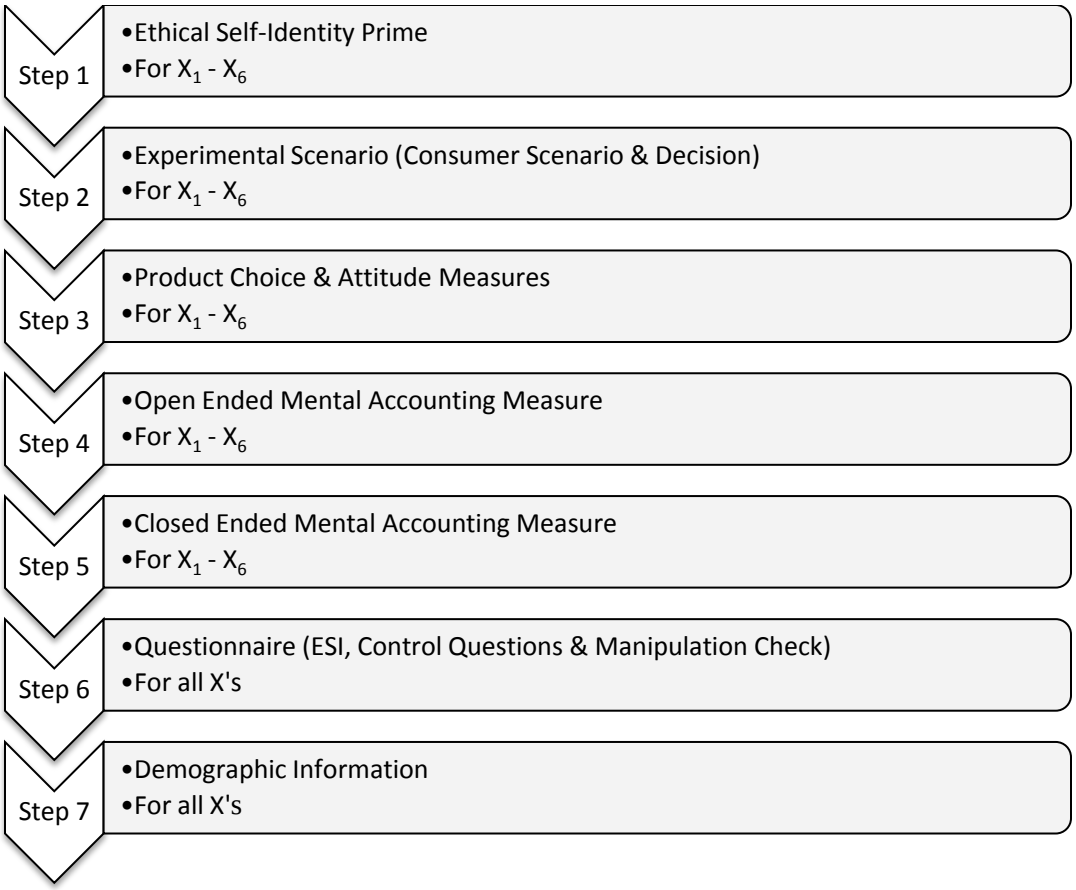

Figure 5.1. Experimental procedure.

5.1.1 Step 1: ESI prime. Participants were randomly assigned to an experimental condition where they were exposed to one of three ESI primes. Participants were asked to write a story about a time that they made a consumer decision. Depending on which condition the participant was placed, they either wrote about a consumer decision that had a positive effect on the environment (positive ESI prime), a negative effect on the environment (negative ESI prime), or a consumer decision in general, with no reference to environmental impact (no ESI prime). This type of prime attempted to ensure that the participant was thinking of actual behaviours that they have performed in the past, which should affect their subsequent behaviours (Zhong et al., 2009). The individual's choice should be affected by the prime as previously hypothesized.

5.1.2 Step 2: Experimental scenario. A scenario was presented to the participant, and they were asked to choose between two products (conventional or environmentally conscious). Though there is much discrepancy in the literature, generally speaking, the average premium that a consumer is willing to pay for socially conscious products is around a maximum of 10% (Cotte & Trudel, 2009). A price premium of 10% was used in the first scenario. The second scenario prices were based on an informal survey of actual supermarket prices for light bulbs. After participants had completed the process (Step 2 - 5) for the first product choice, they were shown the second scenario and followed the same process.

Scenario 1. *Imagine you are at the supermarket. You need to buy paper towel, and you find yourself trying to decide between two different brands. Your first choice is two rolls of conventional brand name paper towel for $2.99 (Option #1). Your second choice is two rolls of 100% recycled paper towel for $3.29 (Option #2).*

Scenario 2. *Imagine you are at the supermarket. You need to buy light bulbs, and you find yourself trying to decide between two different products. Your first choice is two conventional light bulbs that last up to one year for $2.29 (Option #1). Your second choice is two compact fluorescent light bulbs that last up to 5 years and are energy efficient for $7.99 (Option #2).*

5.1.3 Step 3: Product choice & attitude measures. After the participant read through the scenario, they were asked to indicate if they would choose option #1 or option #2; this was followed by an attitudinal measure on a 7-point scale. Measures of attitude towards each product were also taken using a 7-point scale (See Table 5.2 & 5.3).

The attitude scale that was used was a condensed version of a scale used by Shamdasani, Stanaland and Tan (2001) to assess attitude towards a product or brand.

Table 5.2 Product Choice

Please think for a moment about which product you would choose and indicate below your choice, and your attitudes towards the products.						
□ Option #1						
□ Option #2						
1 - I would definitely choose #1.	2	3	4	5	6	7 - I would definitely choose #2.

Table 5.3 Attitude Measures

In regards to Option #1, please indicate your attitude towards the product:						
1 – This is a bad product	2	3	4	5	6	7 – This is a good product
1 – I dislike this product	2	3	4	5	6	7 – I like this product
1 – I feel negatively toward the product	2	3	4	5	6	7 – I feel positively toward the product
In regards to Option #2, please indicate your attitude towards the product:						
1 – This is a bad product	2	3	4	5	6	7 – This is a good product
1 – I dislike this product	2	3	4	5	6	7 – I like this product
1 – I feel negatively toward the product	2	3	4	5	6	7 – I feel positively toward the product

5.1.4 Step 4: Open ended mental accounting measure. Following the attitudinal measures and the product choice, the participant was asked to describe the thought process they went through in order to reach their decision. This thought listing was analyzed for content in order to assess the use of mental accounting, and the number of thoughts listed were coded and counted as a measure of the extent of cognitive processing.

5.1.5 Step 5: Closed ended mental accounting measure. A closed ended measure of mental accounting was taken after each decision scenario. Items were measured on a 7-point scale: 1 = *Strongly disagree* /7 = *Strongly agree* (See Table 5.4).

Table 5.4 Closed Ended Mental Accounting Measure

Please indicate whether you agree or disagree with the following statements, in reference to the decision that you just made.							
I did a rough mental tally of my previous environmentally conscious behaviours	1	2	3	4	5	6	7
I thought about my previous behaviours	1	2	3	4	5	6	7
I took into account my past environmentally conscious behaviours	1	2	3	4	5	6	7
I did not think about my past behaviours at all	1	2	3	4	5	6	7
I chose what I would normally choose in a real life situation	1	2	3	4	5	6	7
I tried to make up for past behaviours	1	2	3	4	5	6	7

5.1.6 Step 6: Questionnaire. Following the manipulation check participants were administered a questionnaire to measure general MA tendencies and dispositional ESI. Control questions were also asked. Dispositional MA tendencies were measured using statements regarding the internal processes that the individual may use to keep track of different behaviours. Dispositional ESI was measured using an adapted, condensed scale from Aquino and Reed's (2002) measure of centrality of moral identity. Control questions included questions about the participant's usual shopping behaviours, price sensitivity, social desirability (Strahan & Gerbasi, 1972) and perceived self-efficacy (Cotte & Trudel, 2009). Items were measured on a 7-point scale: 1 = *Strongly disagree*/7 = *Strongly agree* (See Table 5.5 – 5.8).

Table 5.5 General Mental Accounting Tendencies

Usually, I keep track of my environmentally conscious behaviours in my head.	1	2	3	4	5	6	7
I keep a sort of mental tally of my environmentally conscious behaviours.	1	2	3	4	5	6	7
When I'm thinking of making a consumer decision, and the choice with the best environmental impact is difficult or expensive, I sometimes consider whether I have made other good choices recently.	1	2	3	4	5	6	7
I make up for worse environmentally conscious choices by performing better choices later on.	1	2	3	4	5	6	7
I may not make the best environmentally conscious choices, but I make up for it in other areas of life.	1	2	3	4	5	6	7
If I've been really good with environmentally conscious choices, I take a break once in a while.	1	2	3	4	5	6	7
I can make up for less desirable environmental choices at another time in the future.	1	2	3	4	5	6	7
If I have not been very good with making environmentally conscious choices, I try to make up for it.	1	2	3	4	5	6	7
I make environmentally conscious consumer decisions automatically, without much thought.	1	2	3	4	5	6	7
I consciously seek to maximize my positive impact on the environment.	1	2	3	4	5	6	7

Table 5.6 Control Questions

General environmental, price, usual behaviours, self-efficacy:							
I consider myself to be an environmentally conscious consumer.	1	2	3	4	5	6	7
I usually purchase recycled paper towel	1	2	3	4	5	6	7
I think that purchasing recycled products helps the environment	1	2	3	4	5	6	7
I usually purchase energy efficient, compact fluorescent light bulbs	1	2	3	4	5	6	7
I think that purchasing energy efficient products helps the environment	1	2	3	4	5	6	7
I usually purchase environmentally friendly products	1	2	3	4	5	6	7
Price is the most important factor in my consumer decisions	1	2	3	4	5	6	7
I think that every decision I make has the potential to make a difference for the environment	1	2	3	4	5	6	7
Social Desirability Scale:							
I like to gossip at times	1	2	3	4	5	6	7
There have been occasions where I took advantage of someone	1	2	3	4	5	6	7
I'm always willing to admit it when I make a mistake	1	2	3	4	5	6	7
I always try to practice what I preach	1	2	3	4	5	6	7
I sometimes try to get even rather than forgive and forget	1	2	3	4	5	6	7
I have never deliberately said something that hurt someone's feelings	1	2	3	4	5	6	7

Table 5.7 Manipulation Check

The opening exercise asked me to describe:			
1- A consumer decision that had a positive effect on the environment	2- A consumer decision that had a negative effect on the environment	3- A consumer decision in general	4- I was not asked to describe a consumer decision

Table 5.8 Dispositional ESI

It would make feel good to be a person who is environmentally conscious	1	2	3	4	5	6	7
Being someone who is environmentally conscious is an important part of who I am	1	2	3	4	5	6	7
I would be ashamed to be a person who is not environmentally conscious	1	2	3	4	5	6	7
Being environmentally conscious is an important part of my sense of self	1	2	3	4	5	6	7
I strongly desire to be environmentally conscious	1	2	3	4	5	6	7
I often buy products that communicate the fact that I am environmentally conscious	1	2	3	4	5	6	7
The types of things I do in my spare time (i.e. hobbies) clearly identify me as environmentally conscious	1	2	3	4	5	6	7
The kinds of books and magazines that I read identify me as environmentally conscious	1	2	3	4	5	6	7
The fact that I am environmentally conscious is communicated to others by my membership in certain organizations	1	2	3	4	5	6	7
I think of myself as an “environmental consumer”	1	2	3	4	5	6	7
I think of myself as someone who is concerned about environmental issues	1	2	3	4	5	6	7

5.1.7 Step 7: Demographic information. Demographic information was also measured (See Table 5.9).

Table 5.9 Demographic Information

What is your age? _____

Gender:
- Male
- Female

How much formal schooling have you completed?
- Completed junior high/middle school
- Completed high school
- Completed Trade School Certification (any kind)
- Completed Associates Degree
- Completed Bachelors Degree
- Completed Master's Degree
- Completed Doctorate Degree
- Other, please specify _____

Annual estimated household income:
- Under $10,000
- $10,000 - $24,999
- $25,000 - $49,999
- $50,000 - $74,999
- $75,000 - $99,999
- $100,000 - $149,999
- $150,000 - $199,999
- $200,000 - $299,999
- $300,000 - $399,999
- $400,000 - $499,999
- $500,000 - $749,999
- $750,000 - $999,999
- Over $999,999

5.2 Sample (Pilot Study)

The pilot study was conducted using a sample from the University of Lethbridge community. A link to the experiment was placed on the University of Lethbridge Online Notice Board. Anyone over the age of 18 was welcome to participate, so this was not solely a student sample.

The sample comprised of 107 participants. Participants were 75.5% female, and 24.5% male. The age of participants ranged from 18 to 66, with a mean of 32.9. The median education level was bachelor's degree. The median household income level of participants was between $50,000 and $74,999.

6. Results (Pilot Study)

6.1 Composite Score Creation (Pilot Study)

In order to create composite scores for each scale used in the study a principle components factor analysis was performed. Prior to the factor analysis, any reverse coded items were recoded. The factor analysis ensured that all items loaded onto one component before conducting a reliability analysis. Since the majority of items loaded onto the anticipated factor, rotation was not necessary, and the non-rotated solutions were examined.

A majority of the scales were above the conventional 0.70 Cronbach's alpha threshold and were deemed reliable (See Table 6.1). The self-efficacy control question scale was marginally reliable with a Cronbach's alpha of 0.67, but as it was only used as a control variable the slightly lower score was deemed acceptable for use.

All scale items were measured on a 7-point Likert-type scale. The composite score for each scale was created by averaging the scores of each item, and then mathematically converting the mean into a score between 0 and 1. All scale means are reported as values between 0 and 1. This standardization allowed for uniformity and simplicity in analysis.

Table 6.1 Scale Reliability Results

Scale	Number of Items	Cronbach's Alpha
General mental accounting tendencies	8	.87
Experimental mental accounting (paper towel)	4	.91
Experimental mental accounting (light bulbs)	4	.91
Dispositional ESI	10	.92
Social desirability scale	4	.70
Self-efficacy control questions	3	.67

6.2 Manipulation Check (Pilot Study)

In order to determine if the prime manipulation was successful, participants were asked to indicate whether they had initially been asked to describe a positive consumer decision, a negative consumer decision, a consumer decision in general, or no consumer decision at all. The frequency in which participants indicated their correct condition was observed, and because the majority of participants were correct, the manipulation was deemed successful.

6.3 General Findings (Pilot Study)

General descriptive statistics of a selection of variables were assessed. Both the dispositional ESI scale and the general MA tendencies scale were converted into composite scores. The mean score for dispositional ESI was 0.53, showing a level of ethical self-identity near the scale mid-point. The mean score for general MA tendencies was 0.38, which is slightly below the scale mid-point.

The overall findings for product choice differed between the two product scenarios. When faced with a dichotomous choice between regular paper towel and recycled paper towel, participants were almost evenly split with 51.6% choosing conventional, and 48.4% choosing recycled. The continuous measure of product choice commitment had a mean of 4.05 on a 7-point scale, with 72.7% of the sample being highly committed to their choice (choosing on the 7-point scale either1, 2, 6 or 7 [1 = *I would definitely choose the conventional paper towel*, 7 = *I would definitely choose the recycled paper towel*]).

The dichotomous choice between conventional and energy efficient light bulbs was quite different from the paper towel scenario with 24.7% choosing conventional, and 75.3% choosing energy efficient. The continuous measure had a mean of 5.22 on a 7-point scale, with 79.3% of participants being highly committed to their choice (choosing on the 7-point scale either1, 2, 6 or 7 [1 = *I would definitely choose the conventional light bulbs*, 7 = *I would definitely choose the energy efficient light bulbs*]). It appears that it was easier for participants to make the environmentally conscious choice in this case because over time, the energy efficient light bulbs were actually cheaper. This was confirmed by the open-ended responses of participants (See section 6.4). Because the responses varied between the two product scenarios, the findings were analyzed separately for hypothesis testing.

Price sensitivity was measured as a control variable with a standardized mean of 0.60 (Price is the most important factor in my consumer decisions, 1 = *Strongly disagree*, 7 = *Strongly agree*). This shows that the sample was price sensitive overall.

Self-efficacy was measured as a control variable as well, using a three-item scale, and had a mean composite score of 0.79. This shows that a majority of participants thought that their individual consumer decisions could have an impact on the environment at some level.

6.4 Open Ended Response Analysis (Pilot Study)

Following the quantitative analysis, the open ended responses of participants were assessed. After indicating their product choice, participants were asked to describe the thought process they went through to reach their decision (Step 4 in the experimental

procedure). These open ended responses were analyzed. They varied in length from one word answers up to a maximum of 132 words. The minimum number of thoughts counted for both scenarios was one, and the maximum was four. The mean number of thoughts for the paper towel scenario was 1.7, and the mean number of thoughts for the light bulb scenario was 1.9. Thoughts were considered to be separate from one another if they addressed a different issue or category. For example 'cost' related statements were considered as one thought even if mentioned more than once. Overall the open ended responses were quite short, and modifications to the instructions were made for the main study in an attempt to elicit longer responses.

6.5 Hypothesis 1 Results (Pilot Study)

H1 proposed that an inverted U-shaped curvilinear relationship exists between dispositional ESI and MA. A linear multiple regression was used in order to test this hypothesis by including a squared version of dispositional ESI as an IV. Because each participant was presented with two product scenarios (paper towel and light bulb), two regressions were completed, one for each scenario.

For both tests, the DV was the mean deviated closed-ended MA scale; the IVs of interest were the mean deviated dispositional ESI scale and the squared mean deviated dispositional ESI scale (in order to test for a curvilinear effect). Control variables included demographic variables: gender, age, income, education, as well as the general MA tendencies scale, the self-efficacy scale, the social desirability scale and price sensitivity (See Appendix A). All multi-item scales were mean deviated unless otherwise

noted. A variable was also created to represent whether or not the scenario was presented first or second to the participant, and this was included as a control variable as well.

6.5.1 Regression results. Though both regressions were at least marginally significant, the IVs of interest were not (See Table 6.2, 6.3, 6.4 & 6.5). There is a lack of support for the curvilinear effect proposed by H1. In both regressions, the general MA tendencies variable was significant. The general tendency of mental accounting was the strongest predictor of whether a participant used mental accounting in this decision scenario; this is reasonable because general MA tendencies should be consistent with experimental MA to some degree.

In order to better analyze the data, a new variable called Trichotomized ESI was created. Dispositional ESI was split into three groups: Low ESI, Mid ESI and High ESI. The lowest 25% of scores were designated as Low ESI, the highest 25% of scores were designated as High ESI, and the remaining 50% were designated as Mid ESI. . Rather than having three equal groups, this alternative split was chosen in order to look at more extreme levels of low and high ESI, which better fits the hypotheses. A closer look at the means of these three groups was taken.

Table 6.2 Model Summary: Regression (MA, paper towel scenario)

R	R^2	Significance
.494	.244	**.055**

Table 6.3 Coefficients: Regression (MA, paper towel scenario)

Variable	B	Standard Error	Beta	Significance
Constant	.149	.223		.507
MD Dispositional ESI	-.099	.193	-.071	.609
MD^2 Dispositional ESI	.664	.639	.125	.302
MD General MA tendencies	.606	.169	.415	**.001**
Gender	-.004	.040	-.013	.914
Age	-.005	.003	-.210	.117
Income	.018	.018	.128	.336
Education	-.006	.020	-.035	.769
MD Self-efficacy	.227	.254	.116	.375
MD Social desirability scale	.046	.159	.034	.772
Price sensitivity	-.037	.022	-.247	.101
Scenario 1 or 2	.097	.069	.162	.165

Table 6.4 Model Summary: Regression (MA, light bulb scenario)

R	R2	Significance
.536	.287	**.012**

Table 6.5 Coefficients: Regression (MA, light bulb scenario)

Variable	B	Standard Error	Beta	Significance
Constant	.356	.237		.137
MD Dispositional ESI	.063	.196	.043	.748
MD^2 Dispositional ESI	.589	.658	.102	.374
MD General MA tendencies	.709	.169	.467	**.001**
Gender	.017	.040	.049	.667
Age	.000	.003	.014	.907
Income	.008	.019	.056	.664
Education	-.039	.019	-.229	.057
MD Self-efficacy	.130	.239	.068	.589
MD Social desirability scale	.019	.163	.013	.909
Price sensitivity	-.024	.022	-.153	.286
Scenario 1 or 2	-.060	.068	-.098	.375

6.5.2 Independent samples t-test results. To better understand the data, an independent samples t-test was performed; the Trichotomized ESI variable was used as the grouping variable, and the means of all three ESI groups (low, mid, high) were compared to each other in three separate tests (See Figure 6.1).

Paper towel scenario. When comparing the MA of Mid ESI to Low ESI, no difference was found between the groups ($t [60] = -1.20$, $p < .24$). When comparing the MA of Mid ESI to High ESI, no difference was found between the groups ($t [30] = -.51$, $p < .62$). When comparing the MA of Low ESI to High ESI, no difference was found between the groups ($t [41] = -.39$ $p < .70$).

Light bulb scenario. When comparing the MA of Mid ESI to Low ESI, no difference was found between the groups ($t [62] = -.33$, $p < .74$). When comparing the MA of Mid ESI to High ESI, no difference was found between the groups ($t [30] = .69$, $p < .50$). When comparing the MA of Low ESI to High ESI, no difference was found between the groups ($t [41] = -.91$ $p < .37$).

This additional analysis does not support H1, as there is no difference in MA across the three levels of ESI.

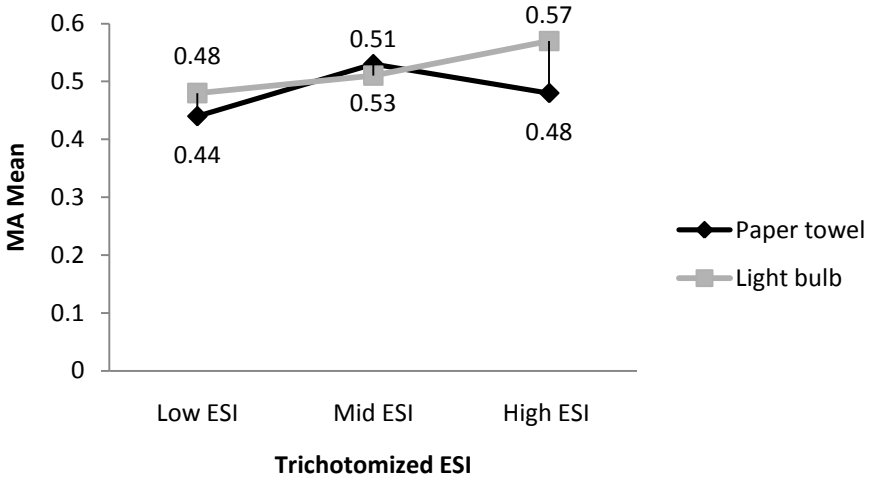

Figure 6.1. MA means for trichotomized ESI in both product scenarios.

6.6 Hypothesis 2 Results (Pilot Study)

H2 proposed that individuals with a mid-level ESI would have a higher level of cognitive processing that those with a high or low ESI. This suggests a curvilinear effect, and a multiple linear regression was used to test the hypothesis by including a squared version of dispositional ESI as an IV. Two regressions were completed, one for each product scenario.

For both tests, the DV was cognitive processing, which was represented by the thought count variable for each product scenario; the IVs of interest were the mean deviated dispositional ESI scale and the squared mean deviated dispositional ESI scale (in order to test for a curvilinear effect). The thought count variable was taken from the coding of participants' open-ended responses. Because both thought count variables were initially positively skewed, they were transformed by taking the natural logarithm. The normalized variables were mean deviated for the analysis. Control variables included

demographic measures, the social desirability scale, price sensitivity, and whether or not the product scenario was presented first or second.

6.6.1 Regression results. Neither regression was significant, thus H2 was not supported (See Table 6.6, 6.7, 6.8 & 6.9). Dispositional ESI was marginally significant in the paper towel scenario, showing that there may be evidence of a linear relationship between cognitive processing and the level of ESI.

Table 6.6 Model Summary: Regression (Cognitive processing, paper towel scenario)

R	R^2	Significance
.420	.176	.151

Table 6.7 Coefficients: Regression (Cognitive processing, paper towel scenario)

Variable	B	Standard Error	Beta	Significance
Constant	.325	.343		.347
MD Dispositional ESI	.504	.296	.235	**.093**
MD^2 Dispositional ESI	-1.095	.959	-.136	.258
Gender	-.023	.064	-.044	.724
Age	-.005	.005	-.119	.381
Income	.037	.028	.179	.201
Education	-.008	.034	-.031	.811
Price Sensitivity	.006	.034	.028	.854
MD Social desirability scale	-.363	.258	-.170	.164
Scenario 1 or 2	-.169	.108	-.186	.122

Table 6.8 Model Summary: Regression (Cognitive processing, light bulb scenario)

R	R^2	Significance
.282	.080	.763

Table 6.9 Coefficients: Regression (Cognitive processing, light bulb scenario)

Variable	B	Standard Error	Beta	Significance
Constant	.375	.364		.308
MD Dispositional ESI	-.053	.309	-.025	.864
MD^2 Dispositional ESI	-.075	1.009	-.009	.941
Gender	-.052	.068	-.100	.446
Age	-.007	.005	-.191	.183
Income	.011	.030	.055	.706
Education	-.026	.034	-.098	.455
Price Sensitivity	-.059	.036	-.259	.104
MD Social desirability scale	-.061	.273	-.028	.823
Scenario 1 or 2	.162	.114	.177	.161

6.6.2 Independent samples t-test results. To better understand the data, an independent samples t-test was performed for each scenario; the Trichotomized ESI variable was used as the grouping variable, and the means of all three ESI groups (low, mid, high) were compared to each other in three separate tests (See Figure 6.2).

Paper towel scenario. When comparing the cognitive processing of Mid ESI to Low ESI, a marginally significant difference was found between the groups ($t [58] = -1.89$, $p < .06$). When comparing the cognitive processing of Mid ESI to High ESI, no difference was found between the groups ($t [55] = -.56$, $p < .59$). When comparing the cognitive processing of Low ESI to High ESI, a significant difference was detected ($t [39] = -2.21$, $p < .03$). We can see from these results that while H2 is not supported, there

is a positive trend in the data. As the level of ESI increases, there is a an increase in the number of thoughts in the paper towel scenario. This was supported by the regression results as well.

Light bulb scenario. When comparing the cognitive processing of Mid ESI to Low ESI, no difference was found between the groups (t [59] = -.61, p < .54). When comparing the cognitive processing of Mid ESI to High ESI, no difference was found between the groups (t [57] = -.10, p < .92). When comparing the cognitive processing of Low ESI to High ESI, no difference was found between the groups (t [40] = -.55, p < .59). We can see from this additional analysis of the light bulb scenario that H2 is not supported.

Support was not found for H2 in either scenario. There was however, evidence of a positive relationship between dispositional ESI and cognitive processing in the paper towel scenario.

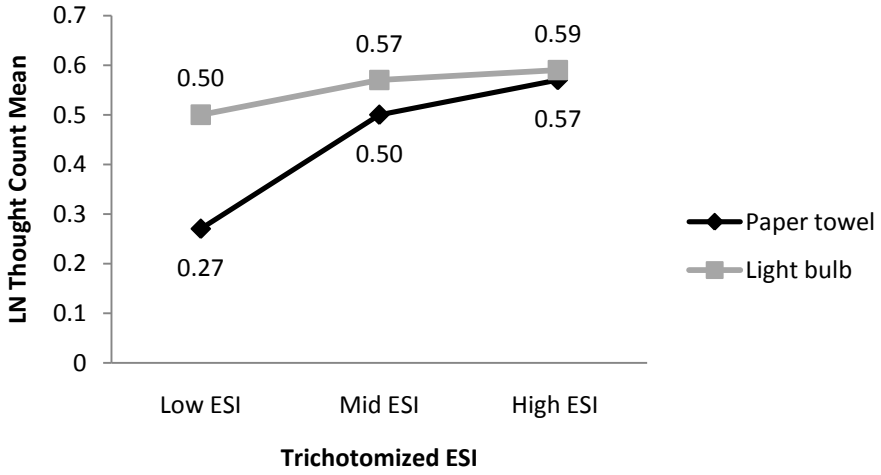

Figure 6.2. LN Thought count means for trichotomized ESI in both product scenarios.

6.7 Hypothesis 3 Results (Pilot Study)

In H3, only low ESI participants were considered. It was hypothesized that individuals with a low ESI would choose the conventional behaviour, regardless of the prime level.

6.7.1 Chi-square test results. Three chi-square tests were run for each scenario to compare the effect of the ESI prime levels on the product choice of low ESI individuals.

Paper towel scenario. Participants who received the positive ESI prime were compared to those who received the negative ESI prime first. No difference between the positive and negative prime levels was found (χ^2 (1) = .04, p < .84). Second, participants who received the negative ESI prime were compared to those who did not receive an ESI prime. No difference between the negative and no prime levels was found (χ^2 (1) = 1.02, p < .31). Third, participants who received the positive ESI prime were compared to those who did not receive an ESI prime. No difference between the positive and no prime levels was found (χ^2 (1) = .60, p < .45). As shown by the product choice frequencies in Figure 6.3, the majority of low ESI participants did choose the conventional paper towel regardless of the prime condition. This knowledge, combined with the chi-square results, shows support for H3 in the paper towel scenario.

Light bulb scenario. The same procedure was used to compare the three groups in the light bulb scenario. No difference between the positive and negative prime levels was found (χ^2 (1) = .04, p < .85). No difference between the negative and no prime levels was found (χ^2 (1) = .56, p < .45). No difference between the positive and no prime levels was

found (χ^2 (1) = .27, p < .61). The chi-square test results indicate support for H3 as the prime level did not have a significant effect on product choice for low ESI participants, however; upon closer examination of the product choice frequencies in Figure 6.4, we can see that the majority of low ESI participants did not choose the conventional light bulbs as hypothesized. Instead, the energy efficient light bulbs were favoured.

The open-ended responses of participants provided some insight into this quandary; many participants expressed that price was the only determining factor in their decision, and that over time the environmentally conscious light bulbs were actually cheaper than the conventional light bulbs. This fact made this decision more about price, and less about whether or not the product was environmentally conscious. This led to more participants choosing the environmentally conscious light bulbs than anticipated due to their price sensitivity, not due to their level of ESI. This problem was one reason why an alternative product was chosen for the main study.

These findings support H3 when considering the paper towel scenario; individuals with a low ESI were not impacted by the ESI prime, and tended to choose the conventional behaviour. There is partial support for H3 when considering the light bulb scenario; individuals with a low ESI were not impacted by the ESI prime, but they tended to choose the socially conscious behaviour.

It is noted that it is unconventional to propose a null hypothesis, because failure to attain significance could be due to any number of factors. For that reason it is necessary to consider the results of H4 and H5 in conjunction with the results of H3 for greater assurance.

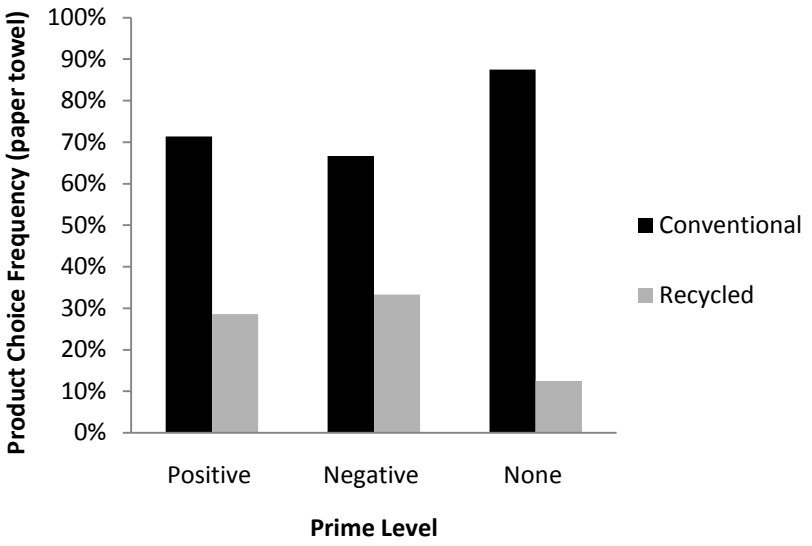

Figure 6.3. Low ESI product choice frequencies in the paper towel scenario.

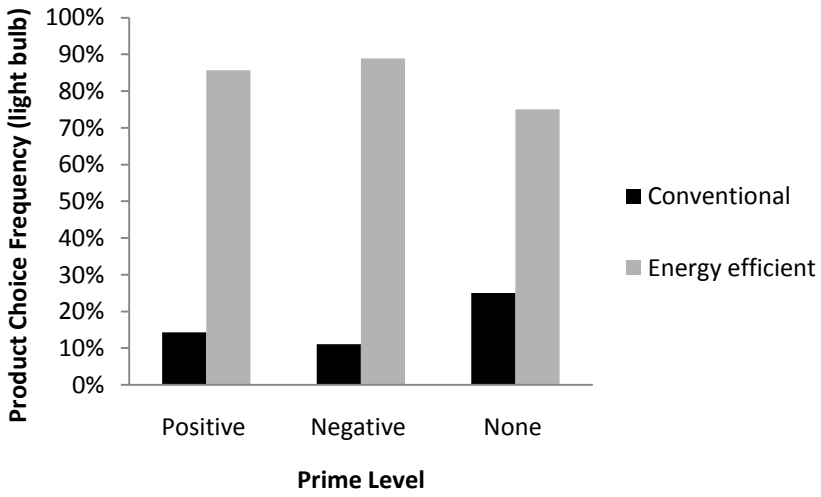

Figure 6.4. Low ESI product choice frequencies in the light bulb scenario.

6.8 Hypothesis 4 Results (Pilot Study)

In H4, only mid-level ESI participants were considered. It was hypothesized that there would be a difference in responses based on the prime level. More specifically, those who received the positive prime would feel licensed to choose the conventional

behaviour (H4a); those who received the negative prime would compensate by choosing the socially conscious behaviour (H4b); and those who did not receive a prime would simply choose their normal behaviour (H4c).

6.8.1 Chi-square test results. Three chi-square tests were run for each scenario to test H4a and H4b by comparing the effect of the ESI prime levels on the product choice of mid level ESI individuals.

Paper towel scenario. Participants who received the positive ESI prime were compared to those who received the negative ESI prime first. No difference between the positive and negative prime levels was found (χ^2 (1) = .78, p < .38). Second, participants who received the negative ESI prime were compared to those who did not receive an ESI prime. No difference between the negative and no prime levels was found (χ^2 (1) = 1.63, p < .20). Third, participants who received the positive ESI prime were compared to those who did not receive an ESI prime. A significant difference between the positive and no prime levels was found (χ^2 (1) = 5.54, p < .02).

For H4a, the comparison of interest is the positive ESI prime and the no prime condition. As we can see from the chi-square test results, there is a significant difference between these groups, however; upon closer examination of the product choice frequencies in Figure 6.5, we can see that the mid ESI participants who received the positive prime favoured the recycled paper towel rather than the conventional paper towel as hypothesized. This supports a priming effect. A priming, or mere exposure effect finds that individuals act more altruistically after simply being exposed to green consumer products, in comparison to the licensing effect where individuals act less altruistically

after purchasing green consumer products (Mazar & Zhong, 2009). The prime in this experiment asked the participants to describe an actual purchase in an attempt to triggor the licensing effect. It is possible that the prime was not strong enough, and that a simple priming effect took place instead. This would explain the unanticipated findings.

For H4b, the comparison of interest is the negative ESI prime and the no prime condition. As we can see from the chi-square test, there is no significant difference between these groups. H4b is not supported in the paper towel scenario.

Light bulb scenario. The same procedure was used to compare the three groups for the light bulb scenario. No difference between the positive and negative prime levels was found (χ^2 (1) = 1.98, p < .16). A marginally significant difference between the negative and no prime levels was found (χ^2 (1) = 3.04, p < .08). No difference between the positive and no prime levels was found (χ^2 (1) = .42, p < .52).

For H4a, the comparison of interest is the positive ESI prime and the no prime condition. As we can see from the chi-square test results, there is no difference between these groups. H4a is not supported in the light bulb scenario.

For H4b, the comparison of interest is the negative ESI prime and the no prime condition. As we can see from the chi-square test results, there is a marginally significant difference between these groups, however; upon closer examination of the product choice frequencies in Figure 6.6, we can see that the mid ESI participants that received the negative ESI prime slightly favoured the conventional light bulbs rather than the energy efficient light bulbs as hypothesized. It is important to recall that the results may have

been confounded by the fact that the energy efficient light bulbs were cheaper than the conventional light bulbs.

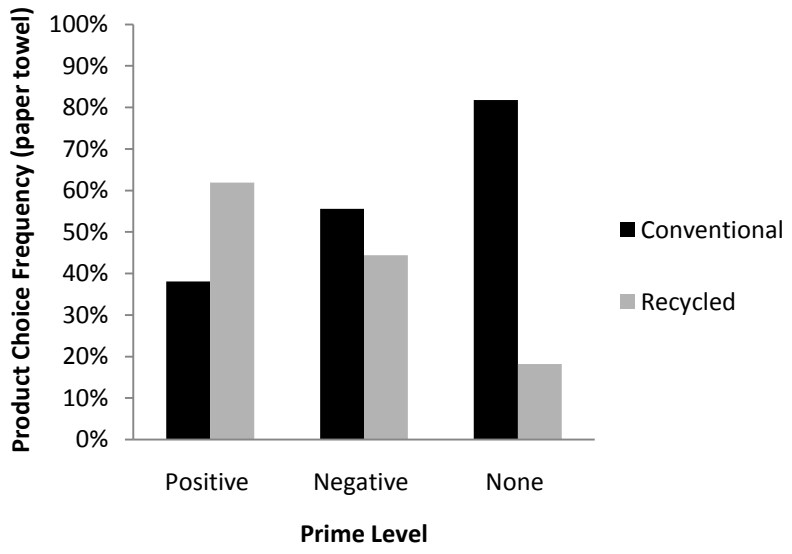

Figure 6.5. Mid ESI product choice frequencies in the paper towel scenario.

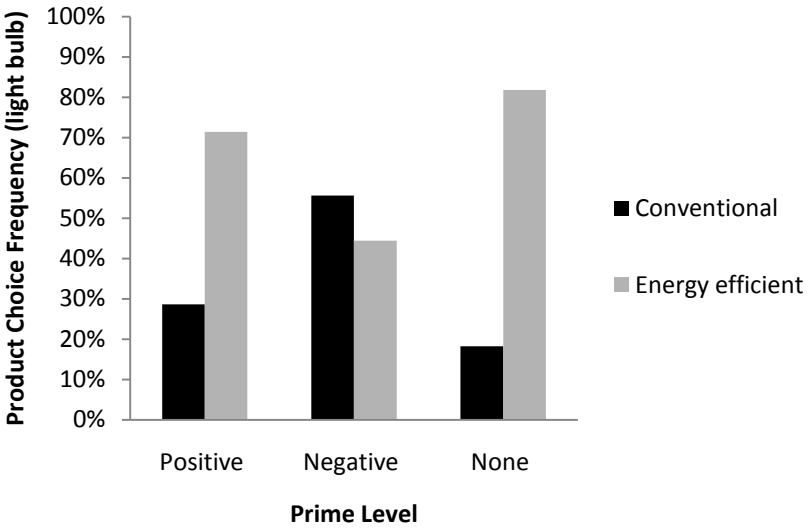

Figure 6.6. Mid ESI product choice frequencies in the light bulb scenario.

6.8.2 Regression results. Participants in the no prime condition were hypothesized to choose the product that they would have normally chosen in a shopping situation (H4c). This was measured by determining if their usual behaviour was a predictor of their experimental product choice. More specifically, a regression was run with the continuous product choice response as the DV, and the control question "I usually purchase recycled paper towel" or "I usually purchase energy efficient, compact fluorescent light bulbs" correspondingly as the IV (measured on a 7-point scale, 1 = *Strongly disagree*, 7 = *Strongly agree*). Control variables were not included as the sample size was too small.

Paper towel scenario. The results for this regression were marginally significant (See Table 6.10 & 6.11). Participants' usual behaviour was a marginal predictor of their experimental product choice.

Light bulb scenario. The results for this regression were significant (See Table 6.12 & 6.13). Participants' usual behaviour was a predictor of their experimental product choice.

Participants' usual behaviour was a predictor of their experimental product choice in both scenarios; these findings show that Mid ESI participants in the no prime condition tended to choose the product that they would have normally chosen in a shopping situation. This shows support for H4c. Since results for H4a and H4b were mixed, support for H4c should be considered muted.

Table 6.10 Model Summary: Regression (H4c, paper towel scenario)

R	R^2	Significance
.528	.279	**.095**

Table 6.11 Coefficients: Regression (H4c, paper towel scenario)

Variable	B	Standard Error	Beta	Significance
Constant	1.287	1.306		.350
Usual Purchase Decision	.581	.312	.528	**.095**

Table 6.12 Model Summary: Regression (H4c, light bulb scenario)

R	R^2	Significance
.960	.921	**.001**

Table 6.13 Coefficients: Regression (H4c, light bulb scenario)

Variable	B	Standard Error	Beta	Significance
Constant	.706	.506		.196
Usual Purchase Decision	.935	.092	.960	**.001**

6.9 Hypothesis 5 Results (Pilot Study)

In H5, only high ESI participants were considered. It was hypothesized that individuals with a high ESI would choose the socially conscious behaviour, regardless of the prime level.

6.9.1 Chi-square test results. Three chi-square tests were run for each scenario to compare the effect of the ESI prime levels on the product choice of high ESI individuals.

Paper towel scenario. Participants who received the positive ESI prime were compared to those who received the negative ESI prime first. No difference between the positive and negative prime levels was found (χ^2 (1) = .24, p < .62). Second, participants who received the negative ESI prime were compared to those who did not receive an ESI prime. No difference between the negative and no prime levels was found (χ^2 (1) = .21, p < .65). Third, participants who received the positive ESI prime were compared to those who did not receive an ESI prime. No difference between the positive and no prime levels was found (χ^2 (1) = 1.11, p < .29). As shown by the product choice frequencies in Figure 6.7, the majority of high ESI participants did choose the recycled paper towel regardless of the prime condition. This knowledge, combined with the chi-square results, shows support for H5 in the paper towel scenario.

Light bulb scenario. The same procedure was used to compare the three groups for the light bulb scenario. No difference between the positive and negative prime levels was found (χ^2 (1) = .92, p < .34). No difference between the negative and no prime levels was found (χ^2 (1) = 1.30, p < .26). No difference between the positive and no prime levels was found (χ^2 (1) = .07, p < .79). As shown by the product choice frequencies in Figure 6.8, the majority of high ESI participants did choose the energy efficient light bulbs regardless of the prime condition. This knowledge, combined with the chi-square results, shows support for H5 in the light bulb scenario.

These findings support H5 when considering both the paper towel scenario and the light bulb scenario; individuals with a high ESI were not impacted by the ESI prime, and tended to choose the socially conscious behaviour.

Again it is noted that proposing a null hypothesis is unconventional and requires further support from other tests. Given that the results of H4 were mixed, the support found in both H3 and H5 may be somewhat muted and must be considered cautiously.

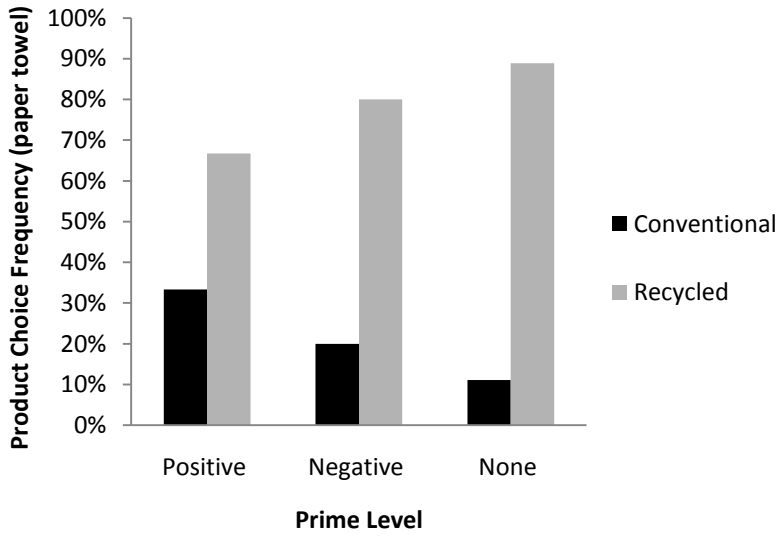

Figure 6.7. High ESI product choice frequencies in the paper towel scenario.

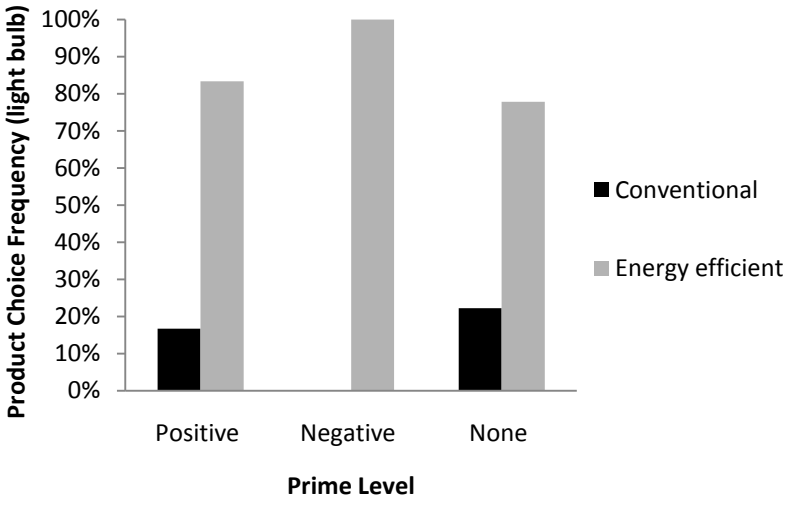

Figure 6.8. High ESI product choice frequencies in the light bulb scenario.

6.10 Summary (Pilot Study)

To summarize, the results of hypothesis testing were largely unsuccessful, though the findings were instrumental in guiding the design of the main study. Because the two product scenarios had to be analyzed separately, the samples were quite small overall which may have contributed to some of the inconclusive findings.

H1 was not supported by the findings; there does not appear to be a relationship between MA and ESI in either product scenario. H2 was not supported by the findings either, but a positive linear trend was found between cognitive processing and the level of ESI in the paper towel scenario. Participants with a higher ESI had more thoughts than those with a lower ESI in the paper towel scenario only. Upon analysis of the open-ended responses and the feedback from participants, it was noted that responses were shorter than anticipated overall, and some participants felt that the question needed more instruction. The mean number of thoughts counted was quite low in general. It is possible that these consumer scenarios were too low in level of involvement to facilitate much cognitive processing. In the main study this was addressed by adding further instruction and suggesting a response length, as well as using a product with a higher price point for the second scenario in an effort to increase involvement.

H3 and H5 were both supported by the findings, though must ultimately be considered in conjunction with H4. The sample sizes were quite small overall and could possibly explain the insignificant results found. H4 was generally not supported by the findings, but there did appear to be a priming effect that took place in the paper towel scenario, suggesting that positively priming the environment may lead to increased environmentally conscious consumer purchase intentions.

The pilot study was considered successful in strengthening the design of the main study in order to obtain more conclusive results.

7. Methodology (Main Study)

7.1 Modifications

As a result of the pilot study findings, minor modifications to the design of the study were made. The length of the experiment was problematic; accordingly the study was shortened by using a between-subjects design rather than a within-subjects design for the product scenario factor. For the main study, each participant saw only one product scenario instead of both product scenarios.

In the pilot study, compact fluorescent light bulbs were used in the second product scenario. Due to additional environmental concerns brought forth by some participants about the product, and the confounding price issue, the choice was made to use a different product. A clothing item (shirt) made from either regular cotton or 100% organic cotton was chosen as the new product. The price premium of approximately 10% was applied to this product, making it consistent with the price premium in the first product scenario. This product scenario, as opposed to the paper towel scenario, also allowed for a higher price point to be considered, possibly leading to more involvement by the participant in the decision. The new product scenario is presented below.

Scenario 2. *Imagine you are shopping at a clothing store. You see a shirt that you like and want to buy, but there is a choice between two versions of the shirt. Your first choice is a regular cotton shirt for $22.00 (Option #1). Your second choice is a 100% organic cotton shirt for $24.50 (Option #2).*

Also, in order to improve effectiveness of the experimental manipulation, more detailed instructions were added to the questionnaire. Upon examination of the feedback

from pilot study participants, supplementary instructions were added throughout the study for clarification and other questions were improved as well.

7.2 Experimental Design (Main Study)

The experiment was a 3 (ESI prime) x 2 (product scenario) fully crossed, mixed factorial design (See Table 7.1). ESI was primed at three different levels, negative, positive and no prime. The product condition was presented in one of two experimental scenarios.

In total there were six experimental conditions, and a seventh control condition. Participants were randomly assigned to each cell. Environmentally conscious consumer behaviour was again the main focus of this experiment. The step-by-step experimental procedure was the same as the pilot study except that each participant only saw one product scenario.

Table 7.1 Experimental Design (Main Study)

Factors		Experimental Scenario	
		Scenario #1	Scenario #2
Prime	Positive	$\mathbf{X_1}$	$\mathbf{X_4}$
	Negative	$\mathbf{X_2}$	$\mathbf{X_5}$
	None	$\mathbf{X_3}$	$\mathbf{X_6}$

7.3 Sample (Main Study)

The sample for the main study was collected from the online site Zoomerang. Zoomerang has an online panel of more than three million members across five countries, including Canada and the United States. Individuals are profiled according to a range of

demographic information and are managed for authenticity. Zoomerang randomly selects a stratified sample according to age, income, and gender distribution in North America. Additionally, this sample was screened for primary grocery shoppers only; this is an appropriate characteristic for this particular consumer behaviour study. This online forum was ideal for collecting such a large sample in a small amount of time. A minimum of 20 participants per cell was required, but in order to guard against incomplete data, a minimum of 30 participants per cell was attained.

The sample comprised of 315 participants. After 7 participants were removed due to questionable data, a final sample of 308 participants was analyzed. Participants were 75.6% female, and 24.4% male. The age of participants ranged from 18 to 88, with a mean of 44.5 years. The median education level was trade certificate. The median household income level of participants was between $25,000 and $49,999. In general this sample was older, less educated and had a lower income level than the pilot study sample. This was not surprising, as the pilot study data were collected via a university web page.

8. Results (Main Study)

8.1 Composite Score Creation (Main Study)

In order to create composite scores for each scale used in the study a principle components factor analysis was performed. Prior to the factor analysis, any reverse coded items were recoded. The factor analysis ensured that all items loaded onto one component before conducting a reliability analysis. Since the majority of items loaded onto the anticipated factor, rotation was not necessary, and the non-rotated solutions were examined.

A majority of the scales were above the conventional 0.70 Cronbach's alpha threshold and were deemed reliable (See Table 8.1). The social desirability control scale was marginally reliable with a Cronbach's alpha of 0.68, but as it was only used as a control variable the slightly lower score was deemed acceptable for use.

All scale items were measured on a 7-point Likert-type scale. The composite score for each scale was created by averaging the scores of each item, and then mathematically converting the mean into a score between 0 and 1. All scale means are reported as values between 0 and 1. This standardization allowed for uniformity and simplicity in analysis.

Table 8.1 Scale Reliability Results

Scale	Number of Items	Cronbach's Alpha
General mental accounting tendencies	8	.85
Experimental mental accounting (paper towel)	4	.86
Experimental mental accounting (cotton shirt)	4	.85
Dispositional ESI	11	.94
Social desirability scale	4	.68
Self-efficacy control questions	3	.74

8.2 Manipulation Check (Main Study)

In order to determine if the prime manipulation was successful, participants were asked to indicate whether they had initially been asked to describe a positive consumer decision, a negative consumer decision, a consumer decision in general, or no consumer decision at all. The frequency in which participants indicated their correct condition was observed, and because the majority of participants were correct, the manipulation was deemed successful.

8.3 General Findings (Main Study)

Next, the general descriptive statistics of a selection of variables were assessed. Both the dispositional ESI scale and the general MA tendencies scale were converted into composite scores. The mean score for dispositional ESI was 0.46, which is just below the scale mid-point for ethical self-identity. The mean score for general MA tendencies was 0.45, which is just below the scale mid-point for general mental accounting tendencies.

The overall findings for product choice were similar between the two product scenarios. When faced with a dichotomous choice between conventional paper towel and recycled paper towel, participants were more likely to choose conventional, with 63.5% choosing conventional, and 36.5% choosing recycled. The continuous measure of product choice commitment had a mean of 3.46 on a 7-point scale, with 67.8% of the sample being highly committed to their choice (choosing on the 7-point scale either1, 2, 6 or 7 [1 = *I would definitely choose the conventional paper towel*, 7 = *I would definitely choose the recycled paper towel*]).

The dichotomous choice between a conventional cotton shirt and a 100% organic cotton shirt followed a similar pattern, with 70.5% choosing conventional, and 29.5% choosing organic. The continuous measure of product choice commitment had a mean of 3.28 on a 7-point scale, with 67.8% of participants being highly committed to their choice (choosing on the 7-point scale either1, 2, 6 or 7 [1 = *I would definitely choose the regular cotton shirt*, 7 = *I would definitely choose the 100% organic cotton shirt*]). Because the general findings for each product scenario were very similar, the decision was made to collapse the two product scenarios, and analyze them as a whole for hypothesis testing.

Price sensitivity was measured as a control variable with a standardized mean of 0.70 (Price is the most important factor in my consumer decisions, 1 = *Strongly disagree*, 7 = *Strongly agree*). This shows that the sample was price sensitive overall.

Self-efficacy was measured as a control variable as well, using a three-item scale, and had a mean composite score of 0.62. This shows that a majority of participants thought that their individual consumer decisions could have an impact on the environment at some level.

8.4 Open Ended Response Analysis (Main Study)

The same procedure was used to analyze the open ended responses of participants in the main study as in the pilot study. Open ended responses varied in length from one word answers up to a maximum of 159 words. The minimum number of thoughts counted was one, and the maximum was five. The mean number of thoughts was 1.7. The added instructions did not help to elicit longer answers, as the mean number of thoughts was actually less than in the pilot study.

8.5 Hypothesis 1 Results (Main Study)

H1 proposed that an inverted U-shaped curvilinear relationship exists between dispositional ESI and MA. A multiple linear regression was used in order to test this proposal by including a squared version of dispositional ESI as an IV. The DV was the mean deviated closed-ended MA scale; an examination of the means of experimental MA for both scenarios showed that they followed a similar pattern, and so they were collapsed into one experimental MA variable. A dummy variable was included in the regression to see whether or not the product scenario made a difference. The IVs of interest were the mean deviated dispositional ESI scale and the squared mean deviated dispositional ESI scale (in order to test for a curvilinear effect). Control variables included demographic variables: gender, age, income, education, as well as the general MA tendencies scale, the self-efficacy scale, the social desirability scale and price sensitivity (See Appendix B). All multi-item scales were mean deviated unless otherwise noted.

8.5.1 Regression results. Though the regression was significant, the results were not what were expected (See Table 8.2 & 8.3). If the relationship was curvilinear, the squared dispositional ESI variable would need to be significant. This is not the case; however, the dispositional ESI variable was highly significant. While H1 is not supported by these findings, a positive linear relationship between dispositional ESI and experimental mental accounting is supported by these findings. It appears that an individual with a higher level of dispositional ESI also exhibits a higher level of MA, regardless of product scenario.

The general tendency of mental accounting was also a predictor of whether a participant used mental accounting in this decision scenario; this is reasonable because general MA tendencies should be consistent with experimental MA to some degree.

As was done in the pilot study, a new variable called Trichotomized ESI was created. Dispositional ESI was split into three groups: Low ESI, Mid ESI and High ESI. The lowest 25% of scores were designated as Low ESI, the highest 25% of scores were designated as High ESI, and the remaining 50% were designated as Mid ESI. Rather than having three equal groups, this alternative split was chosen in order to look at more extreme levels of low and high ESI, which better fits the hypotheses. A closer look at the MA means of these groups was taken (See Figure 8.1).

Table 8.2 Model Summary: Regression (MA)

R	R^2	Significance
.596	.355	**.001**

Table 8.3 Coefficients: Regression (MA)

Variable	B	Standard Error	Beta	Significance
Constant	.294	.096	.266	.471
MD Dispositional ESI	-.251	.238	-.062	**.002**
MD^2 Dispositional ESI	.542	.093	.424	.293
MD General MA tendencies	.008	.018	.026	**.001**
Gender	.000	.001	-.019	.660
Age	.000	.001	-.019	.760
Income	.000	.009	-.002	.975
Education	.000	.008	-.002	.975
MD Self-efficacy	-.020	.082	-.018	.809
MD Social desirability scale	.181	.072	.161	.012
Price sensitivity	-.002	.009	-.013	.829
Scenario 1 or 2	.002	.015	.009	.881

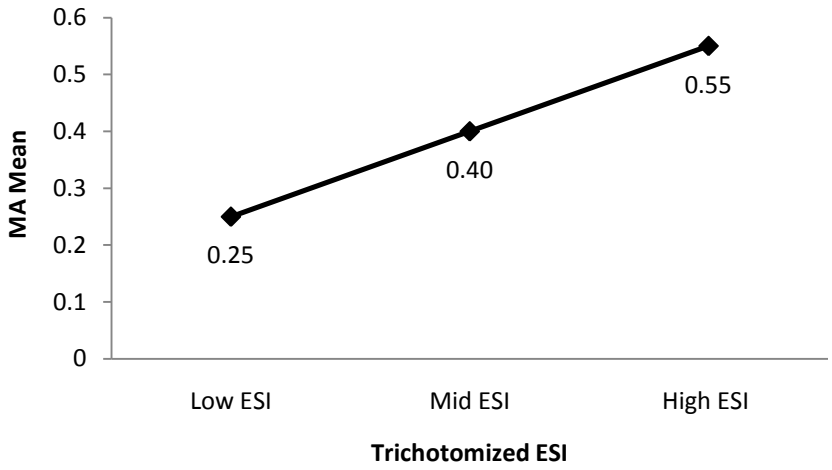

Figure 8.1. MA Means for Trichotomized ESI.

8.6 Hypothesis 2 Results (Main Study)

H2 proposed that individuals with a mid-level ESI would have a higher level of cognitive processing that those with a high or low ESI. This suggests a curvilinear effect, and a multiple linear regression was used to test the hypothesis by including a squared version on dispositional ESI as an IV. The DV was the mean deviated thought count variable; an examination of the means of the thought count variable for both scenarios showed that they followed a similar pattern, and so they were collapsed into one thought count variable to represent cognitive processing. A dummy variable was included in the regression to see whether or not the scenario made a difference. The IVs of interest were the mean deviated dispositional ESI scale and the squared mean deviated dispositional ESI scale (in order to test for a curvilinear effect). Because the thought count variable was initially positively skewed, it was transformed by taking the natural logarithm. The normalized variable was mean deviated for the analysis. Control variables included demographic measures, the social desirability scale, and price sensitivity.

8.6.1 Regression results. Though the regression was significant, the results were not what were expected (See Table 8.4 & 8.5). Neither of the dispositional ESI variables was significant. Some control variables, namely gender and education, were significant. More specifically, female participants were likely to do more cognitive processing than male participants. Also, a higher level of education indicated more cognitive processing overall.

Table 8.4 Model Summary: Regression (Cognitive processing)

R	R^2	Significance
.391	.153	**.001**

Table 8.5 Coefficients: Regression (Cognitive processing)

Variable	B	Standard Error	Beta	Significance
Constant	-.172	.165		.297
MD Dispositional ESI	-.010	.170	-.005	.951
MD^2 Dispositional ESI	.605	.502	.081	.229
Gender	.101	.038	.183	**.009**
Age	-.002	.002	-.089	.219
Income	.033	.019	.118	.095
Education	.057	.016	.243	**.001**
MD Self-efficacy	.200	.170	.101	.241
MD Social desirability scale	.210	.147	.104	.154
Price sensitivity	-.033	.019	-.124	.081
Scenario 1 or 2	.007	.030	.016	.811

8.6.2 Independent samples t-test results. To better understand the data, independent samples t-tests were performed to compare the means of the DV; the Trichotomized ESI variable was used as the grouping variable, and the means of the DV

in all three ESI groups (low, mid, high) were compared to each other in three separate tests (See Figure 8.2).

When comparing the cognitive processing of Mid ESI to Low ESI, no difference was found between the groups ($t\ [153] = -.21$, $p < .83$). When comparing the cognitive processing of Mid ESI to High ESI, no difference was found between the groups ($t\ [154] = -1.22$, $p < .22$). When comparing the cognitive processing of Low ESI to High ESI, no difference was found ($t\ [101] = -1.21$, $p < .23$). We can see from these results that H2 is not supported.

It does not appear that individuals with a mid-level ESI do significantly more cognitive processing than those with high or low ESI, or that any linear relationship exists.

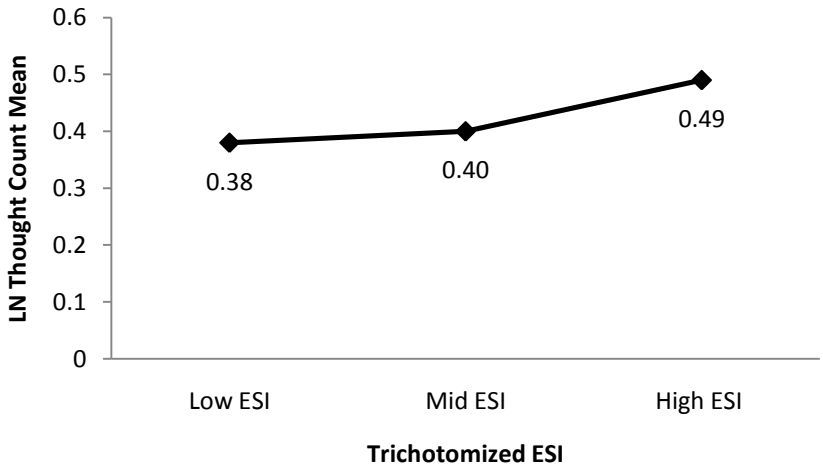

Figure 8.2. LN Thought count means for trichotomized ESI.

8.7 Hypothesis 3 Results (Main Study)

In H3, only low ESI participants were considered. It was hypothesized that individuals with a low ESI would choose the conventional behaviour regardless of the prime level.

8.7.1 Chi-square test results. Three chi-square tests were run to compare the effect of the ESI prime levels on the product choice of low ESI individuals.

Participants who received the positive ESI prime were compared to those who received the negative ESI prime first. A significant difference between the positive and negative prime levels was found (χ^2 (1) = 4.12, p < .04). Second, participants who received the negative ESI prime were compared to those who did not receive an ESI prime. No difference between the negative and no prime levels was found (χ^2 (1) = .08, p < .78). Third, participants who received the positive ESI prime were compared to those who did not receive an ESI prime. No difference between the positive and no prime levels was found (χ^2 (1) = 2.45, p < .12). Based on these results, it appears that low ESI participants reacted differently to the positive versus the negative prime in the decision scenario.

Although, overall participants still tended to choose the conventional behaviour, there was a significant difference between the positive and negative prime levels. This, combined with the product choice frequencies, shows that low ESI participants were likely influenced by the positive prime to choose the more environmentally conscious product (See Figure 8.3).

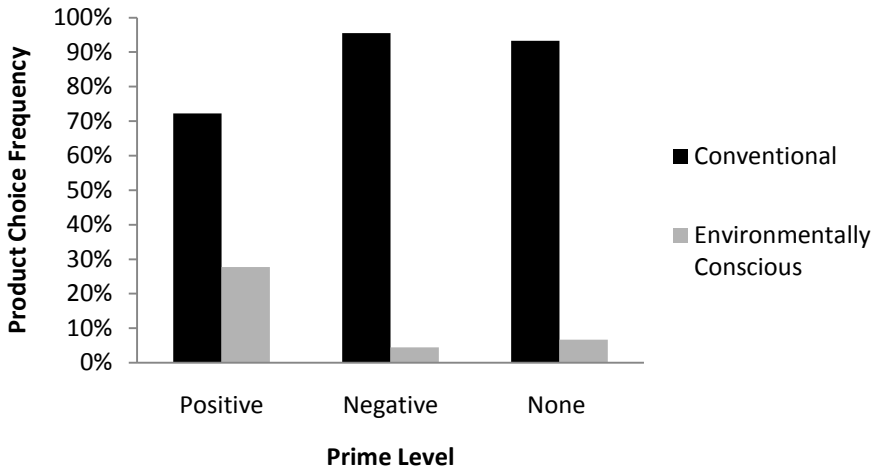

Figure 8.3. Low ESI product choice frequencies.

8.8 Hypothesis 4 Results (Main Study)

In H4, only mid-level ESI participants were considered. It was hypothesized that there would be a difference between product choice responses depending on the prime level. More specifically, those who received the positive prime would feel licensed to choose the conventional behaviour (H4a); those who received the negative prime would compensate by choosing the socially conscious behaviour (H4b); and those who did not receive a prime would simply choose their normal behaviour (H4c).

8.8.1 Chi-square test results. Three chi-square tests were run to test H4a and H4b by comparing the effect of the ESI prime levels on the product choice of mid level ESI individuals.

Participants who received the positive ESI prime were compared to those who received the negative ESI prime. No difference between the positive and negative prime levels was found (χ^2 (1) = 1.96, p < .13). Second, participants who received the negative ESI prime were compared to those who did not receive an ESI prime. No difference

between the negative and no prime levels was found (χ^2 (1) = .09, p < .50). Third, participants who received the positive ESI prime were compared to those who did not receive an ESI prime. A significant difference between the positive and no prime levels was found (χ^2 (1) = 3.50, p < .05).

For H4a, the comparison of interest is the positive ESI prime and the no prime condition. Participants who received the positive ESI prime were expected to feel licensed to choose the conventional behaviour (H4a). As we can see from the chi-square test results, there is a significant difference between these groups, but the product choice frequencies show that those who received the positive prime were actually more likely to choose the environmentally conscious product than those who did not receive a prime (See Figure 8.4). These results are the opposite of what was predicted. H4a is not supported by these findings.

For H4b, the comparison of interest is the negative ESI prime and the no prime condition. Participants who received the negative ESI prime were expected to feel the need to compensate by choosing the socially conscious behaviour (H4b). As we can see from the chi-square test results, there is no significant difference between these groups. H4b is not supported by these findings.

Even though attempts were made to strengthen the prime for the main study, it appears to still not have been strong enough to trigger the licensing effect. In the future it may be beneficial to have participants actually participate in a purchasing scenario rather than relying on recollections of past consumer behaviour. The priming manipulation did however successfully prime environmentally conscious consumer behaviour.

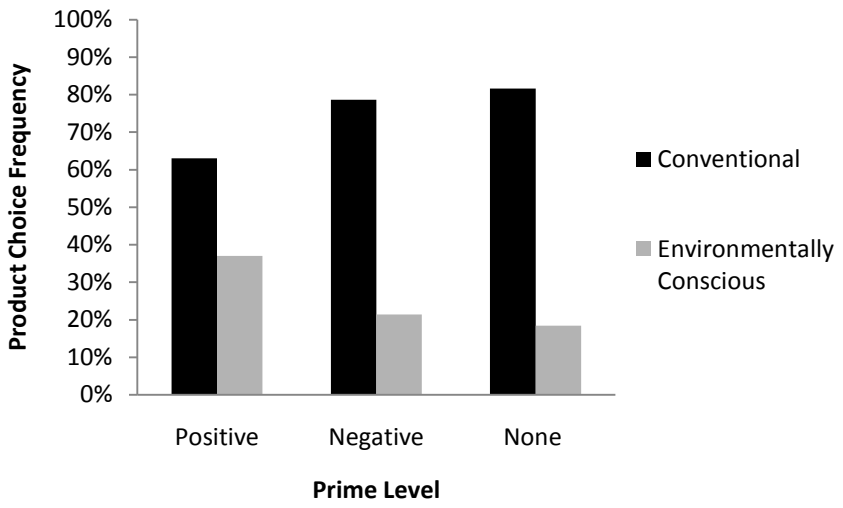

Figure 8.4. Mid ESI product choice frequencies.

8.8.2 Regression results. Participants in the no prime condition were hypothesized to choose the product that they would have normally chosen in a shopping situation (H4c). This was measured by determining if their usual behaviour was a predictor of their experimental product choice. More specifically, a regression was run with the continuous product choice response as the DV, and the control questions regarding usual purchase behaviour as the IV. Whether or not the participant participated in scenario one or scenario two was included as a control.

The results for this regression were significant (See Table 8.6 & 8.7). Participants' usual purchase behaviour was a predictor of their experimental product choice. These results show that Mid ESI participants in the no prime condition tended to choose the product that they would have normally chosen in a shopping situation. This shows support for H4c.

Although H4a and H4b were not supported by the findings, a successful priming effect did take place. Mid ESI participants who received the positive prime were more likely to choose the environmentally conscious behaviour, than those in the negative or no prime conditions.

Table 8.6 Model Summary: Regression (H4c)

R	R^2	Significance
.511	.261	**.001**

Table 8.7 Coefficients: Regression (H4c)

	B	Standard Error	Beta	Significance
Constant	1.648	.224		**.001**
Usual Purchase Decision	.600	.067	.513	**.001**
Scenario 1 or 2	-.046	.119	-.022	.698

8.9 Hypothesis 5 Results (Main Study)

In H5, only high ESI participants were considered. It was hypothesized that individuals with a high ESI would choose the socially conscious behaviour, regardless of the prime level.

8.8.1 Chi-square test results. Three chi-square tests were run to compare the effect of the ESI prime levels on the product choice of high ESI individuals.

Participants who received the positive ESI prime were compared to those who received the negative ESI prime first. No difference between the positive and negative prime levels was found (χ^2 (1) = .01, p < .59). Second, participants who received the negative ESI prime were compared to those who did not receive an ESI prime. No

difference between the negative and no prime levels was found (χ^2 (1) = 2.16, p < .13). Third, participants who received the positive ESI prime were compared to those who did not receive an ESI prime. No difference between the positive and no prime levels was found (χ^2 (1) = 1.94, p < .15). As shown by the product choice frequencies, the majority of high ESI participants in the positive and negative prime conditions did choose the environmentally conscious product (See Figure 8.5). According to the chi-square test results, there is no difference between the prime levels, which shows support for H5.

The non-significant findings support H5, although considering the product choice frequencies; it does appear that individuals with a high ESI were at least somewhat impacted by the ESI primes as a general trend.

Because the product choice results for the positive and negative primes were almost identical, they were combined into one category, 'primed' and compared to the no prime group (See Figure 8.6). A chi-square test was used to compare the two categories, and a marginally significant difference was found between them (χ^2 (1) = 2.70, p < .09). This marginally significant result should be considered muted by the previous chi-square test results that tested the positive and negative prime levels separately, but may be suggestive of a general priming effect on high ESI individuals as well. Both positive and negative priming appear to lead to more environmentally conscious consumer behaviour.

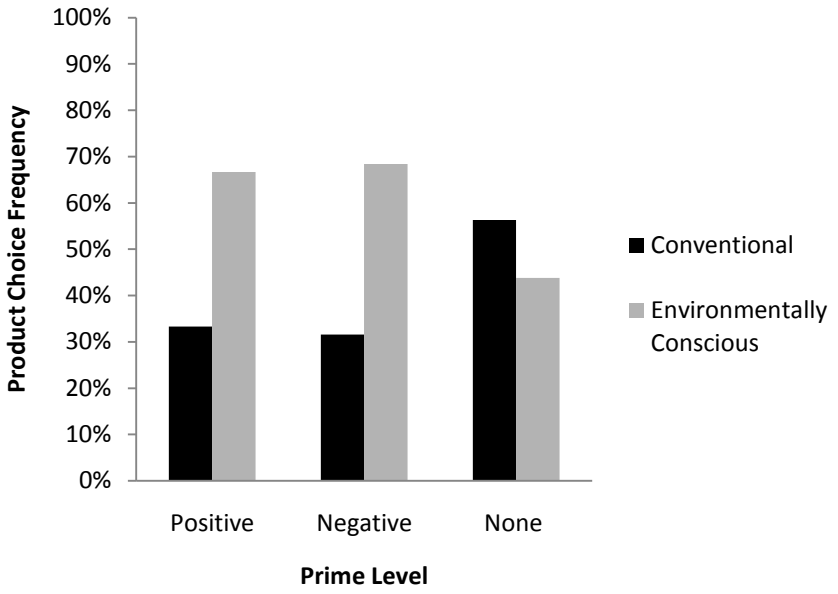

Figure 8.5. High ESI product choice frequencies.

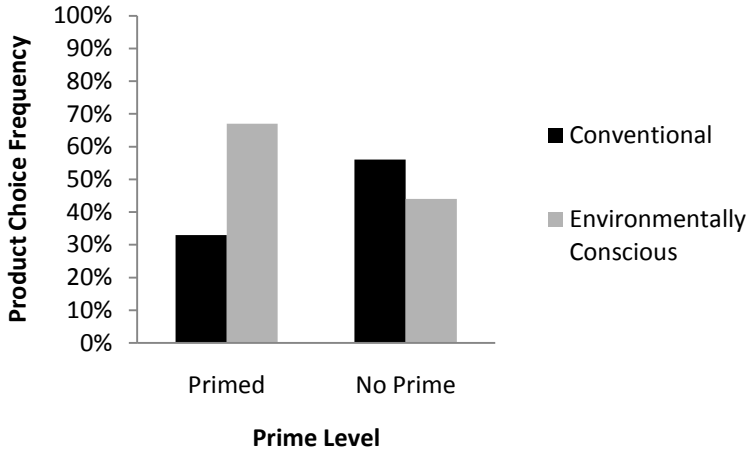

Figure 8.6. High ESI product choice frequencies, primed versus no prime.

8.10 Summary (Main Study)

In the main study, the results of the two product scenarios were similar, and responses were collapsed and analyzed as a whole, thus validating the modifications made to the design of the study.

H1 was not supported by the findings, though a positive linear relationship was found between experimental MA and dispositional ESI. H2 was not supported by the findings, and no relationship was found between cognitive processing and dispositional ESI. This was surprising given that mental accounting is a cognitive process. This will be discussed further in the discussion and conclusion section.

H3 and H4 were not supported by the findings, but a positive priming effect appeared to be taking place. The priming manipulation successfully primed low and mid level ESI participants. H5 was supported by the findings, but upon additional analysis, there appeared to be a marginal priming effect as well. A discussion of priming and its implications can be found in the discussion and conclusion section.

While the hypotheses were not supported, the findings were still valuable and useful in increasing knowledge of environmentally conscious consumer behaviour.

9. Discussion and Conclusion

9.1 Discussion

The question that this research addressed was: what factors play a role in determining an individual's decision to partake, or not to partake in socially conscious consumer behaviour, and what are the underlying processes that guide this decision? A pilot study was initially conducted, and results were used to inform the design of the main study. Results of each study are discussed in the subsequent paragraphs, followed by overall conclusions.

9.1.1 Pilot study. The pilot study provided extremely valuable guidance in the design of the main study. Two products were tested, and results suggested that one of the products did not perform as anticipated. As a result, the pilot study data were analyzed in two separate series of tests. Since the two product categories could not be collapsed for analyses, this greatly reduced the number of participants in each cell, which contributed to inconclusive findings. Although the results of hypothesis testing were not that informative, the feedback obtained from participants was valuable in strengthening the main study. From the pilot study, it was discovered that the light bulb was not an ideal product for this experiment. There were additional environmental concerns brought forth about the composition of the energy efficient bulbs and about proper disposal. Not all participants considered the energy efficient light bulbs to actually be better for the environment which compromised the meaning of the results. Also, the price of energy efficient light bulbs is considerably higher than conventional light bulbs, but they last longer and are more economical over time. This additional factor confounded the results

of this scenario, as many participants indicated that they only considered price in their selection, and that it was merely an additional benefit if the product was better for the environment. Considering the difficulties with this product, it was decided to use a different product in the main study.

In light of the pilot study results and feedback from participants, some modifications were made to the main study. While the original paper towel product scenario was retained for the main study, a cotton shirt replaced the light bulb in the second scenario. This allowed for a parallel price premium to be used across the two scenarios, and introduced a product at a higher price point. This proved to be a successful modification, as the results from each scenario were quite compatible and could be collapsed and analyzed together instead of separately. Also, due to feedback from the pilot study, the design of the main study was changed to a between-subject rather than within-subject design in order to decrease the length of the experiment. Each participant therefore, only saw one of the two product scenarios. The pilot study was successful in identifying necessary design changes that strengthened the main study considerably.

9.1.2 Main study. Though the original hypotheses were not supported by the results of the main study, there were nonetheless, meaningful findings. A positive linear relationship between dispositional ethical self-identity (ESI) and mental accounting (MA) was found. The results show that participants with a high level of dispositional ESI conduct more mental accounting than those with a lower ESI in an environmental decision making scenario. In other words, individuals who feel an ethical orientation is part of their core self-identity are more inclined to mentally consult upon their own previous ethical behaviours when considering their current ethical choice.

Based on previous research, it was expected that if being a socially conscious consumer was strongly bound to a person's self-identity that it should be reasonably stable over time (Trevino et al., 2006). This idea informed the development of the hypothesis that those with a high level of ESI would actually use less mental accounting. Apparently, participants with a high ESI experienced more ambivalence in a consumer decision making scenario than expected, and so relied on more neutralization techniques, specifically mental accounting, than their lower ESI counterparts. This can possibly be explained by the very complex consumer environment that exists, and the actuality that it is often difficult to determine whether or not the product in question will actually have a positive effect, or at least a less negative effect, on the environment. This knowledge, combined with the many decisions that individuals face everyday, consumer or not, can help to explain why consumers who consider themselves to be highly ethical may face ambiguity in making socially conscious consumer behaviour decisions, and need to rely on techniques such as mental accounting. The neutralization technique, *metaphor of the ledger,* that was referred to in the literature review has shown to be of use in socially conscious consumer decision making scenarios by consumers (McGregor, 2008). As an individual's dispositional level of ESI increases, so too does their use of mental accounting.

A similar relationship was initially predicted to exist between dispositional ESI and cognitive processing, specifically participants with a mid-level ESI were expected to partake in more cognitive processing than low or high ESI participants due to their lack of strong commitment to either conventional or socially conscious products, but this was not supported. Neither was a parallel found between the relationship of cognitive

processing with dispositional ESI, and the actual relationship of MA with dispositional ESI found in hypothesis testing. The findings instead indicated that there was no difference between the three levels of ESI in cognitive processing. This is surprising given that mental accounting is a cognitive process; it would have been reasonable to assume that it would display a similar trend. The method of assessing cognitive processing in this study (a content analysis of open-ended thoughts listings) may not have been suitable considering the nature of the research sample. Feedback from some participants indicated that writing about their decision was too laborious. This view is sustained by the shorter than anticipated responses overall. Because this study was disseminated online, participants may have been less willing to spend time writing long answer responses. This should be kept in mind for any future research using an online sample; this type of sample may be more suited to multiple choice or short answer responses.

The remaining hypotheses also produced mixed results. While the attempt to elicit a licensing and compensation effect was unsuccessful, the manipulation was successful in priming environmental consumer behaviour in participants. Specifically, low and mid ESI participants increased their environmentalism after receiving a positive environmental prime. This is consistent with assimilation effects described by the priming literature; judgements made will be consistent with the primed category (Herr, 1989). In this research, when asked to recall past environmental behaviours, the notion of environmentalism was primed and this led to an assimilation effect; participants behaved in a more environmentally conscious manner as a result. High ESI participants marginally increased their environmentalism after receiving either the negative or

positive environmental prime. This marginal effect may have been due to the fact that high ESI participants already displayed a higher level of environmentally conscious consumer behaviour, suggesting a ceiling effect, thus the increase was less than it was for participants on the lower end of the scale. Interestingly, for high ESI participants, both the negative and positive primes led to a similar pattern of results: priming ethical behaviour. Perhaps because high ESI individuals are more attuned to their ethical self, the direction of the prime had less impact than the ethical content of the prime. As previous research has shown, when it comes to self-identity, individuals will attempt to maintain consistency between their behaviours and their perception of their own self-identity (Aquino & Reed, 2002). Conceivably, the prime may have served as a reminder of their dispositional ethical self-identity which prompted their intrinsic desire to make their consumer decision consistent with this identity.

These results indicate the importance of dispositional ESI in socially conscious consumer behaviour; not only in how the individual processes the purchase decision, but in how they react to external stimuli. It has been shown by the results that internal processing of the decision at hand varies across different levels of ethical self-identity. Even though this variation exists, positively priming the environment generally leads to an increase in environmentally conscious purchase intentions across all levels of ESI. There also appears to be a more complex internal process for high ESI individuals, and this research has only scratched the surface by finding that they do in fact partake in more mental accounting and are more likely to increase their environmentally conscious purchase intentions when primed either positively or negatively.

9.2 Contribution and Implications

The theoretical contribution of this research is that it lessens the gap between the socially conscious consumer behaviour literature and the mental accounting literature. Mental accounting has not been directly applied to the socially conscious consumer behaviour literature in the past, and this study takes the first step in building the connection between these two research areas. It is also the first study, to the knowledge of the researcher, to measure mental accounting activity across different levels of ethical self-identity in the consumer context. Past research has not made the leap to empirically test whether or not mental accounting is used in neutralization efforts by consumers who face socially conscious consumer behaviour dilemmas.

The two most meaningful theoretical contributions from this study are 1) dispositional ESI and MA are positively related such that the higher the dispositional level of ESI, the more MA that the individual uses, and 2) priming the environment leads to more environmental purchases overall: an assimilation effect takes place. Though this study initially sought to elicit licensing and compensation effects, these were not found. Instead, these findings support that priming the environment will lead to more environmentally conscious purchasing intentions.

This research also has practical implications. Understanding which underlying forces, situations and individual differences play a role in consumer decisions is an important step in fully understanding socially conscious consumer behaviour. Only in fully understanding this type of behaviour can it be encouraged. McGregor (2008) points out that consumers may shift between acceptable and irresponsible behaviours and are

not always unethical in their behaviour. This inconsistency, according to McGregor (2008), offers hope that consumers may be persuaded to make ethical consumption a priority. From a managerial perspective, as consumer behaviour shifts more towards socially conscious purchasing, it will be important for marketers to have knowledge of the mental processes guiding these decisions, and the role that external stimuli, such as priming, play in order to foster socially conscious consumer behaviour in our society.

This study categorizes consumers into three levels of ESI, and shows the differences and similarities between them. This information can be useful for marketers because they can tailor their efforts towards these three segments of consumers. Knowing in advance, any dispositional trait, including ESI, is not usually possible for marketers, but based on other factors such as product category or the place in which the product is sold, certain suppositions can be made about an individual's disposition. The priming effects discovered in this study may be more easily applied by marketers because regardless of disposition, there was some level of assimilation intentions for all participants. Priming effects were higher on low and mid level ESI individuals, but still had the desired effect on high ESI individuals: the desired effect being an increase in environmentally conscious consumer behaviour intentions.

9.3 Limitations and Future Research

Previous research has shown that, while priming green or environmentally conscious purchasing through mere exposure increased pro-social behaviours; a licensing effect occurred only when actual purchasing behaviours were performed which led to an increase in unethical behaviour (Mazar & Zhong, 2009). Even though the personal

reflection priming activity had a significant effect in this research, the results were not as intended, and as such the priming manipulation is a limitation of this study. In the future, research that wishes to elicit a licensing effect would be at an advantage by having participants actually participate in a purchasing scenario rather than having them draw on recollections of past consumer behaviour.

Another limitation of this study is that it only looks at the environmental aspect of socially conscious consumer behaviour. As not all dimensions of socially conscious consumer behaviour could be covered in this thesis, there is an opportunity for more research to be done in this area by exploring other aspects of socially conscious consumer behaviour. Also, this study was only able to test a limited number of products. There is an opportunity for replication with other products and/or services.

Open-ended responses provided some ideas for future research as well. Numerous participants from the main study mentioned that they would have chosen the socially conscious product had there been a promotional offering, such as a coupon. This may have practical implications for marketers of socially conscious products, and could be a potential area for more research. Also, there was a real lack of understanding about what made each product environmentally friendly. Some of this confusion came to light with the light bulb concerns, but the lack of understanding was not limited to one product. Some participants doubted that recycled paper towel was better for the environment. Some participants did not know what made cotton ‘organic’; one participant even expressed that cotton was a plant, so therefore was intrinsically ‘organic’. This general lack of understanding shows the opportunity for future research regarding the general knowledge of the consumer concerning socially conscious products. This study focused

on the consumer's intent of being more environmentally conscious and did not attempt to measure the actual outcome of the products on the environment. The actual outcome of *supposedly* environmentally or socially conscious products is another topic entirely; a topic that could be quite interesting for future consumer research.

The recent shift toward socially and environmentally conscious purchasing behaviours by many consumers must not be taken advantage of by companies hoping to *jump on the bandwagon,* so to speak. Since many consumers lack the knowledge to make the best decisions at times, they must rely on information provided to them by many sources, including marketers. From the open-ended responses of this study, there was a level of skepticism about these products that must not be left unaddressed. Gaining back the trust of consumers will also be an important step in being able to successfully market products that are in fact socially conscious. This would be another excellent area for further research.

9.4 Conclusions

This study was successful in answering the research question by providing insight into the processes through which consumers make socially conscious consumer decisions, and the factors that play a role. Using an online experimental procedure, consumers' dispositional ethical self-identity was discovered to be a driving force in their use of mental accounting procedures, though not in the manner anticipated. Mental accounting has been shown to play a role in consumer decision making in an environmentally conscious context, depending on the individual's dispositional level of ESI. Individuals with a higher level of dispositional ESI exhibit a higher level of mental

accounting activity. This finding acknowledges the fact that consumers have different levels of ESI, and that they process these socially conscious decisions in different ways. Positive environmental priming was also shown to successfully cause an assimilation effect in consumers' purchase intentions across all levels of ESI. Interestingly, negatively priming the environment also increased environmentally conscious purchase intentions in high ESI individuals, indicating a more complex cognitive process for this segment of consumers. This research uncovered that dispositional ESI plays a key role in guiding socially conscious consumer behaviour.

This study is a start in fully understanding the relationship between dispositional ethical self-identity and mental accounting, and is a first attempt in uniting these different research areas. The findings from this study also provide practical tools that marketers can use. Understanding the underlying processes behind socially conscious consumer behaviour will ultimately assist marketers in encouraging consumers to make more socially conscious purchase decisions.

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Appendix A

Table A1 Scale Items (Pilot Study)

Scale	# of items	# deleted
General mental accounting tendencies	8	0
Usually, I keep track of my environmentally conscious behaviours in my head.		
I keep a sort of mental tally of my environmentally conscious behaviours.		
When I'm thinking of making a consumer decision, and the choice with the best environmental impact is difficult or expensive, I sometimes consider whether I have made other good choices recently.		
I make up for worse environmentally conscious choices by performing better choices later on.		
I may not make the best environmentally conscious choices, but I make up for it in other areas of life.		
If I've been really good with environmentally conscious choices, I take a break once in a while.		
I can make up for less desirable environmental choices at another time in the future.		
If I have not been very good with making environmentally conscious choices, I try to make up for it.		
Experimental mental accounting (both scenarios)	4	1
I did a rough mental tally of my previous environmentally conscious behaviours		
I thought about my previous behaviours		
I took into account my past environmentally conscious behaviours		
I did not think about my past behaviours at all (R)		
~~I tried to make up for past behaviours~~		
Dispositional ESI	10	1
It would make feel good to be a person who is environmentally conscious		
Being someone who is environmentally conscious is an important part of who I am		
I think of myself as an "environmental consumer"		
I would be ashamed to be a person who is not environmentally conscious		
Being environmentally conscious is an important part of my sense of self		
I strongly desire to be environmentally conscious		
I often buy products that communicate the fact that I am environmentally conscious		
The types of things I do in my spare time (i.e. hobbies) clearly identify me as environmentally conscious		
The kinds of books and magazines that I read identify me as environmentally conscious		
~~The fact that I am environmentally conscious is communicated to others by my membership in certain organizations~~		
I think of myself as someone who is concerned about environmental issues		
Social desirability scale	4	2
I like to gossip at times (R)		
There have been occasions where I took advantage of someone (R)		
~~I'm always willing to admit it when I make a mistake~~		
~~I always try to practice what I preach~~		
I sometimes try to get even rather than forgive and forget (R)		
I have never deliberately said something that hurt someone's feelings		
Self-efficacy control questions	3	0
I think that purchasing recycled products helps the environment		
I think that purchasing energy efficient products helps the environment		
I think that every decision I make has the potential to make a difference for the environment		

Appendix B

Table B1 Scale Items (Main Study)

Scale	# of Items	# deleted
General mental accounting tendencies	8	0
Usually, I keep track of my environmentally conscious behaviours in my head.		
I keep a sort of mental tally of my environmentally conscious behaviours.		
When I'm thinking of making a consumer decision, and the choice with the best environmental impact is difficult or expensive, I sometimes consider whether I have made other good choices recently.		
I make up for worse environmentally conscious choices by performing better choices later on.		
I may not make the best environmentally conscious choices, but I make up for it in other areas of life.		
If I've been really good with environmentally conscious choices, I take a break once in a while.		
I can make up for less desirable environmental choices at another time in the future.		
If I have not been very good with making environmentally conscious choices, I try to make up for it.		
Experimental mental accounting (both scenarios)	4	1
I did a rough mental tally of my previous environmentally conscious behaviours		
I thought about my previous behaviours		
I took into account my past environmentally conscious behaviours		
I did not think about my past behaviours at all (R)		
~~I was influenced by my past behaviours~~		
Dispositional ESI	11	0
It would make feel good to be a person who is environmentally conscious		
Being someone who is environmentally conscious is an important part of who I am		
I think of myself as an "environmental consumer"		
I would be ashamed to be a person who is not environmentally conscious		
Being environmentally conscious is an important part of my sense of self		
I strongly desire to be environmentally conscious		
I often buy products that communicate the fact that I am environmentally conscious		
The types of things I do in my spare time (i.e. hobbies) clearly identify me as environmentally conscious		
The kinds of books and magazines that I read identify me as environmentally conscious		
The fact that I am environmentally conscious is communicated to others by my membership in certain organizations		
I think of myself as someone who is concerned about environmental issues		
Social desirability scale	3	3
I like to gossip at times (R)		
There have been occasions where I took advantage of someone (R)		
~~I'm always willing to admit it when I make a mistake~~		
~~I always try to practice what I preach~~		
I sometimes try to get even rather than forgive and forget (R)		
~~I have never deliberately said something that hurt someone's feelings~~		
Self-efficacy control questions	3	0
I think that purchasing recycled products helps the environment		
I think that purchasing organic cotton products helps the environment		
I think that every decision I make has the potential to make a difference for the environment		