THE IMPACT OF MORTALITY SALIENCE EFFECTS ON CONSUMER BEHAVIOUR

Alexander Davidson

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ABSTRACT

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ALEX DAVIDSON

Terror management theory (TMT) has proven that reminders of death intensify efforts to engage in culturally prescribed behaviour. Individuals tend to exhibit cultural worldview defences when mortality is made salient and it has been demonstrated that heightened self-esteem will reduce existential anxiety. In connection with consumer behaviour, death-related thoughts have been found to increase consumption, enhance support for charitable donations and stimulate preferences for luxury products among many other things. This study demonstrates that mortality salience (MS) manipulations influence subconscious reactions to different consumer behaviours. In particular, MS leads to decreased importance for prestigious items among high self-esteem individuals and causes age to have an inverse relationship with prestige importance. MS causes low as compared to high self-esteem individuals and younger as compared to older individuals to become more risk averse when confronted with risky purchase decisions. MS also leads to increased preferences for nutritional information on food products for females as compared to males. Surprisingly, MS does not lead to less favourable attitudes towards foreign products nor does it lead it to more favourable attitudes towards charitable organizations. As opposed to testing the effects of MS on consumer behaviour

among American consumers, this study contributes to the terror management literature by revealing that MS impacts Canadian consumer behaviour outcomes. While past research has consisted of methodological similarities by conducting most MS experiments in a classroom of university students, this study primes subjects with death-related thoughts through an online survey questionnaire. The managerial implications of this study suggest that in times when MS is high among the Canadian population, risky products might become more profitable especially if they are known to already interact with individual levels of self-esteem. Similarly, marketing strategies for high status products should diverge away from older age groups as those consumers will most likely exhibit negative reactions to such items. The theoretical implications of this study contribute to a more comprehensive understanding of the link between TMT and consumer behaviour and reflect evolutionary influences on consumer psychology.

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CHAPTER 1:

INTRODUCTION

It is impossible to watch or read the news without being bombarded with reports of murders, terrorist attacks, life-threatening epidemics or environmental disasters. After being induced with death-related thoughts, how do people cope with existential anxiety? This paper will investigate the impact of mortality salience effects on human beings and will focus on specific consumer behaviour outcomes such as attitudes to foreign products and charitable organizations, the importance of prestigious items, risky purchase decision making and preferences for nutritional information on food products. This chapter will begin by explaining the influence of death anxiety on culture and will introduce terror management theory as means of testing mortality salience effects. The relationship between mortality salience and consumer behaviour will then be briefly reviewed and the research objectives of this study will be discussed.

1.1 Cultural Worldviews and Death Anxiety

Culture can be defined as "humanly created and transmitted beliefs about the nature of reality manifested though uniquely human institutions such as religion, art, and science" (Solomon et al., 2004a). A Darwinian understanding of culture is necessary if one is to explore the evolutionary underpinnings and survival characteristics that lie at the heart of this human creation. It is important to follow this evolutionary perspective since art and religious or supernatural proclivities appear in every human society and era (McCarter, 2009). An evolutionary investigation necessitates an in depth examination of

the psychological foundations of culture in which the answers to many of humanity's ongoing and unsettled questions can be solved and summed up in three words: fear of death.

Cultural anthropologist Ernest Becker demonstrated the psychological impact that death anxiety has had on human beings - the only animal that is knowingly aware of the inevitability of his or her own mortality (Becker, 1973). As the human species became more conscious of themselves and their surroundings, increasing self-awareness produced a tenaciously incessant fear of death. With the awareness of our own existence and the burgeoning realization of our threatening world, the recognition of our own mortality would have cognitively paralyzed us. Conversely, those who adopted cultural worldviews developed an evolutionary advantage which consequently transcended through generations (Deacon, 1997). These worldviews instilled meaning and purpose in the lives of those who ascribed to them and with a heightened sense of importance and value in the universe, death was no longer disconcerting. For our ancestors, cultural worldviews provided a buffer from the threat of death anxieties through the augmentation of their self-esteem. Culture can thus be seen as the ultimate medium to which human beings are collectively drawn towards as a means of eradicating fears that would otherwise completely consume them:

> "Culture accomplishes this goal by casting each of us as principle characters in an ongoing sacred narrative cosmological drama that imbues the world with meaning from which each one can derive a sense of value (self-esteem) and the consequent assurance that death can somehow be symbolically and/or literally transcended." (Solomon et al., 2004a, p. 24).

Cultural worldviews are so effective because they are shared between members of society and are therefore constantly validated and reaffirmed. People who do not accept or uphold such worldviews (either because they disagree or because they have differing views and beliefs) threaten those with dissimilar and incompatible conceptions. If one's own worldviews are seen as fallacious or questionable then existential anxieties cease to be controlled. If such an anxiety-buffer is not operative, the overwhelming and paralyzing terror of death is reawakened. According to Becker (1973), such threats result in cultural worldview defences in which differing outlooks and beliefs conjure up feelings of animosity to those who don't uphold the same cultural standards and values. The more entrenched an individual is in the beliefs of their worldviews, the less tolerance they will have for contrasting convictions of belief. In order to empirically validate the relationship between cultural worldviews and death anxiety, a testable theory was developed which has generated enlightening and informative research studies.

1.2 Terror Management Theory

A growing interest concerning insights into death anxiety and its relation to culture and human behaviour began to emerge in the psychological academic community during the 1980s. More specifically, the multidimensional works of Ernest Becker started to make an influential impression on a group of psychology professors from universities in the United States: Jeff Greenberg; Sheldon Solomon and Tom Pyszczyski. As a result, they developed terror management theory (TMT) which combined the previously mentioned explanations about the impact of death anxiety on human beings and their environments in order to answer basic questions regarding the human condition through empirical support. They wanted to know why people go to great lengths to achieve self-esteem?; Why do people believe that their conception of reality is the truth?; And why do people have a hard time getting along with each other, especially those who are different? (Pyszczyski, 2004).

To date over 300 studies in many different countries have explored a plethora of topics within TMT and have integrated a variety of mortality salience (MS) techniques to elicit death-related thoughts (Solomon et al., 2004). The most widely used MS manipulation consists of open-ended questions that ask participants to think about what will happen as they physically die and to describe the emotions that the thought of death arouses (Greenberg et al., 1990). Participants in the control conditions are asked to write about and describe their emotions towards a neutral topic. Although open-ended questions seem to be the most widely used terror management methodological manipulation, others have been shown to be as effective such as: death anxiety scales

(Rosenblatt et al., 1989; Mikulincer and Florian, 1997); conducting interviews in proximity to funeral homes (Pyszczynski et al., 1996); and being exposed to gory automobile accident footage (Nelson et al., 1997). Regardless of the different MS manipulations that have been implemented, findings from terror management research studies have confirmed the legitimacy of the theory and have also revealed its impact on consumer behaviour outcomes.

1.3 Mortality Salience and Consumer Behaviour

In the weeks following the horrific events of September 11th 2001, the Bush administration urged and advised American citizens to go shopping and as a result the purchases of homes, cars, appliances, furniture and electronic gadgets increased in record quantities (Arndt et al., 2004a). The advent of such immediate eager consumerism may have startled and surprised many people however this behaviour does not seem all that shocking from the perspective of TMT. Considering that the theory's main argument asserts that the awareness of death engenders overwhelming existential anxiety that motivates people to imbue life with meaning by acquiring and procuring self-esteem from cultural beliefs, intense materialistic consumption should be a predictable consequence of 9/11 as the desire for possessions is already deeply engrained in the psyche of American culture (Veblen, 1899).

Research investigating the impact of MS effects on consumer behaviour has produced many interesting findings. After being primed with mortality-related thoughts, nationalistic biases have emerged for domestic-made products (Nelson et al., 1997);

willingness to contribute to charitable organizations has risen (Ferraro et al., 2005 and Jonas et al., 2002); increased purchase intentions have been elicited for high-status products (Mandel and Heine, 1999); risky decisions are less likely to be undertaken by those with low self-esteem (Landau and Greenberg, 2006) and larger quantities of food products are preferred (Mandel and Smeesters, 2008).

1.4 Research Objectives

This research intends to build on these past studies that have investigated the impact of MS effects on consumer behaviour while making new contributions to the literature (Figure 1.4). The main objective of this research study is to demonstrate that MS will lead to:

- Less favourable attitudes to foreign products. Self-esteem will moderate this relationship such that low self-esteem individuals will reveal even less favourable attitudes as compared to high self-esteem individuals after an MS prime and compared to low self-esteem individuals in the control group.
- More favourable attitudes to charitable organizations. Self-esteem will moderate this relationship such that low self-esteem individuals will reveal even more favourable attitudes as compared to high self-esteem individuals after an MS prime.
- Increased importance for prestigious items. Self-esteem will moderate this relationship such that low self-esteem individuals will reveal increased importance while high self-esteem individuals will reveal the opposite effect.

Age will also moderate this relationship such that younger individuals will reveal increased importance while older individuals will reveal the opposite effect.

- Increased perceptions of risk on risky product purchases. These effects are predicted to be more pronounced for females, older age groups and low self-esteem individuals.
- Increased preferences for nutritional information on food products for females. These effects are predicted to be even more pronounced for low self-esteem females.

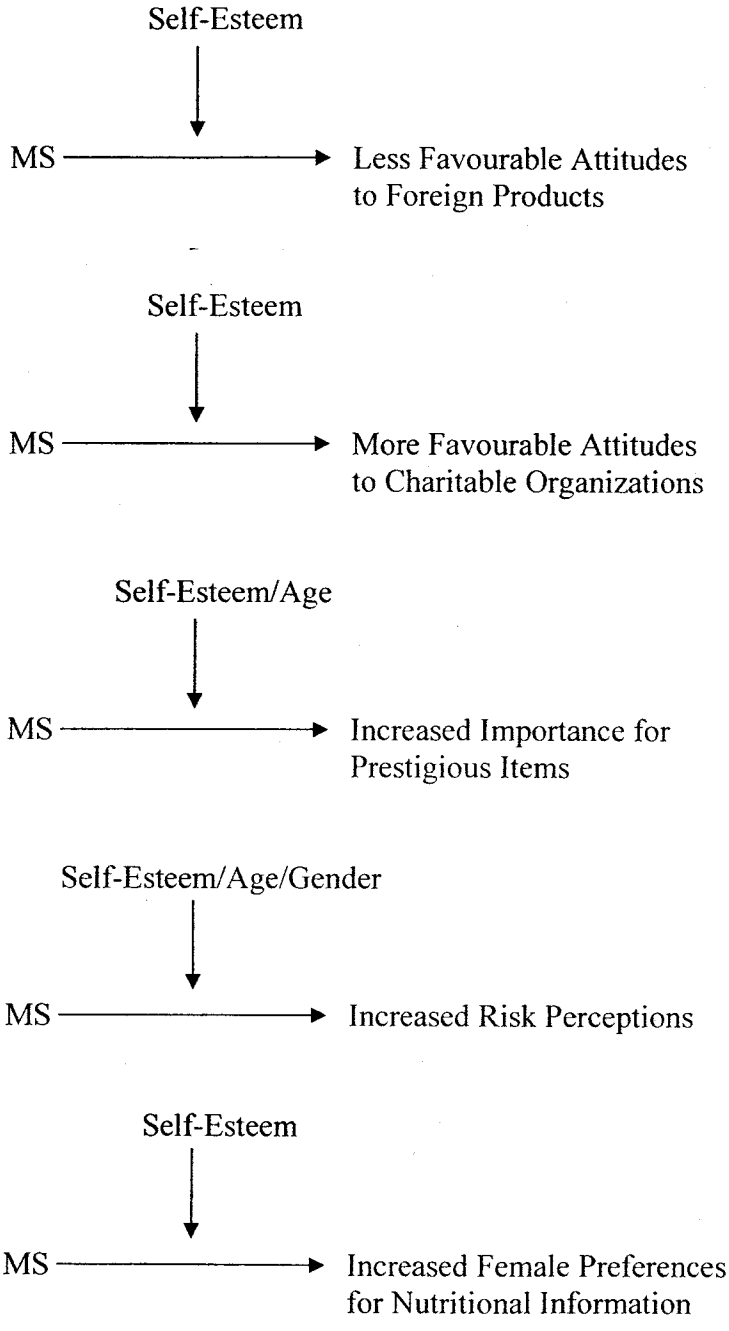
As a new contribution to this research field, this study will be conducted solely among Canadian, as opposed to American, consumers. While it can be expected that the cultural worldviews of Canadian and American consumers due to not differ tremendously, it will be interesting to observe if similar effects regarding such things as attitudes towards foreign products can be obtained among Canadian consumers induced with MS.

A new methodological approach consisting of administering the survey questionnaires through online consumer panels will be a second contribution to this research field. The majority of research studies that have investigated the effects of MS on different stimuli have conducted terror management experiments using university students in isolated classrooms. It is of interest to determine if the findings from those experiments were influenced by the repeated use of young students within a limited age

range and if the secluded classroom environment altered the impact of the MS effects. The use of an online survey questionnaire in this study will provide keener insight into the robustness of TMT. The variety of different age groups as well as a proportional mix of males and females should conclude if age and gender differences impact results.

This paper will first discuss the theoretical development of TMT by examining the impact of death anxiety as a psychological foundation of culture. An exhaustive overview of studies demonstrating empirical support for TMT will then be presented followed by a review of recent research that has linked the theory to consumer behaviour outcomes. Following the review of past literature, the research context and methodology of the current study will be discussed in which the development of the hypotheses will be explained and further elaborated upon. The results will then be presented followed by a general discussion related to the findings. Finally, the conclusion will bring forth several aspects related to this study such as the managerial implications, limitations and future research.

Figure 1.4 - Impact of MS Effects on Different Consumer Behaviours



CHAPTER 2:

DEATH ANXIETY AS THE PSYCHOLOGICAL FOUNDATION OF CULTURE

The following sections will discuss the theoretical development of TMT by exploring historical evidence related to the impact of death anxiety on past cultures and societies. An explanation to why and how social interaction evolved and led to the need for culture will be first discussed. Secondly, an example of an ancient society located in present-day Turkey will reveal evidence of how cultural revolutions actually preceded agricultural revolutions in order to provide a collective means of reducing existential anxieties. A discussion will then be presented which will focus on political revolutions from the past and present which have reflected immortal aspirations. Lastly, examples of symbols of immortality will be examined in order to demonstrate how cultures from different locations and eras have attempted to control anxieties related to death through symbolic representations of their beliefs.

2.1 The Emergence of Social Interaction

It has been proposed by evolutionary theorists that the emergence of human bipedalism (arguably 3.5 million years ago) resulted in the exploitation and use of tools for various functions thus leading to eventual alterations in brain size and functional ability (Donald, 1991). Aside from the impact of bipedalism on brain development, it is also said to have been responsible for constricting the birth canal causing newborn infants to be more developmentally immature and thus more dependent on their parents and elders as compared to other primates (Solomon et al., 2004b). Such dependencies

necessitated larger cooperative groups of hominids which led to the increase of social interaction and the imperative requirement to 'generate narrative accounts of death-transcending visions of reality' (Solomon et al., 2004a, p. 26).

The adaptive advantage of incorporating these primordial spiritual beliefs was that those who were embedded with them were less fearful to fight in the face of danger and were more likely to take heavier risks for accumulating food, resources or protection. This has been entertained as a possible explanation for the extinction of the hominid species closely related to Homo Sapiens where predators or physical deprivation have been ruled out as possible reasons (Donald, 1991). The aphorism that there are no atheists in foxholes (indicating that those without spiritual beliefs are less likely to face danger or risk death) is a reflection of the adapted capabilities (i.e. cultural or spiritual beliefs) that enabled continuous survival skills.

According to Solomon et al. (2004a), human cognitive capacities increased due to the development of symbolic thought. As a result, the ability for spoken language emerged which provided the facilitation of sharing survival-related concepts and thoughts. For example, through language, our ancestors were able to coordinate hunting parties that could gather larger amounts of prey. As spoken language evolved and led to the emergence of speech, grammar and sentence structure, simultaneously a more sophisticated system of beliefs and 'narrative accounts' developed. In turn, this sophisticated system of supernatural narrative accounts fostered customs believed to

strengthen survival such as performing spiritual rituals before hunting in order to ensure mystical protection and guidance. Such early forms of spirituality have been evidenced by the discovery of ritual burials and artwork by early Homo Sapiens (Mithen, 1996).

In convergence with the idea that death anxieties promoted the need for culture, they were also responsible for initial verbal communication among early hominid species. Although evolutionary psychologists and some scientists would refute this explanation and propose that initial linguistic abilities evolved because they facilitated the transfer of knowledge, contrasting theories proclaim that: "Modern humans developed language in response to pressure to improve their conceptual apparatus, not vice versa" (Donald, 1991, p. 215).

2.2 The Impact of Death Anxiety on the Formation of Communities

It is widely believed that approximately 12,000 years ago a transition began to occur in which nomadic hunting and gathering communities slowly developed into sedentary settlements (Gupta, 2004; Redman, 1978). The arguments presented by many evolutionists and archaeologists regarding the reasons for the transition of hunter-gatherer groups to permanent community-dwellers (leading to the eventual emergence of civilization) is based on agricultural development and the domestication of plants and animals (Rindos, 1987). In other words, modern humans initially started living together in groups and communities as a result of what is now known as either the first agricultural revolution or the Neolithic revolution. While there is no denying that such

revolutions indeed made living together more manageable, tolerable and successful, recent evidence suggests that cultural revolutions may have preceded agricultural revolutions and not the other way around.

In a series of investigations brought about by an excavation in Catalhoyuk, Turkey, Balter (1998) reported on the discovery of a settlement where nomadic ancestors lived together 9000 years ago, long before any evidence of agricultural activity in that area. It is believed that as many as 10,000 people lived in this settlement which was occupied for approximately 1000 years and expanded to 12 hectares. Archaeologists working on this site have thus pondered exactly why these settlers came together in the first place? The search for these answers has produced very interesting findings such as the discovery of mass burials located underneath houses; evidence of a mass amount of people being crammed in small dwellings with holes in the roofs used as entrances and the uncovering of works of art believed to contain religious or spiritual connotations. According to Balter (1998), unlike other older known cities such as Uruk in Mesopotamia, settlers in Catalhoyuk did not organize any division of labour and most construction work and artistic production was carried out in individual dwellings. This suggests that to a certain degree these settlers were self-reliant and were therefore not compelled to live in this densely populated community for dependence on additional labour.

Agriculture has been ruled out as a reason for communal growth as the archaeologists at Catalhoyuk suggest that an agricultural system consisting of an irrigation network was not necessary since the settlers lived in very wet conditions. As well, the theory that many settlers were needed in order to take care and attend to livestock was discarded since excavated animal bones provide evidence that this was not a cattle-centered economy. The only explanation the archaeologists have developed for this unusual settlement is based on evidence that has amounted from excavations into the burials of these communal dwellers. It was revealed that the burials found underneath the houses were in close proximity to painted murals of wild animals and hunting scenes which indicate that the settlers' artwork was produced and used as a mythical way to control the natural world through symbolic representation:

> "Arguing from so-called ethnographic evidence which uses knowledge of present-day cultures to shed light on past societies, they suggest that the art might have represented a ritualistic attempt to assuage the spirits that had taken the lives of the community's young people, or perhaps an effort to protect the living from the spirits of the dead. Similar practices exist today among the San hunters of southern Africa, nomadic tribes in northern Asia, and the Nuba of Sudan. There are also striking parallels with burial practices of the Tikopia people of Polynesia, who buried their dead under the floors as well." (Balter, 1998, p. 1445).

It is speculated by Balter (1998) that hunter-gatherer societies underwent a mental transformation that altered their outlooks and encouraged them to live together in individual permanent dwellings. This resulted in the creation of artwork which was used for the purpose of misrepresenting reality and the natural world in order for humans to better deal with the existential stresses that are unfortunately ever-present. The depiction of hunters killing wild animals or taming a savage beast in mural paintings could have provided tranquility and ease of mind to settlers, helping them overcome anxieties resulting from the fear of death. Balter (1998) refers to similar findings from evidence collected from other archaeological sites such as Asikli in Central Anatolia; Cayonu, Southern Turkey and Jericho in the West Bank.

2.3 Revolutionary Immortality

The ancient creation of works of art is undoubtedly a primordial manifestation of human beings to depict real life threatening scenarios in a way that facilitated interpretative exaggeration thus removing individuals from the daily anguish induced by the environment. As well, other cultural expressions can also be seen as a product of our most basic fears related to death such as politics, economics, philosophy or any other social or natural science. With regards to the emergence and development of political philosophy and, in more recent times, political science, it is possible that all political revolutions from the past and present are, in essence, attempts at the immortalization of the people, the leaders and the culture. Examples from the Chinese communist revolution

and ancient societies in Egypt and Mesoamerica will be discussed in order provide historical evidence for the impact of death anxiety as a foundation of political revolutions.

In reference to the cultural revolution that took place in the second half of the twentieth century in China during the rule of Mao Tse-Tung, Lifton (1968) remarks: "The essence of the 'power struggle' taking place in China, as of all such 'power struggles,' is power over death" (Lifton, 1968, p. 8). Lifton describes the Chinese cultural revolution as being compelled by concerns of death, and generalizes this notion to all political revolutions. It is this fear that drove Chinese leaders and many of its citizens to acquire cultural symbolic immortality through revolution as it is accordingly described in the well-known Chinese communist slogan: 'May the revolutionary regime stay red for ten thousand generations'.

Lifton (1968) defined the communist structure as a 'socially created family' intended to propagate a strong cultural belief system so that even in the face of death, one is proud to die for the people, the culture and for all that it represents. Mao Tse-Tung, the revolutionary leader, thought of his own death as imminent and overdue because he had the fortune to escape it so many times in his past. A desire for immortality grew stronger especially with the realization that it could be attained through a cultural transformation. In essence, by transforming the culture so that it would become synonymous with Mao Tse-Tung and his communist aspirations, the leader created a way to symbolically live on forever. As a result, when the revolution was in threat of danger or death (e.g. by the

American presence in Vietnam), there was, in the words of Lifton: "a call for reassertion of revolutionary immortality" (Lifton, 1968, p. 31). A threat to the revolution was a challenge to its immortal ambitions; therefore the end of the revolution provoked its own type of collective existential anxieties.

A trend emerged for deceased communist leaders in which their corpses were embalmed and preserved for viewing in mausoleums. Perhaps their attempts at symbolic immortality inspired their followers to display them in a constant immortal state. To extend this understanding of political revolutions, certain world-changing historical occurrences have also reflected a desire from the leaders and their people to achieve symbolic immortality. Hitler and the Nazis' attempt at world domination was expected to guarantee that the Third Reich would live on for 1000 years. From this perspective, fascism is the quintessential nationalistic ideology for deriving symbolic immortality as it places the collective desires of the nation above any individual. As such, one lives and dies for the state because of its expected longevity and in turn death anxieties are repressed through the presumed attainment of cultural symbolic immortality (Fest, 1973). In fact, many examples can be extracted from the political changes of the twentieth century, as well less recent cases have also reflected mankind's ultimate goal towards immortality.

Ongoing studies and excavations in Egypt investigate the mysteries of the ancient civilization that was once dominant in the region and have generally revealed a culture obsessed with death or more importantly, immortality. Ancient Egyptians believed in the

transfer of the dead to the next world and practised the process of mummification as a technique to preserve the deceased for their posthumous transition. One of the most widely recognized icons of immortality, the pyramid, was used to bury ancient monarchs and leaders with their prized possessions. Hieroglyphs have been discovered on the walls of the burial chambers with designs aimed to safeguard the dead's passing into afterlife (Mertz, 2007). Parallels can be made between these burial practises and those of the Catalhoyuk settlers nearly 5000 years earlier. It can be argued that such immortalization practises influenced the political and economic motives of this ancient society.

Much of the same can also be attributed to other ancient spiritual civilizations such as the Mayans of Mesoamerica, who at their peak, impressively constructed intricate and complex architectural designs for symbolic usage by priests. These spiritual leaders performed rituals on pyramids to demonstrate their rise from earth to the heavens (Putatunda, 2008). In the ancient Mexican city of Chichen Itza, the enormous El Castillo pyramid contains murals and carvings located next to a cenote (a deep natural well) which was used to make human sacrifices to the rain god. Unlike the ancient Egyptians or Catalhoyuk settlers, the Mayans implemented sophisticated mathematical and astronomical knowledge hundreds of years before Europeans would make such discoveries (Sharer & Morley, 1994). While this discovery has astonished scientists and archaeologists, it does not seem so unfathomable if one is to understand the role of death anxiety as a psychological foundation of all cultures from past and present and its impact on culturally driven practises.

2.4 Symbols of Immortality

In most cultures, religious symbols can be explicitly identified by their association with a deep yearning for immortality. The cross in Christianity; the long-living lotus flower in Buddhism; the undying flames of the Menorah in Judaic symbolism or the Gate of Eternal Life in Islam are all examples of the propensity for people to tangibly recreate a representation of their immortal pursuits. This type of symbolism also exists outside of religious interpretation as it quenches the universal thirst to deny humanity's mortal limitations:

> "...man's yearning for organismic activity, the pleasures of incorporation and expansion, can be fed limitlessly in the domain of symbols and so into immortality. The single organism can expand into dimensions of worlds and times without moving a physical limb." (Becker, 1973, p. 3).

One of the universal symbols of immortality is the Phoenix, a mythical bird that is depicted as being constantly reborn from the ashes of its inflamed nest. This `firebird` originated in ancient mythologies and has transcended many cultures and eras from the Phoenicians, Egyptians and Greeks with similar bird-like symbols appearing in the cultures of the Chinese, Persian, Japanese, Russian and others. As it is still referenced today in modern cultures, its impact on literature, folklore and art cannot be underestimated (Mushet, 1973).

The fountain of youth is a universal symbol of immortality said to of originated in the Arabic lands of the Middle-East despite mythical accounts of Spanish conquests' attempts to discover it. The fountain of youth can be found in the folklore of most ethnic cultures in Europe and the Middle-East (Peck, 1998). Cultural symbols of immortality can also be epitomized more abstractly through metaphorical folk tales or figurative writings. In Sumerian texts that date back to 2000 B.C., the Epic of Gilgamesh reveals a story that is concerned with the protagonist character's long and never-ending quest to obtain immortality following the death of his best friend. This tale is referred to as "a metaphor for the unique existential concerns of the human condition engendered by consciousness and the consequent awareness of death" (Solomon et al., 2004a, p. 30). Its significance is that it is believed to have transcended into the basis for the Old and New Testaments of the Bible which would thus make it a precursor for the messianic ideologies of Judaism, Christianity and Islam (Tigay, 1982). Similarly, the Tibetan Book of the Dead (Bardo Thodol), a symbolic text within Tibetan culture, is intended to provide an existential guide for the experiences that one will incur when passing from one life to the next (Dorje, 2007).

Most symbols of immortality seem to be affiliated with some form of supernatural explanation however secular symbols are interestingly both widespread and commonly unknown. Historically, money gave mankind the ability to assume power over people, the gods and essentially death: "What leads man to assign great value to something? That it gives life, enables man to triumph over weakness and death by borrowing some of the powers of the gods" (Becker, 1975, p. 77). Money is one of the most universal symbols

of immortality with its roots tracing back to ancient times and its sacred power in modern cultures may be even more significant as it fills the vacuum left by the abandonment of antiquated rituals. As Becker (1975) and Brown (1959) elucidate, money is presently correlated with power.

In ancient times, precious metals and deposits became appropriated by divine powers as evidenced by such things as gold statues of gods. Initially the first ones to issue money were priests as temples were akin to banks and priests would dispense and accumulate currency in exchange for sacrifices or prayers. Forgery or counterfeit exchange was sacrilegious as coins and jewellery were imprinted with designs of gods and celestial masters. From the middle ages onward, absolute monarchs, who were believed to be divinely selected to rule through prophecy, would have depictions of themselves on the coinage distributed by their kingdom (Becker, 1975). Most present-day currencies throughout the world have images of living or deceased leaders printed on them such as kings, queens, prime ministers or presidents. The back of the U.S. one dollar bill has a picture of a pyramid, the ultimate immortal symbol, with a floating eye around its peak with the words ``In God We Trust`` written underneath and it is commonly referred to as the 'almighty dollar'. The accumulation of wealth has always been synonymously associated with the growth of power and with it comes a perception of superiority and control not only over people but over life and most of all, death. The next section will introduce terror management theory which has demonstrated empirical support for the impact of death anxiety as a psychological foundation of culture.

CHAPTER 3:

TERROR MANAGEMENT THEORY AND ITS EMPIRICAL SUPPORT

The previous examples from past cultures demonstrate the impact of death anxiety on human social evolution with regards to political formations, religious developments, economic frameworks, symbolic depictions and other cultural aspects. Based on this compendium of information, terror management theory was developed as a means to empirically investigate psychological reactions to mortality salience. The following section will explore research studies that have discovered significant effects for the existence of cultural worldviews and self-esteem striving under conditions of death anxiety. Evidence for the cognitive architecture of terror management will be discussed and the application of this theory to politics, religion and reminders of human corporeality will be thoroughly examined.

3.1 Evidence for the Need to Ascribe to Cultural Worldviews

Cultural worldviews provide psychological defences against death anxiety such that an individual intensifies their devotion to their worldviews and feels an increased need to meet its standards of value after mortality is made salient. In a study that primed participants with death-related thoughts by asking open-ended questions related to emotions about mortality, Rosenblatt et al. (1989) discovered that in MS conditions (as opposed to control conditions), negative reactions to moral transgressors increased.

In the first experiment, participative Judges were asked to assign a bond to a defendant accused of prostitution with the results revealing that Judges in the MS condition charged a significantly higher bond on average than those in the control condition. In a follow-up experiment, student subjects in a MS condition allotted a greater reward to a woman who helped police apprehend a criminal than those in the control condition. The results of these experiments were found not to be attributed to mood affects, self-awareness or physiological arousal. Through these results it was demonstrated that reminders of death and mortality affected attitudes towards individuals who violated or upheld aspects of one's own worldviews.

Moral transgressors challenged the values associated with worldviews of the average participant and in many cases such values can be nationally or demographically specific. It was found that after an MS induction, American participants revealed increased positive reactions to a pro-American author and increased negative reactions to an anti-American author (Greenberg et al., 1990a). In a study that intended to find a nationalistic bias, American student participants were induced with MS by watching a videotape of a driver's education video containing footage of fatal car accidents while those in the control condition watched a neutral videotape. Subjects in the experimental condition placed more blame on the driver and less on the manufacturer when they were told that the car was made in the United States. These nationalistic biases were not present in the control condition (Nelson et al., 1997).

In a research experiment that investigated the relationship between MS and patriotic tendencies in Germany, national pride was found to decrease among German participants after being primed with MS. While it may seem that these results contradict basic TMT theory in regards to national-specific worldviews, the researchers explained that reactions to national symbols under MS were reported more negatively because of their association with the country's condemned role in World War II. As such, action-oriented individuals (those who are able to self-regulate negative affects after an anxiety-induced experience) were hypothesized and found to display the regular cultural worldview pattern while state-oriented individuals (those who do not have such preventive coping mechanisms) did not employ these psychological defences (Kazen et al., 2005). In a study that investigated German participants' reactions to the introduction of the Euro currency (a symbol that does not induce thoughts related to the country's history), Jonas et al. (2005) found that under condition of MS a significant decreased liking of the new currency was observed. The results from these experiments provide substantial evidence for the existence of nationally-specific cultural worldview defences as a reaction to death-related salience.

Arndt et al. (2002a) attempted to validate the theory that reminding participants of their mortality would increase accessibility of nationalist constructs but unintentionally discovered significant effects for men and not women. Their experiment consisted of an MS or non-MS prime followed by a list of 26 incomplete word fragments that could either be filled in with pro-American or neutral words. Their explanation for the lack of

effect in women suggests that nationalistic pride is not a significant protector for them to buffer death anxieties. Follow-up studies revealed that after an MS induction there was an increase of accessibility to relationship-related thoughts for women, but not for men.

While gender differences have not received overwhelming attention within this literature, men and women have indicated different reactions to MS primes depending on the context. For example, female participants were found to increase identification with their gender after an MS induction. Interestingly, when they were asked to take a math test, they no longer responded to MS with gender identification (Arndt et al., 2002b). The researchers explain that math is perceived as a prospect that activates negative stereotypes of women and therefore counterbalances the strengthening of worldview associations following a mortality prime. The research demonstrated that MS did lead to stronger group identification, however when that group was framed negatively, MS actually lead to 'disidentification' due to the gender based stereo-type threat.

3.2 Tolerance of the In-Group and Hostility towards the Out-Group

Research has revealed that artificial group identification is also activated and heightened in response to mortality-related anxiety. Harmon-Jones et al. (1996) placed half of their participants in randomly assigned groups and told the other half that they were being placed in groups with members who shared the same preferences for a certain type of artwork. Following an MS induction, attitudinal tests revealed that participants in the 'shared preference for artwork' condition had more favourable reactions to in-group members and less favourable reactions to out-group members.

Actual in-group identification has also been found to increase after an MS induction with participants perceiving greater in-group entitativity as well as scoring higher on in-group bias measures (Castano et al., 2002). Under MS conditions, pro-social behaviours towards in-group members were exhibited (Jonas et al., 2002) while out-group participants were judged more negatively (Castano, 2004). Also, enhanced perceptions of collective continuity of the in-group's standards of values increase in-group identification (Sani et al., 2009) and following the terrorist attacks on September 11, 2001 (an MS prime in itself), group identification with country and university were rated higher as compared to six months before and 18 months after the attacks (Moskalenko et al., 2006).

Strengthening an individual's devotion and attachment to their cultural worldviews can also increase aggression and intolerance to those who do not meet the standards ascribed by those views or who are considered 'violators' to that system of values and beliefs. To test for aggression, participants were primed with MS and were then asked to read political essays that pre-test results found to be either very liberal or conservative. They were asked to allocate spoonfuls of hot sauce to be consumed by the unknown author and it was observed that participants assigned greater amounts when the author was considered a worldview threatening target (McGregor et al., 1998).

Research findings have found that participants in death salient conditions judged social transgressions more severely and recommended harsher punishments to the transgressors than did participants in a death non-salient condition (Florian & Mikulincer,

1997). Accordingly, research has shown that aggression to worldview-threatening others can be moderated by an individual's dispositional level of tolerance such that those with low levels will generate even more disdain while those with high levels seem to mitigate the effects of MS on intolerance (Greenberg et al., 1992a). Consistent with the relationship between MS and aggression, priming subjects with mortality-related thoughts has also enhanced stereotypic thinking and preferences (Schimel et al., 1999) and it has led White participants to find explicitly racist Whites as less racist when compared to a control group (Greenberg et al., 2001a).

3.3 The Strive for Self-Esteem

The inclination to maintain and adhere to a set of cultural worldviews is driven by an individual's unconscious obsession to have a sense of belonging and value in this world. This compulsion to feel valuable is directly related to the need for self-esteem as a means to assuage the anxieties associated with feeling worthless, insignificant or meaningless. In other words, higher self-esteem serves as an anxiety buffer that subdues these psychological concerns and prevents them from destabilizing mental equanimity. Greenberg et al. (1992b) discovered that when self-esteem was momentarily elevated by providing participants false feedback on a supposed IQ test, self-reported anxiety was reduced in response to graphic video footage of an autopsy and electrocution as compared to a control condition. In anticipation of painful electric shocks, physiological arousal was reduced when self-esteem was artificially elevated and likewise, dispositionally high self-esteem was found to reduce the need to deny vulnerability to

early death (Greenberg et al., 1993). This same study also concluded that the effects of a self-esteem boost were eliminated in conditions where mortality was made salient.

The investigation by TMT researchers into the relationship between self-esteem and MS has discovered that individuals with manipulated or dispositionally high self-esteem (HSE) do not react to MS primes with increased cultural worldview defences as compared to those with low (LSE) or moderate self-esteem (Harmon-Jones et al., 1997). Under MS conditions, American student participants who received a manipulated self-esteem boost did not harshly evaluate an individual who verbally attacked the United States, whereas those who did not receive such a boost did evaluate the target as such. When the self-esteem boost was based on the educational major that the student was undertaking, the negative reactions to the anti-U.S. target were eliminated but when an anti-major target was introduced, negative reactions increased as compared to control groups (Arndt & Greenberg, 1999a). These results suggest that, following MS primes, increased worldview defences may only be attenuated by a self-esteem boost when the worldview-threatening target is attacking aspects of what the self-esteem boost is based on.

MS and self-esteem also interact and have an impact on decision-making especially with regards to different levels of risk. MS has led HSE individuals to pursue risky decisions that could return major benefits at the cost of potential substantial failure while people with LSE have been reported to become more risk averse (Landau & Greenberg, 2006). Recent research has shown that it is implicit self-esteem (as opposed

to explicit) that moderates the relationship between MS and increased worldview defences. Interestingly, MS primes increased the endorsement of positive personality feedbacks but only among individuals low in implicit self-esteem and high in explicit self-esteem (Schmeichel et al., 2009).

Some studies show that self-esteem moderates the effects of MS on worldview threatening targets therefore it is only logical to expect that an MS induction would lead towards efforts to achieve and maintain self-esteem. For participants who reported high relevance of driving to their self-esteem, MS increased reckless driving behaviour as compared to those not induced with MS (Ben-Ari et al., 1999). When one's physical body is a main source of self-esteem, MS was shown to augment self-esteem striving through increased identification with the body and increased interest in sex. For individuals who were appearance-oriented yet low in body self-esteem, MS manipulations led to decreased appearance-monitoring (Goldenberg et al., 2000a). Similarly, increased fitness intentions emerged after an MS induction but only for those who reported that fitness was important to their self-esteem (Arndt et al., 2003) and MS increased strength output on a hand dynamometer for individuals who highly valued physical strength but had no impact on those not invested in strength training (Peters et al., 2005).

Considering that self-esteem striving is augmented when mortality is made salient, Goldenberg et al. (2003) attempted to find how each gender procures their self-esteem after an MS induction. Their first study discovered that men derive more self-

esteem from their sex lives as compared to women whose self-esteem is more predicated on romantic commitment. Subsequent studies revealed that MS primes led to increased distress for men when challenged with sexual infidelity and similar effects for women when encountering emotional infidelity. Recently, Landau et al. (2009a) reported that MS caused reluctance to self-enhance (i.e. increase self-esteem) following positive personality test feedback when it was known that the test was judged negatively by institutional authorities. Thus, it seems that MS will lead to self-esteem striving unless doing so contradicts major conceptions of one's worldview. While many TMT studies take into account the moderating influence of self-esteem, other anxiety-buffering mechanisms independent of self-esteem have also been shown to have an impact on the relationship between MS and cultural worldview defences. For instance, individuals with low dispositional self-control exhibited increased worldview defence after an MS prime whereas those with high dispositional self-control did not. These results were found to occur over and above the effects of trait self-esteem (Gaillot et al., 2007).

Self-awareness is another moderating influence that has had an impact on the effects of MS such that when research participants were asked to sit in a cubicle and write about their death, they spent significantly less time when there was a mirror in front of them than when there was not. Furthermore, following an MS prime, participants wrote much less when the exercise consisted of using an internal focus of attention (writing about themselves) as compared to an external focus of attention (writing about someone else). The MS primed participants were found to write less when using an internal focus of attention as compared to those that were not primed with MS (Arndt et al., 1998).

Surprisingly, another study demonstrated that when individuals were exposed to their mirror image they reported increased death salience as measured by death-and-life relevant word completion tasks. These effects were explained as a result of those individuals using dialectical reasoning when accessing cognitions related to life and death (Silvia, 2001).

Recent research has revealed that clarity and coherence in the structure of the self-concept interact with MS effects independent of self-esteem. Several studies confirmed that MS led high structure-seeking individuals to prefer coherent, properly defined and well-organized presentations of their personal characteristics as compared to those who were primed with MS but found to be low in structure-seeking (Landau et al., 2009b).

It can be expected that other unknown influences moderate the effects that MS has on preferences and attitudes. Interestingly, MS effects will elicit different reactions depending on whether death-related thoughts are in focal attention or on the periphery of consciousness. The timing of MS effects has suggested a cognitive architecture of TMT.

3.4 The Cognitive Architecture of Terror Management Theory

The psychological defences that emerge following an MS induction will tend to activate low death-thought accessibility, however if a delay is instituted following the manipulation, death-related thoughts become increasingly accessible (Figure 3.4). In order to provide support for the role of consciousness and accessibility in death-related thoughts, Greenberg et al. (1994) found weaker effects for cultural worldview defences

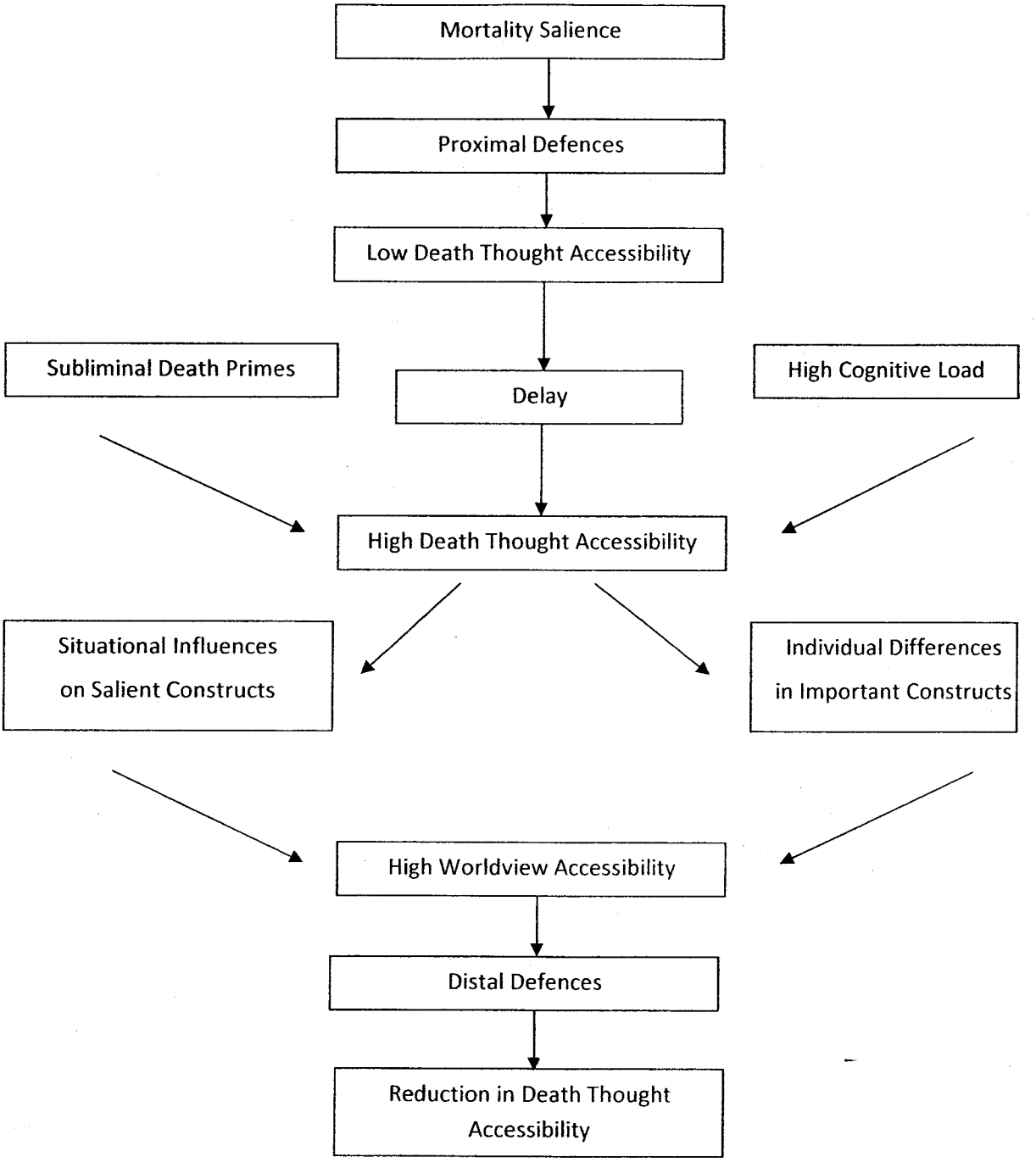
(preference for a pro-U.S. target and disdain for an anti-U.S. target) when participants were asked to think more deeply about mortality. The reason for the weaker effects was a result of the problem of death being in active memory as opposed to on the fringes of consciousness. Two follow-up studies validated this concept by introducing a distracter immediately after the MS prime which thus led to an increase in defence of cultural worldviews as compared to the non-distracter condition. These findings indicate a cognitive architecture of terror management that consists of a dual process model that can be accurately summed up as follows:

> "...thoughts of death are posited to instigate proximal or distal defences: relatively rational strategies that minimize threat and ultimately facilitate the removal of death-related thought from current focal attention. This then results in initially low levels of death-thought accessibility, or how much death remains in a person's focal attention. When the accessibility of death thoughts later increases outside awareness, the symbolic system is engaged and activates beliefs that serve the self-protective goal of imbuing the world with a sense of meaning and value. With the elevated accessibility of these beliefs, unconscious death thoughts trigger distal or symbolic defenses – experiential, indirect strategies to bolster faith in the cultural worldview." (Arndt et al., 2004, p. 38).

Since MS leads to initially low levels of death-thought accessibility due to suppression, it can be expected for these effects to be erased when suppression efforts are disrupted. In a study that tested MS effects, with or without a delay, it was revealed that immediate increases in worldview defence were exhibited by high but not low cognitive load participants in the non-delay condition. Participants in the high cognitive load groups mentally rehearsed a number to perform and following the MS prime, efforts to suppress death-thought accessibility were virtually removed. As a result, worldview defences increased as compared to low cognitive load participants (Arndt et al., 1997a).

Further evidence to support this theory regarding primal and distal defences was provided in a study which found that even subliminal exposure to death-related stimuli (i.e. the word 'death' being flashed for 29 milliseconds) produced increased cultural worldview defences when death-related thoughts were outside of consciousness as compared to when they were in focal attention (Arndt et al., 1997b). Additionally, Simon et al. (1997a) demonstrated that following an MS prime and a subsequent delay, increases in death-thought accessibility were only significant when participants were in an experiential mode of cognitive processing as compared to the non-delay condition. Participants in the rational mode indicated that the distraction had no impact on accessibility. Pyszczynski et al. (1999) reported similar findings regarding the dual process model of defence as well as the significant impact of an MS delay on cultural worldview defences in experiential but not rational modes.

Figure 3.4 - Cognitive Architecture of Terror Management Theory



Source: Arndt et al. (2004a)

Greenberg et al. (2000) also found evidence for a temporal sequence of defences initiated by MS such that proximal defences in the form of vulnerability denial only emerged directly after participants had been thinking about death while distal defences developed following a distraction from death-related thoughts. In other words, denying one's vulnerability to early death is another way to cope with conscious thoughts of mortality which eventually leads to suppression of death-related thoughts thus resulting in the activation of distal defences.

Considering that cultural worldviews are prompted to protect people from thoughts about death, Schimel et al. (2007) hypothesized that weakening the terror management structure should have the reverse effect whereby death-thought accessibility increases. Evidence supported these contentions by demonstrating that when Canadian participants' cultural values were threatened, death-thought accessibility on a word-fragment completion task increased significantly as compared to when a different culture's values were threatened. The researchers attempted to replicate these findings by dispensing an anti-creationist article to participants who either held a pro-creation or pro-evolution worldview. As expected, participants with a pro-creationist mindset exhibited higher death-thought accessibility after reading the article as compared to the pro-evolution participant condition. The researchers noted that since both cultural worldviews and self-esteem work to protect people from thoughts about death, a threat to either of them should produce the same effects.

The previous research stimulated a follow-up study conducted by Hayes et al. (2008) in which three distinct types of self-esteem were threatened: providing negative feedback on intelligence tests; disclosing to participants that their personalities were incongruent with their desired career paths and telling participants that they would deliver an ill prepared speech in front of their peers. Death-thought accessibility was assessed either by reaction times on a lexical decision task or by a word fragment completion task. Converging evidence supported all self-esteem manipulations on death-thought accessibility and also demonstrated that when participants were fortified against mortality threats by affirming their values and beliefs, threats to self-esteem had no affect on the accessibility of death-related thoughts. Not only does this research provide further evidence for the cognitive architecture of terror management but it also confirms the notion that self-esteem serves as a terror management function.

The evidence for proximal and distal defences within TMT have also been corroborated and expanded in relation to their impact on health-related behaviours. It was discovered that proximal defences led to immediate increases in fitness intentions whereas distal defences motivated similar intentions but only among participants who considered fitness important to their self-esteem (Arndt et al., 2003a). These results indicate that symbolic defences enhance cultural worldview and self-esteem striving whereas initial defences are the result of the threat of mortality and its direct relation to health promoting behaviours. Taubman-Ben-Ari and Findler (2005) found that MS led to a higher willingness to promote health behaviours in the proximal mode with stronger effects for young and middle-aged adults but not for older participants. Results in the

distal mode revealed that MS led middle-aged but not young adults to conduct health-promoting behaviours while also demonstrating similar effects for older-aged adults with LSE. These findings support the dual process model of TMT and simultaneously advance our understanding of the connection between cultural worldview defences and self-esteem.

3.5 TMT and Politics

TMT research can greatly contribute to the understanding of the psychological processes that occur in public and political decision-making. In a study that investigated reactions of German citizens to the fall of the Berlin Wall and the reunification of Germany, it was found that participants who had already held favourable attitudes towards the reunification were more likely to defend the political decision after an MS prime as compared to a control prime (Jonas & Greenberg, 2004). No reaction was found for participants who held neutral attitudes towards the reunification confirming that the relationship between mortality salience and political convictions is moderated by ideological preferences in relation to the topic being discussed.

Interestingly, ideological preferences have also been shown to change, with leniencies to opposing political views following MS inductions. Nail et al. (2009) demonstrated that American participants with dispositional liberal views and preferences tended to favour more conservative perspectives on hot button issues in an MS condition as compared to a control group. Such controversial political issues included capital punishment, abortion and homosexuality which suggests that conservative social

cognition is a defensive reaction against personal vulnerability and that no matter what ideological preferences one is dispositionally inclined towards, MS will most likely heighten favorability towards more conservative attitudes.

The impact of terror management on political issues has practical significance for ideological preferences and can also interact with leadership selection and predilections. In MS conditions, males were found to evaluate male gubernatorial candidates more positively than female candidates while females displayed similar preferences for candidates from their own gender (Hoyt et al., 2009). As well, when gender stereotypic traits were manipulated under MS conditions, both sexes revealed stronger preferences for agentic (assertive, competitive, independent) candidates as opposed to more communal candidates.

Aside from gender and gender stereotypic traits, political leaders widely differ on a host of other characteristic attributes and can become more influential when the greater public feels increasingly threatened and vulnerable. Gordijn and Stapel (2008) demonstrated that when participants were primed with MS, they were more likely to be persuaded by a controversial leader especially when the leader was attractive and could charismatically communicate his message. Such persuasion was also found to be of significance when the leader's controversial counter-attitudinal message contained pro-attitudinal statements. The researchers suggest that this experiment has also been validated by real political events that transpired in the Netherlands following the 9/11 attack in the U.S., when the controversial Dutch politician, Pim Fortuyn rose to power. In

congruence with the experiment, Dutch voters responded favourably to Fortuyn's charismatic leadership and his communication of both pro-attitudinal and counter-attitudinal statements even though the general public did not take his political ideas very seriously before the attacks (Gordijn and Stapel, 2008).

The impact and effects of the 9/11 attacks on American citizens enabled TMT researchers to apply their theories towards real life contexts and resulted into what Haidt and Algoe (2004) refer to as 'moral amplification' which can be defined as: "the motivated separation and exaggeration of good and evil in the explanation of behavior" (p. 323). In other words, a dichotomous reaction emerged such that individuals were punished if they failed to vilify consensually shared enemies and those with patriotic values antagonized whoever did not ascribe to such standards.

Pyszczynski et al. (2003) observed that proximal and distal defences occurred for most Americans following the events of 9/11 in that they initially reacted with shock and disbelief and over time their patriotic and nationalistic attitudes became more prevalent as they attempted to preserve the 'American way of life'. Such observations were empirically supported in a study conducted by Yum and Schenck -Hamlin (2005) in which the researchers solicited responses directly related to 9/11 from American participants and found convincing evidence for Pyszczynski et al.'s (2003) dual terror management model. Das et al. (2009) tested the effects of terrorism news on prejudiced attitudes towards out-groups and revealed that such news stories increased death-related thoughts of the participants. Those thoughts, in turn, predicted prejudiced attitudes

towards Arabs for non-Muslim participants while prejudice against Europeans increased for participants of Muslim decent.

The majority of studies concerning the relationship between MS and politics have been grounded in North America however a handful of recent research has delved into topics such as Islamic martyrdom, anti-Semitism and the Middle East peace process. In a study involving Iranian college student participants, MS effects led to stronger preferences for martyrdom attacks against the United States as compared to a control group, with some participants even indicating that they were likely to consider such activities themselves (Pyszczynski et al., 2006). MS effects also encouraged politically conservative American college students (as compared to those who are politically liberal) to support extreme U.S. military interventions that could potentially kill thousands of civilians as compared to a control group.. Contrary to those findings, Rothschild et al. (2009) found that reminders of mortality coupled with awareness of compassionate religious values reduced support for extreme American military interventions among high but not low American religious fundamentalists. As well, the researchers also demonstrated that death reminders and the priming of compassionate values from the Koran decreased anti-Western attitudes for Iranian Shiite Muslim participants. Nonetheless, when participants were primed with secular compassionate values, MS increased anti-Western attitudes.

Cohen et al. (2009) tested the effects of MS on attitudes towards Jewish individuals and the state of Israel with results indicating that reminders of mortality increased anti-Semitism and lowered levels of support for the nation-state. As well, MS led participants to elicit greater disapproval of Israeli human rights violations as compared to similar violations conducted by other countries such as India and Russia. The researchers conclude that Jewish people most probably constitute a cultural threat to the worldviews of non-Jews and that this materializes into hostility towards Israel and fuels anti-Semitism. The study of MS effects may also generate greater understanding of the conditions that hamper peace processes, with specific regards to Israelis and Palestinians. Research has suggested that eliminating such effects may alleviate the impediments currently blocking the advancement of peace negotiations (Niesta et al., 2008).

3.6 TMT and Religion

TMT research strongly enforces the notion that the strive for immortality is a basic universal human desire and that since the emergence of critical thinking, some form of religiousness or spirituality has provided a means for transcending the concerns of daily existence. This contention was explicitly tested in a study conducted by Dechesne et al. (2003) in which it was discovered that encouraging a belief in literal immortality (through exposure to essays written in favour of the existence of an afterlife) decreased the effects of MS on self-esteem striving. While it has been proven that mortality awareness results in increased self-esteem striving (Ben-Ari et al., 1999; Goldenberg et al., 2000a; Arndt et al., 2003), this research confirmed the postulation that religion serves

as a buffer in this relationship in that those who have stronger religious belief systems are less likely to pursue self-esteem striving after being primed with thoughts of mortality. The researchers explain the reduction in self-esteem striving as a result of the exposure to the afterlife-confirming information which in turn caused a decrease in the need to strive for symbolic immortality. Belief in an afterlife moderates the effects of MS on the pursuit for one's own meaning in the universe and adversely, MS leads to stronger beliefs in God, divine intervention and increasing religiosity and religious identification (Norenzayan & Hansen, 2006). Similarly, it was found that when Christian subjects were induced with thoughts about their mortality, they reported more positive ratings for fellow Christians while assigning negative ratings to individuals coming from a Jewish background as compared to a control condition (Greenberg et al., 1990a).

Since religion eliminates the effects of MS, Jonas and Fischer (2006) hypothesized that MS should lead intrinsically religious individuals to have reduced death-thought accessibility as compared to those without such an existential anxiety-buffering mechanism. The study validated their theory and also revealed that intrinsically religious people did not engage in worldview defences following MS primes when they had the opportunity to affirm their religious beliefs as compared to those who scored very low on intrinsic religiousness. Similar findings were reported in a Canadian study which concluded that after an MS prime, religious individuals were not affected by an anti-Western essay allegedly written by a radical Muslim student, whereas those who were

self-identified as non-religious and were exposed to the MS prime exhibited cultural worldview defences by revealing decreased support for the civil rights of anti-Western individuals (Norenzayan et al., 2009).

Religious fundamentalism has also been investigated within TMT research as demonstrated by an experiment conducted by Friedman and Rholes (2007). Fundamentalist Christians were presented with material suggesting that the Bible contains inconsistencies. Following these stimuli they reported higher death-thought accessibility whereas non-fundamentalist Christians did not display such reactions. Individuals who hold fundamental religious views are considered more likely to reinforce the strength of their beliefs when faced with thoughts of death.

Vess et al. (2009) demonstrated that reminders of mortality resulted in high fundamentalists endorsing prayer as a viable substitute for medical treatments as they perceived it to be more effective in healing physical ailments. The contemplation of personal mortality also persuaded high fundamentalists to be more supportive of decisions to refuse medical treatment for religious reasons. This research provided further understanding for the implication that fundamental religious individuals have on medical decision making and how MS can influence judgements in times that necessitate critical health-related interventions. It can be inferred from this research that fundamentalists conceive of health-related issues and mortality in a less elaborate, complicated and sophisticated way than non-fundamentalists. Friedman (2008) confirmed this assumption by asking fundamentalists and non-fundamentalists to describe their own deaths and

discovered that fundamentalist death essays were less cognitively complex than that of their counterparts. The high fundamentalist subjects were found to "use significantly less conditional language, tentative language, and inhibitive language" (Friedman, 2008, p.231). As such, the researcher explains that religious fundamentalists are able to resist the psychological consequences of MS. In other words, individuals with fundamental religious beliefs manifest less complex attitudes towards death because any death-related anxieties have been virtually eliminated and therefore they have no need to engage in complicated worldview defences or sophisticated explanations of mortality.

3.7 TMT and Reminders of Human Corporeality

Human beings cope with overwhelming existential threats generated from the awareness of impending death through the symbolic construction of worldviews and self-esteem building. These abstract interpretations help to distance humans from the physical-bound and limited world in which death is unfortunately assured. While religion, culture and spirituality assist in eradicating mortality-related concerns, reminders of our physicality, materiality and corporeality threaten the effectiveness of these symbolic defences against existential anxiety. As Becker (1973) noted, the human body is problematic when trying to avoid existential threats because it reminds people of their animal limitations and vulnerability to death. Accordingly, differing religions and cultures across many eras have viewed the animal nature of humans as a weakness that is to be controlled or transcended (for a list of examples see Goldenberg and Roberts, 2004, p.72).

The basic tenets of Judeo-Christian religions emphasize the immortality of the soul and glorify resistance to animalistic temptations such as sex and lust. Abstract concepts such as love and romance help transcend the existential anxieties that sexuality can elicit and these concepts are constantly permeating cultural mediums. For example, in their analysis of the 100 all-time most popular songs from 1958-1998, Dukes et al. (2003) found that love songs were the most common type across different demographic groups.

Goldenberg and Roberts (2004) state that the tendency to reinforce the distinction between human beings and the natural world is demonstrated by the paradoxical views of women as perceived by different societies and cultures throughout history. They suggest that the sources of discrimination against women have been usually aligned with their biological nature (i.e. being less physical and more emotional than men and the physical and emotional changes brought on by menstrual cycles and pregnancy). In contrast, women tend to be regarded with the highest respect when they are distinguished from their natural attributes and as such, become associated with goddesses and objects of beauty that may even induce worship.

Empirical support for the human inclination to repudiate the reality of human creatureliness and construct symbolic interpretations of the natural world has been largely developed in TMT research. Goldenberg et al. (1999) conducted an experiment in which participants were primed with creatureliness reminders through an essay that discussed the similarity between humans and animals (as compared to an essay that discussed the distinction between the two) and were asked to fill out subscales concerning either the

physical or romantic aspects of sex. The results concluded that when people were reminded of their similarity with animals, death-thought accessibility was greater after the physical sex prime than after the romantic sex prime. Therefore, humans' existential concerns are elevated when they become aware of their corporeal connections to animals and when sex is framed as more of a physical act as opposed to something more abstract (i.e. the romantic aspects). As well, reminders of human-animal similarities in conditions under MS have resulted in decreased attraction to the physical but not the romantic aspects of sex (Goldenberg et al., 2002). These findings suggest that reminders of human biological nature can induce anxiety related to existential concerns due to the strong association between the physical world and the threat of mortality.

Since the thought of being an animal is threatening because it reminds people of their vulnerability to death, Goldenberg et al. (2001) hypothesized that individuals would react with disgust towards body products and animals after being primed with MS. Participants reported increased disgust sensitivity on subscales dealing with body products and animals after a delay from MS as compared to those exposed to the same disgust measurements in a control condition. The participants reported higher levels of disgust towards animals such as cockroaches and maggots and towards body products such as vomit or bowl movements after being manipulated with the MS. Similarly, in the MS condition, greater preferences were exhibited for an essay describing the uniqueness of people and their distinction from animals.

Cox et al. (2007) revealed that when disgust-eliciting pictures were used as stimuli (i.e. feces, vomit, blood, urination etc.), death-thought accessibility increased as compared to stimuli depicting more neutral pictures. In a second study, the same methodology was applied but a more subtle disgust prime was implemented in which the graphic pictures were replaced with questionnaire items about disgust. Interestingly, the researchers found that the disgust-eliciting stimuli only increased death-thought accessibility when the participants had also been previously primed with an essay describing the similarity between animals and humans but not when they had been primed with an essay describing human uniqueness. Beatson and Halloran (2007) proved that MS effects led participants with lower self-esteem who were reminded of human-animal similarities to rate animals more negatively as compared to those in a control condition and it was discovered that even pet owners under conditions of MS responded to reminders of human creatureliness with less positive attitudes towards the average pet (Beatson et al., 2009).

Animals and body products evoke negative reactions in individuals following an MS prime because they remind them of the creaturely aspects of humanity which is why Goldenberg et al. (2007) hypothesized that similar reactions would occur towards pregnant women. Their rationale for testing this hypothesis was due to their postulation that people unknowingly associate pregnancy with human corporeality. In one study, they primed human creaureliness using the human-animal similarity essay compared to a human uniqueness essay and asked participants to indicate how offensive they considered a magazine cover to be. One group was exposed to a Demi Moore *Vanity Fair* cover in

which she appeared pregnant while the other group was exposed to a cover that consisted of the same actress and the same magazine but was taken a year later when she was no longer pregnant. As expected, only when participants had been primed with human creatureliness and exposed to the pregnant picture cover did they find the material to be offensive as compared to the other groups. A second study found that participants placed in the same conditions rated Gwyneth Paltrow as more incompetent when she was pregnant than when she was not. As such, the researchers extend these findings and infer that the human problem associated with negative attitudes towards creatureliness can help explain the objectification and derogation of women throughout history.

In fact, Landau et al. (2006) investigated that matter in greater detail by attempting to prove that women's sexual allure threatens to increase men's awareness of their corporeality and mortality. In several studies the researchers found convincing evidence that MS caused men, but not women, to react more negatively to a sexually explicit woman as compared to a control group that was not primed with MS. After an MS prime, men demonstrated decreased attractiveness ratings for alluring women; decreased their sexual intent toward a sexy woman and decreased interest in seductive woman but did not decrease interest in a more wholesome woman. As well, when participants were asked to write about a time when a woman aroused intense animal-like sexual lust in them, they reported increased tolerance of aggression against women as compared to men who were asked to write about a sporting event that aroused excitement.

The previous sections have demonstrated the empirical support generated by TMT towards cultural worldviews, self-esteem striving, politics, religion and reminders of human corporeality. The focus will now shift towards the impact of TMT on consumer behaviour by discussing the underlying meaning of products and wealth and the relationship between MS and consumption.

CHAPTER 4:

TERROR MANAGEMENT THEORY AND CONSUMER BEHAVIOUR

The relationship between TMT and consumer behaviour has received increasing attention in recent years and in this short time span, a diverse collection of research studies have emerged. This section will begin by discussing examples of how the acquisition of products and wealth can be traced back to our subconscious desire to be immortal as a means to counterbalance the threat of death anxiety. Empirical support demonstrating the connection between MS and consumption will then be presented and will address several studies that have stimulated this current research.

4.1 The Underlying Meaning of Products and Wealth

The accumulation of possessions non-vital to the protection and existence of humanity seems like a luxury that is associated with a capitalistic market-driven system. TMT, however, explains it as an adaptive reaction to our most deep-seated fears related to mortality:

> "To the extent that fear of death engenders identification with a cultural worldview in which individuals purchase symbolic dressings that reflect one's value, and to the extent that the widespread cultural message of consumption and materialism becomes internalized at the individual level, we can understand the "urge to splurge" as an exemplification of

peoples' trenchant need to overcome the existential insecurity evoked by awareness of mortality and given direction by these cultural prescriptions." (Arndt et al., 2004, p.203).

The concept of status signalling in consumer culture entails the accumulation of wealth and the acquisition of vast amounts of possessions in order to be regarded with prestige and high standing in society (Veblen, 1899). Simultaneously, power and money also parallel with safety and security in life while accommodating the innate psychological desire for immortality, albeit, figurative immortality. Therefore, our products and possessions are embodied with meaningfulness which makes our attachment to them essential for the sustainment of psychological equanimity.

Muniz and Schau (2005) observed the interesting reaction that faithful Apple Newton users exhibited after the product was discontinued in 1998. The Apple Newton was one of the first personal digital assistants wherein users interacted and assisted one another in online brand community forums. Through community membership, the researchers were able to observe the discussions between online users even though the product was no longer being manufactured.

From the findings, the researchers became aware of common narratives in the Newton community which consisted of supernatural, religious and magical motifs. Tales of persecution were typically discovered as the users recounted stories dealing with anti-Apple sentiments from people around them coupled with failed attempts to convert loyal

Newton users to more contemporary devices. Many postings contained tales of faith being rewarded such as situations where the user was unsure if a task could be performed and when the Newton accomplished it, the user felt that their loyalty to the product had been honoured. Survival tales were also quite common in which users anthromorphized the Newton enabling members to "magically transcend the risk of the device failing" (Muniz and Schau, 2005, p.742). Discussions also included tales of miraculous recovery such as the batteries being magically brought back to life and tales of resurrection in which rumours began to spread in the community of a 'second coming' of the Newton as well as a 'return-of-the-creator' myth.

These reoccurring themes are: "indicative of the very clear and resilient need humans have to believe in something or someone outside mundane reality" (Muniz & Schau, 2005, p.739). The supernatural motifs helped to perpetuate feelings of stigmatization due to the marginalization of the Newton product on the market which is comparable to the emotions elicited by religions whose members perceive constant neglect by society. The researchers conclude that brand communities enable consumers to create meaningful connections with one another in an environment where religion has lost its prevalence and capitalism has become a dominant ideology:

> "Human will find community where they will. In a consumer culture, they will find it in brands, particularly in the lowly underdog brands, those that are marginalized, stigmatized, and left behind. . . They (brand community members) like being the underdog and enjoy the martyrdom.

This suggests that some of the same forces that drive many religions may drive the religiosity of brand communities." (Muniz and Schau, 2005, p.746).

TMT provides an intriguing and enlightening explanation as to why consumers might become persistently attached to a certain product and it can enrich our understanding regarding the actions of materialistic individuals. Rindfleisch et al. (2008) examined the influence of materialism on self- and communal-brand connections through a national survey and a controlled experiment. Based on scales that measured brand connection, brand loyalty, existential insecurity and materialism, the researchers discovered that materialistic individuals form strong self- and communal-brand connections as a response to existential insecurity. When these existential concerns were absent, materialistic individuals did not report such strong connections. These results lend credence to the findings obtained by Kasser and Kasser (2001) in which it was determined that highly materialistic individuals are more likely to dream about death than are less materialistic individuals.

In an example that links material consumption to blatant death denial, Bonsu and Belk (2003) observed that the Asante society in Ghana, West Africa, undertake ostentatious and elaborate death-ritual performances after someone has died. The relatives of the deceased will spend about five times their annual incomes on displays of material capital such as clothes, transportation and food for other community members in order to signal high status of the departed. TMT can explain such outlandish rituals as

being a part of the strive for self-esteem and immortality. These extravagant efforts of status signalling enhance the posthumous image of the deceased thereby advancing the possibility that the bereaved will be safe and more secure in this life and the next. Relatives of the deceased expect similar displays of material wealth for their own funerals in order to ensure their ascendance to ancestry, thus guaranteeing immortality. As such, these acts of conspicuous consumption elevate self-esteem and pre-emptively alleviate future death-related anxiety.

Western society has also reflected the pursuit of wealth and material consumption as a means to assuage the fear of death as exemplified by the Protestant work ethic (Arndt et al., 2004a). Becker (1975) commented on the use of the marketplace as an immortal ideology that replaced more traditional religious forms for Protestants and perhaps more specifically, Calvinists of the sixteenth century, who have been historically associated with the development of capitalism in old Europe (Weber, 1958).

4.2 Mortality Salience and Consumption

From an economic perspective, goods and services can be categorized as either a luxury or necessity with the demand of luxurious goods rising as income increases. If a purchase is not born out of necessity, its purpose is called into question and it can be arguably suggested that such acquisitions are undertaken to impact self-esteem. What does TMT contribute to the relationship between consumer purchases and the procurement of self-esteem? Mandel and Heine (1999) predicted that high status products would elicit higher purchase intentions for participants who were manipulated with MS

as compared to those who were not. In the experimental condition, a fear of death scale was placed in the middle of a distributed marketing survey while the control condition contained a depression scale. MS group participants revealed more interest in a Lexus and a Rolex than those in the control group. Meanwhile, low-status products like a Geo or Pringles demonstrated practically no difference between groups. The findings confirm that reminders of death increase the attraction of high-status products because their possession procures self-esteem.

Fransen et al. (2009) discovered that the awareness of social presence moderates the impact of MS on attitudes towards luxury brands (i.e. Armani and Mercedez-Benz) such that when participants were told that other people would observe their behaviour, they expressed more favourable attitudes towards the luxury brands than participants not primed with MS. Less favourable attitudes to non-luxury brands were also enhanced in social presence conditions. The results from this research imply that consumers may derive self-esteem from products not only because they are directly following cultural values or norms, but also because they are being observed by those around them.

Kasser and Sheldon (2000) reported higher financial expectations 15 years in the future for participants primed with MS as compared to a control group. Individuals in the experimental group expected higher salaries, more expensive homes, more investments and more money spent on clothes, entertainment and travel. Interestingly, a second study demonstrated that MS participants exhibited enhanced feelings of greed as a result of their intentions to make significantly higher bids for harvesting timber in a forest-

management simulation game than did control participants. Participants were told to imagine themselves as owners of a logging company and that they would be bidding against other companies to harvest tress in a national forest. They were also told that harvesting trees would benefit them with short-term profit but that it had long-term implications on the depletion of the forest. The results revealed that people in the MS condition intended to harvest significantly more acres of land than those in the control condition indicating that MS does not only lead to preferences for increased consumption but it also enhances the desire for selfish profit gain and greed.

Self-esteem can be derived from high status and luxurious items but for many people, their body image and appearance drives self-confidence and self-respect. MS should therefore affect preferences for food products and quantities as they can directly influence body image and consequently impact self-esteem. In a study that investigated this topic, females were found more likely to prefer an indulgent food option (i.e. chocolate cake) over one that is less gratifying (i.e. fruit salad) when they were low on body esteem and when MS was high. For females high on body esteem, they had lower preferences for chocolate cake when MS was high as compared to low while the preferences for males were completely unaffected by the MS manipulation (Ferraro et al., 2005). This indicates that the activation of death anxiety in the presence of food leads to the desire for unhealthier but more satisfying choices when physical appearance already generates LSE. For women who procure self-esteem through the maintenance of their body's appearance, death anxiety leads to further attempts to protect this vital image.

Goldenberg et al. (2004) found similar results when they manipulated participants with MS and gave them the opportunity to eat a nutritious but fattening snack food. The female participants ate less of the fattening snack even though it was nutritious because it might compromise an attractive figure. These results were also found to be especially prominent among women who had higher body mass index scores and it confirms that high body esteem is positively correlated with increased preferences for less indulgent and non-fattening food choices for women under conditions where mortality is salient.

Mandel and Smeesters (2008) allocated participants to either an MS or control condition and then asked them to imagine they were hosting a party for friends and to select items they wish to purchase under a certain budget from a hypothetical shopping list. The researchers reported that MS led to increased food and drink consumption as compared to the control condition for LSE participants. In a follow-up experiment, participants were given the option of sitting on a chair facing towards or away from a mirror after the MS manipulation. After being confronted with the mortality threat, more LSE consumers (as compared to HSE consumers) chose a chair that was facing away from a mirror therefore indicating that they are in a state of escape from self-awareness when threatened by the MS activation. As well, when the MS and self-awareness conditions were combined, participants purchased even more snacks and drinks as compared to participants who were neither primed with MS nor confronted with self-awareness.

The combination of TMT and consumer behaviour has also generated studies that investigated the impact of this relationship on charitable donations. For individuals high on virtue as a source of self-esteem, higher contributions to charity were reported for those in an MS condition compared to a non-MS condition. An increase in the decision to give to charity and in the intent to engage in socially conscious consumer behaviours were also found to increase when MS was high than when it was low. This pattern was reversed for individuals low on virtue as a source of self-esteem (Ferraro et al., 2005). When an MS manipulation consisted of interviewing participants in front of a funeral home, more favourable attitudes were reported towards charitable causes as compared to participants being interviewed three blocks away (Jonas et al., 2002). As well, reminders of mortality also positively increased judgements of charitable organizations that people felt were important to themselves and society. Interestingly, this same study also concluded that MS led to increased donations towards charities that funded domestic projects but not to those that focused on international projects. This validates one of TMT's main suppositions that cultural norms and values become more pronounced when mortality is made salient.

In a study conducted by Fransen et al. (2008), MS was induced by exposure to an insurance brand with the manipulation leading to a positive increase in charity donations compared to a non-brand induced MS condition. The insurance brand proved to be a successful manipulation as it primed individuals with mortality-related thoughts. In addition to these results, the researchers also found that insurance brand-induced MS increased the amount to be spent on entertainment and food in the near future as

compared to a control group. These results were proven with both subtle and extensive exposures to an insurance brand logo. While the findings highlight the relationship between MS and the willingness to make charitable donations and the intent to consume more products and services, it also reveals that mortality can be made salient from the products and brands themselves. In other words, existential threats may be more common than previously assumed and are even embedded in our consumer culture.

Mortality-related thoughts have been found to exacerbate nationalistic biases (Greenberg et al., 1990a) and with the continual growth of a globalized and interconnected market place, such biases can deeply impact consumer choices and behaviour. In a previously mentioned study, MS produced a nationalistic bias in terms of assigning blame to a Japanese auto manufacturer more than to an American auto manufacturer after a car accident (Nelson et al., 1997). These findings highlight the significance that MS has on attitudes to foreign companies and products.

Marketers and managers can learn a great deal from the impact that terror management has on nationalistic biases with regards to consumer-driven sports teams and sports fan affiliations. Dechesne et al. (2000b) predicted and found that Dutch soccer fan participants expected more goals for their own team and more wins under an MS condition as compared to a control condition. Students from the University of Arizona also reported greater optimism for their favourite sports teams after an MS manipulation but would shift their preferences to another team if they were told that their favourite team previously performed badly. This suggests that when their favourite team fails to

shield them from concerns against mortality, they turn to a more successful team in order to assure security. These results indicate the power of a cultural symbol's impact on its members and fans and also reveal the national and even regional biases that can be accentuated after reminders of mortality.

At the city level, biases can also translate into greater optimism and stronger preference following an MS activation. Marchlewski and Fetchenhauer (2006) tested local beer preferences for the inhabitants of two German cities, Düsseldorf and Cologne, under MS and control conditions. The researchers discovered that no matter what city the participants were from, they tended to indicate that their beer tasted better than the other when mortality was made salient but not when MS was absent. As such, terror management not only influences nationalistic biases with regards to consumer behaviour but also affects regional consumer ethnocentrism by distorting preferences and impressions.

Research has begun to investigate the affects of terror management on things that may be considered dangerous or life threatening. Routledge et al. (2004) demonstrated that concerns about death increased participants' intentions to protect themselves from dangerous sun exposure however these effects were only found when thoughts related to mortality were in focal attention. Participants revealed decreased interest in sun protection after the activation of distal defences thus indicating that the potential to look more tanned supersedes any associated dangers because an attractive appearance helps sustain self-esteem when confronted with death-related thoughts. In fact in a second

study, when participants were primed to associate tanned skin with an attractive appearance, the effects of the distal defences generated by MS increased interest in tanning products and services as compared to the effects of proximal defences. This research demonstrates the negative health consequences that may result from symbolic defences against unconscious concerns about mortality and further supports the dual defence model of TMT.

Negative health choices can also stem from products that don't enhance appearance but stimulate physical and psychological relief. Tobacco consumers are constantly informed about the risks of smoking through warning messages directly located on each cigarette package. Hansen et al. (2009) attempted to determine what type of messages work best and how TMT can be used to understand the impact that they have on tobacco consumers. Their findings unfolded an ironic consequence of cigarette on-pack warnings in that death-related warnings were found not to be effective and resulted in more positive smoking attitudes among consumers who based their self-esteem on smoking. From a terror management perspective, for consumers who derive their self-esteem from smoking, reminders of death should persuade them to have stronger preferences towards smoking as it secures them from existential concerns through the sustainment of their self-esteem. When compared to high smoking self-esteem participants, those with low smoking self-esteem demonstrated lower smoking attitudes. In contrast, warning messages unrelated to death reduced smoking attitudes for participants high in smoking self-esteem. It is possible that warning messages regarding appearance or peer acceptance will negatively affect attitudes towards smoking because

these messages discuss the negative impact of smoking on attributes that influence self-esteem. Therefore, people high in smoking self-esteem will turn to smoking when confronted with thoughts about mortality but may actually become less interested when they realize that it may affect aspects that would compromise their self-esteem.

The following sections will propose hypotheses that contribute to past research studies stemming from the combination of TMT and consumer behaviour. As well, new contributions to this emerging research field will also be discussed. The methodology, results, discussion and conclusion will follow.

CHAPTER 5:

RESEARCH CONTEXT

Terror management theory has stimulated an extensive collection of studies related to many fields, but to date only a handful of experiments have focused on its relationship with consumer behaviour. The following section will propose hypotheses that connect the effects of mortality salience on different consumer behaviour outcomes. Several exploratory factor analyses validating the measures used to test the hypotheses will then be presented.

5.1 Hypothesis Development

H1: Attitudes to Foreign Products

The induction of mortality salience has been correlated with nationalistic and patriotic biases. Greenberg et al. (1990a) discovered that American participants reacted more positively to essays that were pro-American; Nelson et al. (1997) found that fatal car accidents elicited less blame on an American auto manufacturer and Jonas et al. (2005) showed that less approval was given to the adoption of a new currency under conditions of MS. It is expected that overall attitudes to products from foreign countries will be less favourable under conditions of MS as compared to a control condition. This research will test the effects of MS on attitudes to foreign products from China and Japan for Canadian participants. China and Japan were selected as countries to be tested because a significant portion of Canadian imports come from these two countries thus

making them familiar manufacturing locations amongst Canadian consumers. Since these countries differ in the types of products that they primarily manufacture for export, 'attitudes to foreign products' as a construct will not rely solely on one foreign country or one type of product thus the responses will provide a more comprehensive understanding of the MS effects.

H1a: MS will lead to less favourable attitudes to foreign products from China and Japan as compared to a control group.

Greenberg et al. (1993) demonstrated that higher self-esteem is correlated with a tendency to deny vulnerability to an early death and Harmon-Jones et al. (1997) revealed that HSE individuals reacted to an MS prime with less worldview defences than those with low or moderate self-esteem. Therefore it is also expected that LSE individuals will reveal less favourable attitudes to foreign products than HSE individuals after the MS prime. Since MS has a more pronounced affect on LSE individuals, it is also expected that differences will emerge between the MS and control groups such that LSE individuals will reveal less favourable attitudes to foreign products after being primed with the manipulation.

H1b: MS will lead to less favourable attitudes to foreign products from China and Japan among LSE as compared to HSE individuals.

H1c: MS will lead to less favourable attitudes to foreign products from China and Japan for LSE individuals as compared to a control group.

H2: Attitudes to Charitable Organizations

The impact of MS on consumer decision making has also affected the willingness to engage in socially conscious behaviours. Ferraro et al. (2005), Jonas et al. (2002) and Fransen et al. (2008) each demonstrated that MS primes led to higher contributions and donations and increased positive judgements towards charitable organizations. This research expects to find similar effects such that MS will lead to overall increased favourable attitudes to charities as compared to a control condition. Past research has not tested the effects of dispositional self-esteem on attitudes to charitable organizations following an MS prime therefore the experimental group is expected to elicit more favourable attitudes for LSE as compared to HSE individuals. In other words, since LSE individuals do react to MS with pronounced worldview defences, it is predicted that the manipulation will cause them to better approve of charities and associated organizations.

H2a: MS will lead to more favourable attitudes towards charitable organizations as compared to a control group.

H2b: MS will lead to more favourable attitudes towards charitable organizations for LSE as compared to HSE individuals.

- **H3: Importance of Prestigious Items**

Products that embody high status and luxuriousness elicit higher preference under condition of MS. Mandel and Heine (1999) showed that MS participants revealed more favorability for products such as a Rolex or a Lexus as compared to Pringles or a Geo. Low status products elicited less favourable reactions. Fransen et al. (2009) found similar

effects for luxury brands such as Armani and Mercedez-Benz. Kasser and Sheldon (2000) also demonstrated that MS participants preferred more expensive homes and to spend more money on clothes. Rindfleisch et al. (2009) determined that fear of death motivates materialistic individuals to form strong connections with brands that they consistently use and possess. This study expects to find similar results with regards to the degree of importance allocated to prestige when shopping for clothes.

H3a: MS will lead to increased importance for prestige when shopping for clothes as compared to a control group.

Richins (1991) and Dawson (1992) suggested that materialistic people are more likely to have less self-esteem than others therefore it is expected that LSE individuals will show an increase in importance for prestige when shopping for clothes after the MS prime. The relationship between levels of materialism and self-esteem should also cause MS to affect HSE individuals. They should react to prestige when shopping for clothes with less importance under MS since high-status products might be considered a threat to their self-esteem.. As expected, more importance for prestige should be elicited for LSE as compared to HSE individuals.

H3b: MS will lead to increased importance for prestige when shopping for clothes among LSE as compared to HSE individuals.

H3c: MS will lead to increased importance for prestige when shopping for clothes among LSE individuals as compared to a control group.

H3d: MS will lead to decreased importance for prestige when shopping for clothes among HSE individuals as compared to a control group.

Past research has not investigated age differences under MS with regards to high-status or prestigious products. This study attempts to prove that MS will lead younger individuals to care more about prestigious items than older individuals since age is expected to correlate with level of materialistic values. The anxiety-buffering and death denying functions of prestigious items should make them more attractive to younger ages and less attractive to older ages after the MS prime. As such, importance for prestige when shopping for clothes should increase among younger individuals while it should decrease among older individuals after being primed with MS.

H3e: MS will lead to increased importance for prestige when shopping for clothes among younger individuals as compared to older individuals.

H3f: MS will lead to increased importance for prestige when shopping for clothes among younger individuals as compared to a control group.

H3g: MS will lead to decreased importance for prestige when shopping for clothes among older individuals as compared to a control group.

H4: Risky Purchase Decision Making

Death-related thoughts can have a significant impact on decision making when risk is involved. Landau and Greenberg (2006) found that HSE participants were more likely to make a risky decision under condition of MS as compared to those with LSE. Similarly, MS led LSE participants to become more risk averse as compared to those with HSE. These findings are expected to be repeated when the decision making is centered on risky purchases. This research intends to demonstrate that higher amounts of risk will be associated to risky purchases by LSE individuals as compared to HSE individuals under condition of MS. Ben-Ari (2004) investigated the relationship between risk taking and death awareness and found that under conditions of MS, adolescents and males were found more likely to pursue various risky activities.

H4a: MS will lead LSE individuals to consider risky purchases to be riskier as compared to HSE individuals.

H4b: MS will lead females to consider risky purchases to be riskier as compared to males.

H4c: MS will lead older individuals to consider risky purchases to be riskier as compared to younger individuals.

H5: Preferences for Nutritional Information on Food Products

MS has impacted preferences for food products and quantities as they have been found to interact with self-esteem. Ferraro et al. (2005) found that women high on body esteem had lower preferences for an indulgent, non-nutritional food item under

conditions of MS while men showed no differences. Goldenberg et al. (2004) demonstrated that under conditions of MS, females cared less about the nutritional aspect of a food item if it were fattening. This research expects to find that preferences for nutritional information on food products will increase for women after the MS prime but not for men. As well, this relationship will be even more pronounced for LSE women whereas LSE men will not reveal any differences.

H5a: MS will lead females to have increased preferences for nutritional information on food products as compared to a control group while males will show no difference between the two groups.

H5b: MS will lead females to have increased preferences for nutritional information on food products as compared to males while the control group will show no differences between each gender.

H5c: MS will lead LSE females to have increased preferences for nutritional information on food products as compared to a control group while LSE males will show no difference between the two groups.

5.2 Scale Selection and Exploratory Factor Analysis

The Rosenberg (1965) self-esteem scale is widely used in social science research to measure dispositional self-esteem. It was originally tested on over five thousand high school juniors in the state of New York and consists of ten items originally answered on a four-point likert scale ranging from strongly disagree to strongly agree. All the scales used in this research were measured on a seven-point likert scale so that standardization

could be avoided during analysis. Rosenberg (1965) found that the scale had high reliability and internal consistency and that it was also a valid measure of self-esteem. Although this scale has been proven to be a unidimensional measure of self-esteem, analyses consisting of adult populations have identified two dimensions of self-esteem in which a consensus on what they represent has not been universally determined (Greenberger et al., 2003). The exploratory factor analysis (EFA) for self-esteem produced two components and the scale was reduced to six items after cross-loadings were removed. A second EFA revealed that they loaded on one factor between 0.712 and 0.845 with a reliability of 86.8%. The six items explained 60.99% of the total variance.

Attitudes to foreign products were measured using the Country-of-Origin Product Image scale developed by Klein, Ettenson and Morris (1998) and Darling and Arnold (1998). The scale consists of six items reflecting perceptions and attitudes of products made in a country of the researcher's choice (country name is left blank in the scale). Originally, the scale was tested on a sample of 244 people and demonstrated a construct reliability of 0.73. Through a single-construct structural equation model, the items revealed a single construct with low residuals and it was also indicated that the scale had a good level of model fit. A seven-point likert scale with anchors ranging from strongly disagree to strongly agree was used in the original testing and was left unchanged for this study.

Attitudes to foreign products were composed of two scales measuring attitudes to Chinese products and Japanese products separately. All six of the items on the 'attitudes to Chinese products' scale loaded on one factor between 0.500 and 0.850. The factor explained 49.81% of the total variance falling by a marginal amount under the general requirement of 50%. Reliability between the items was 78.9% indicating that they consistently measured the variable (alpha > 0.70). A second EFA was carried out on five of the items after removing the item with smallest loading (0.500) on the factor. The five items loaded between 0.631 and 0.847 explaining 56.18% of the total variance with a reliability of 80.1%. As such, the removed item was not included as part of the 'attitudes to Chinese products' measurement. All six items on the 'attitudes to Japanese products' scale loaded on one factor between 0.660 and 0.902 explaining 64.51% of the total variance with a reliability of 88.6%. Similarly, when the item with the smallest loading on the factor (0.660) was removed, a second EFA determined that the remaining items loaded between 0.697 and 0.901 explaining 69.47% of the total variance (almost five percent higher than the first EFA) with an increased reliability of 88.9%. The removed item was not included as part of the 'attitudes to Japanese products' measurement.

Since this study intends to test general attitudes to charitable organizations without referring to a specific charity, the Attitudes toward Charitable Organizations scale developed by Webb, Green and Brashear (2000) was used. The scale consists of items that measure general attitudes to charities with regards to their image, function and successfulness. Originally, seventy-eight items were generated however through content validation and the implementation of exploratory and confirmatory factor analyses, most

items were eliminated except for the few that demonstrated a one-factor model. The scale developers never indicated what type of scale they used to report the answers however this study will record the responses on a seven-point likert scale.

Attitudes to charitable organizations consisted of five items loading between 0.609 and 0.835 on one factor explaining 61.79% of the total variance with a reliability of 82.9% between the items. After removing the item which loaded on the factor with a value of 0.609, a factor analysis on the four remaining items was conducted. The items loaded between 0.826 and 0.851 on the single factor explaining 70.14% of the total variance (an increase of 8.34% from the previous analysis) with a reliability of 85.5% (an increase of 2.6%). These four items were selected as the proper measurement for this variable.

The importance of prestigious items was measured with the Prestige Importance scale developed and examined by Kirmani, Sood and Bridges (1999). The scale measures how a person considers prestige to be an important criterion when shopping for a specified product based on uni-polar items. In this context, the product was generalized to clothes with the respondents indicating the importance of prestige, exclusivity and status. While the developers reported a reliability of 0.91 between the items in the scale, no validity testing was performed. This study will once again test the reliability as well as the scale's validity. The importance of prestige when shopping for clothes was measured using three items that loaded between 0.873 and 0.940 on one factor explaining 83.89% of the total variance with a high reliability of 90.2% between the items.

To test for risky purchase decision making, a self-made scale was developed. The scale consists of items that separately describe a different type of purchase with varying degrees of risk. Respondents are asked to indicate what level of risk they associate with each purchase on a seven-point likert scale ranging from 'not risky at all' to 'extremely risky'. The reason for the self-made scale was due to the fact that no scales of this kind had been previously developed. While past marketing research scales have tested such things as the level of being risk averse, it was determined that no scales exist which test perceptions of risk on risky purchases. As such, the sample in this study will be the first to test the scale's reliability and validity. Risky purchase decision making consisted of six items loading on two factors with three items cross-loading. After the items with cross-loading were removed, the remaining three items loaded on one factor between 0.631 and 0.849 explaining 55.3% of the total variance with an insufficient reliability of 57.7% (alpha < 0.70).

Preferences for nutritional information on food products were measured using the Nutrition Information Interest scale developed by Moorman (1998). The scale consists of items that were originally answered on a seven-point likert scale and measures the desire of a person to receive and process nutritional information about food products. Moorman (1998) had previously developed nutrition information interest scales with regards to specific food products however this scale was created for the purpose of measuring general attitudes. The developer reported a reliability of 0.91 but no information regarding the scale's validity had been provided. Preferences for nutritional information on food products consisted of five items loading between 0.860 and 0.920 on one factor

explaining 79.13% of the total variance with a high reliability of 93.3% between the items.

In order to control for mood affects, Watson and Clark's (1994) PANAS-X mood affects scale was employed. This scale typically identifies mood affects through self-reported measures. Respondents are asked to indicate how they feel at the present moment with regards to different emotions on a five-point likert scale ranging from 'Not at All' to 'Extremely'. The PANAS-X mood affects scale consists of 60 items and aside from positive and negative moods, it also measures specific affects such as fear, fatigue and shyness. Consistent with previous terror management research, this study only applied the 20-item positive and negative mood affect measures. In order to be consistent with the ranges of the other scales used in the study, answers were reported on a seven-point likert scale.

The twenty items of the PANAS-X mood affect scale were broken down into ten positive mood emotions and ten negative mood emotions. An EFA was tested on each group separately confirming their unidimensionality, validity and reliability. The positive mood emotions component of the mood affect scale consisted of such items as excited, attentive, enthusiastic and interested and explained 51.53% of the total variance. The ten items loaded on one factor from 0.531 to 0.814 with a reliability of 89.4%. The negative mood emotions consisted of such items as upset, irritable, nervous and afraid and explained 56.64% of the total variance. Those ten items loaded on one factor between

0.619 and 0.841 with a reliability of 91.4%. All of the items used for measuring positive and negative moods were included in the testing in order to control for mood affects.

Table 5.2 – Summary of Exploratory Factor Analyses

Constructs	Items	Items Previously Removed	Factor Loadings	Reliability (α)	Total Variance Explained
Self-esteem	6	4	0.712-0.845	0.868	60.99%
Attitudes to Chinese Products	5	1	0.631-0.847	0.801	56.18%
Attitudes to Japanese Products	5	1	0.697-0.901	0.889	69.47%
Attitudes to Charitable Organizations	4	1	0.826-0.851	0.855	70.14%
Importance of Prestigious Items	3	0	0.873-0.940	0.902	83.89%
Risky Purchase Decision Making	3	3	0.631-0.849	0.577	55.3%
Preferences for Nutritional Information	5	0	0.860-0.920	0.933	79.13%
Positive Mood	10	0	0.531-0.814	0.894	51.53%
Negative Mood	10	0	0.619-0.841	0.914	56.64%

CHAPTER 6:

METHODOLOGY

The following section will discuss the methods used to test the aforementioned hypotheses. This study was conducted through an online survey distributed to random consumers across Canada. The purpose of conducting the survey online was to extend this research field by demonstrating that the effects of MS could also be obtained outside of an isolated classroom. As such, an online TMT experiment is a new contribution within this research stream. The following section will discuss in detail the survey description, data collection and sample characteristics.

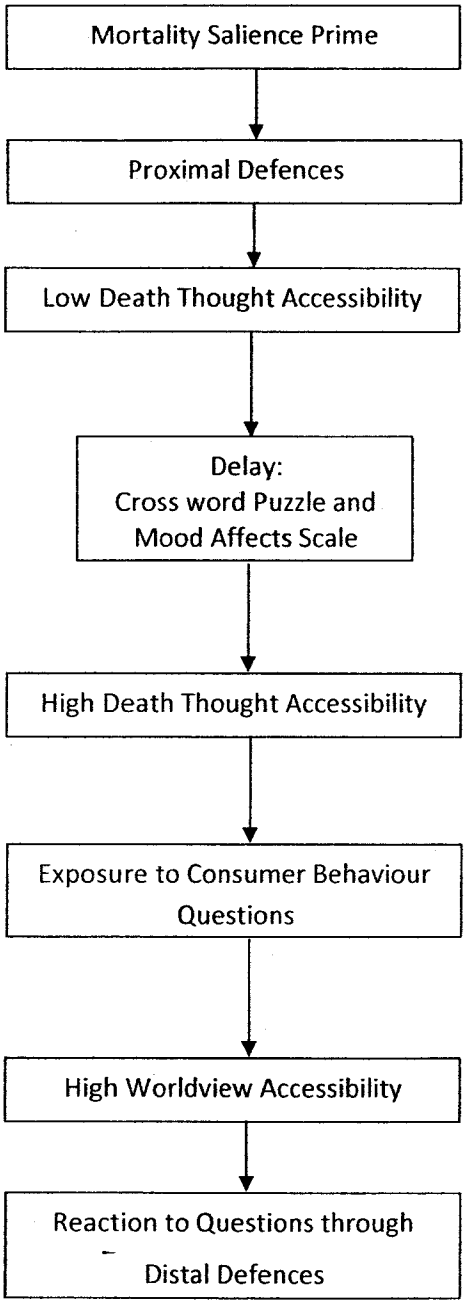
6.1 Survey Description

The survey was labelled as a 'Personality and Attitude Test Survey'. All participants were assured of their anonymity and confidentiality and were told that they could terminate the survey at any time if they deemed necessary. The first portion of the survey consisted of the self-esteem scale and several filler questions to distract the responder from the true purpose of the study. A page was then presented before the manipulation and stated that: 'on the following page are two-open ended questions, please respond to them with your first, natural response. We are looking for peoples' gut-level reactions to these questions'. Half of the participants then received the MS manipulation while the other half received the control group questions.

The MS manipulation imitated other studies (i.e. Greenberg et al., 1990a; Solomon et al., 1991) and was accordingly titled 'The Projective Life Attitudes Assessment'. It was described as a new innovative personality assessment in which responses would be content-analyzed in order to assess different personality dimensions. The two open-ended questions asked participants to 'briefly describe the emotions that the thought of your own death arouses in you' and to 'jot down, as specifically as you can, what you think will happen to you as you physically die and once you are physically dead'. The control group participants received two open-ended questions related to going to the dentist which asked them to 'briefly describe the emotions that the thought of going to the dentist arouses in you' and to 'jot down, as specifically as you can, what type of pain you might experience at the dentist and describe what it would feel like'.

Both groups were then asked to respond how they felt at that moment regarding several different moods on the PANAS-X mood affect scale. In order to ensure that the distal and not proximal defences would be activated following the MS prime, the participants were then unknowingly presented with a distracter. They were asked to locate as many words as possible from a word puzzle of random letters. Following the distracter, the consumer behaviour questions were presented on different pages. At the end of the survey, their demographic information was collected and they were briefed on the purpose of the study and thanked for their participation (Figure 6.1).

Figure 6.1 – How MS Effects Impact Reactions to Consumer Behaviour Questions



6.2 Data Collection and Sample Characteristics

The collection of data online took place in a five day period during the second week of January 2010. The surveys were distributed by Toluna Inc., an international marketing research firm. As per request, the surveys were distributed to 540 Canadian consumers nationwide with an approximate even distribution of sex and an age range between 18 and 40. Toluna Inc. rewarded the participants who fully completed the survey through monetary compensation. The completed survey response rate was 70.3%, leaving 160 uncompleted surveys to be discarded. Out of the 380 completed surveys, 23.7% (90 respondents) were eliminated from the study due to abnormal duration of survey completion. Both the median and average time for completion was just under 15 minutes and those 90 respondents completed the survey either under one third of the median time (five minutes) or over one hour of the median time. Upon verification of the eliminated results, respondents tended to answer each item with the same response. Similarly, their responses to the two open-ended questions tended to either be nonsensical or apathetic. The remaining data used for analysis consisted of 290 completed responses with 136 in the experimental group (MS) and 154 in the control group (dentist).

The sample characteristics are broken down into sex, age and country of origin. The sample was relatively distributed with respect to sex with 53.4% females who made up 52.2% of the experimental group and 54.5% of the control group. The age range between 18 and 40 was also relatively distributed with an average of 30.25 years and a median of 31 years. The smallest age group was between 18 and 24 and made up 25.5% of the sample. The age group between 25 and 32 made up 32% of the sample and the

largest group between the ages of 34 and 40 consisted of 41.7% of the sample. Two additional responders not included in this distribution were 44 and 45 years of age respectively. As well, distribution of age within the experimental and control groups was also fairly even. The sample consisted of 76.2% of responders who reported that Canada was their country of origin with the experimental group consisting of 49.8% of those born in Canada.

CHAPTER 7:

DATA ANALYSIS

The following section will explain the analyses and results that developed from testing the previously mentioned hypotheses. Means were calculated for the included items of each variable and were analyzed accordingly. Respondents from the MS and control groups were allocated with a dummy variable and in most cases, 'MS or control' was listed as the independent variable while the different types of consumer behaviour were listed as separate dependent variables.

The hypotheses were tested using an ANCOVA (analysis of covariance) in order to control for mood affects through covariate analysis. Both positive and negative mood affects were entered as covariates. Linear regressions were also run to test for correlations among continuous variables. Self-esteem was transformed into a dummy variable so that LSE and HSE individuals could be distinguished through a median split.

7.1 Hypothesis 1

It was predicted that MS will lead to less favourable attitudes towards products from China and Japan as compared to a control group. It was also predicted that LSE individuals would reveal less favourable attitudes as compared to HSE individual primed with MS and LSE individuals in the control group. In order to elicit the most accurate responses, participants who recorded their country of origin as either China or Japan were eliminated from this sample. In both groups, 16 responders claimed their country of

origin as China while no one reported that their country of origin was Japan. The ANCOVA revealed that there was no significant difference found between the means of the MS and the control group regarding attitudes to Chinese products ($p > 0.1$). Similarly, no significant difference was obtained between the groups for attitudes towards Japanese products ($p > 0.1$). The sample was split among the MS and control groups and the self-esteem split was inputted as the independent variable. When primed with death-related thoughts, LSE individuals did not display less favourable attitudes towards Chinese or Japanese products as compared to HSE individuals ($p > 0.1$). When the sample focused on LSE individuals in order to test for differences between the MS and control groups, the MS prime did not decrease favourable attitudes to products from either country ($p > 0.1$). As such, **H1a, H1b and H1c are rejected.**

7.2 Hypothesis 2

Charitable organizations were predicted to elicit more favourable attitudes among those in the MS group as compared to the control group. LSE individuals were predicted to reveal more favourable attitudes as compared to HSE individuals. An ANCOVA was performed and indicated no significant difference between the two groups ($p > 0.1$). The effects of MS were also expected to increase favourable attitudes to charitable organizations for LSE as compared to HSE individuals. The sample was split among the MS and control groups and the self-esteem split was inputted as the independent variable however no significant differences emerged from the testing ($p > 0.1$). Therefore, **H2a and H2b are rejected.**

7.3 Hypothesis 3

The importance of prestige when shopping for clothes was predicted to increase following the MS prime however the ANCOVA did not reveal any differences between the two groups ($p > 0.1$). LSE individuals were predicted to reveal increased importance for prestigious items as compared to HSE individuals and LSE individuals in the control group. When the sample was split among the MS and control groups and the self-esteem split was inputted as the independent variable, LSE did not reveal increased importance for prestigious items as compared to HSE individuals ($p > 0.1$). Also, when the sample was focused on those with LSE, increased importance for prestigious items did not increase after the MS prime ($p > 0.1$) and therefore, **H3a, H3b and H3c are rejected.**

It was predicted that the importance of prestige when shopping for clothes would decrease among HSE individuals when primed with MS. When the sample was focused on those with HSE, the ANCOVA did not reveal this relationship between the two groups ($p > 0.1$), but a moderately significant difference was observed among HSE females ($p = 0.056 < 0.1$). As well, HSE males between the ages of 33 and 45 also revealed a moderately significant difference ($p = 0.092 < 0.1$). HSE individuals between the ages of 33 and 45 reported extremely significant results ($p = 0.019 < 0.05$) therefore indicating that HSE somewhat decreases the importance of prestige when shopping for clothes after mortality is made salient. As such, **H3d is partially supported.**

Table 7.31 – Importance of Prestige when Shopping for Clothes: Comparison of MS and Control Groups for High Self-Esteem Individuals

	MS			Control		
	M	SD	N	M	SD	N
Females	3.3333*	1.5742	34	4.0439	1.5090	38
Males	3.7222	1.7186	42	3.7126	1.6990	29
Total	3.5482	1.6562	76	3.9005	1.5902	67

*p < 0.1

Table 7.32 – Importance of Prestige when Shopping for Clothes: Comparison of MS and Control Groups for High Self-Esteem Individuals between the Ages of 33 and 45

	MS			Control		
	M	SD	N	M	SD	N
Females	3.1556	1.4190	15	3.7778	1.6088	18
Males	3.3684*	1.7494	19	4.3333	1.5947	10
Total	3.2745**	1.5922	34	3.9762	1.5971	28

*p < 0.1; **p < 0.05

MS was predicted to increase importance for prestige when shopping for clothes among younger as compared to older individuals. A linear regression among the entire sample illustrated that as age decreases, importance for prestige when shopping for clothes increases at a moderately significant level ($\beta = -0.023$; $p = 0.088 < 0.1$).

Following the MS prime, the same relationship was observed but with higher significance (β = -0.038; p = 0.061 < 0.1) while absolutely no relationship was observed in for the control group. **H3e is partially supported.**

Among younger individuals, MS was predicted to increase importance for prestigious items. When the sample was focused on those between the ages of 18 to 24 or even between the ages of 25 to 32 however the ANCOVA revealed that no significant differences emerged in either case. **H3f is rejected.**

MS was predicted to decrease importance for prestigious items among older individuals. The age groups of 18 to 24 and 25 to 32 did not reveal differences however older individuals between the ages of 33 and 45 demonstrated significantly strong effects for the inverse relationship of MS and importance for prestigious items. The results from the ANCOVA suggest that older individuals will display a decrease in importance for prestige when shopping for clothes after an MS prime (p = 0.028 < 0.05). When the sample was split among age groups as well as sex, females did not reveal any significant differences however males in this high age group displayed a strong decrease in importance for prestige when shopping for clothes after the MS prime (p = 0.004 < 0.01). **H3g is supported.**

Table 7.33 – Importance of Prestige when Shopping for Clothes: Comparison of MS and Control Groups for Individuals between the Ages of 33 and 45

	MS			Control		
	M	SD	N	M	SD	N
Females	3.1379	1.4379	29	3.4959	1.5584	41
Males	3.5333*	1.7078	25	4.1190	1.3216	28
Total	3.3210**	1.5661	54	3.7488	1.4889	69

*p < 0.01; **p < 0.05

7.4 Hypothesis 4

The level of risk associated with risky purchases was predicted to increase for LSE as compared to HSE individuals after the MS prime. The ANCOVA supported this hypothesis by proving that only under conditions of MS, LSE individuals reported higher values for the level of risk they associated to various risky purchases as compared to HSE individuals ($p = 0.024 < 0.05$). No significant differences emerged between low and high self-esteem individuals in the control group. Interestingly, when the sample was narrowed down to individuals whose country of origin is Canada, similar differences emerged with much stronger significance ($p = 0.006 < 0.01$), while the control group revealed no differences. It can be inferred that country of origin is a determinant factor in how risk is perceived based on self-esteem following an MS prime. **H4a is supported.**

Table 7.41 - Risky Purchase Decision Making: Comparison of Low and High Self-Esteem Individuals in the MS and Control Groups

	MS			Control		
	M	SD	N	M	SD	N
LSE	4.2833*	1.2071	60	4.1226	1.1296	87
HSE	3.8114	1.2699	76	4.0448	1.3205	67

*p < 0.05; **p < 0.01

Table 7.42 - Risky Purchase Decision Making for Canadian Country of Origin: Comparison of Low and High Self-Esteem Individuals in the MS and Control Groups

	MS			Control		
	M	SD	N	M	SD	N
LSE	4.5578**	1.0637	49	4.1538	1.1608	65
HSE	3.8556	1.3268	60	4.0000	1.2266	49

*p < 0.05; **p < 0.01

Gender differences were predicted to be found in this relationship such that MS would lead females to associate higher levels of risk to risky purchases as compared to males. The ANCOVA reported no differences between genders under conditions of MS, not even when self-esteem was used an interaction. **H4b is rejected.**

Age was expected to have an impact on the results since adolescents are considered to be bigger risk takers. Therefore, older individuals were predicted to consider risky purchases to be riskier as compared to younger individuals after the MS prime. A linear regression was performed running 'risky purchase decision making' on age with the sample split between the MS and control groups. Under conditions of MS, no significant results were obtained however when the sample was narrowed down to participants who listed country of origin as Canada, it was determined that as age increases, perception of risk increases ($\beta = 0.042$; $p = 0.018 < 0.05$). In both cases, no effects were found for the control group.

An ANCOVA testing the effects of the 'risky purchase decision making' on age determined that only under MS and with individuals who listed country of origin as Canada did perception of risk increase from the youngest to the oldest age group ($p = 0.022 < 0.05$). As well, no effects were found for the control groups. Although the entire sample was not able to support the hypothesis, the majority of respondents did. Between both MS and control groups, individuals who listed country of origin as Canada comprised nearly 77% of the entire sample and therefore, **H4c is supported.**

Table 7.43 – Risky Purchase Decision Making: Comparison of Age Groups in the MS and Control Groups with Canada as the Country of Origin.

	MS			Control		
	M	SD	N	M	SD	N
18 – 24 Years	3.7917*	1.1414	32	3.7471	1.1807	29
25 – 32 Years	4.1404*	1.0700	38	4.3030	1.2115	33
33 – 45 Years	4.5128*	1.4466	39	4.1410	1.1554	52

*$p < 0.05$

7.5 Hypothesis 5

After an MS prime, increased preferences for nutritional information on food products was predicted to occur among females while males were expected to display no effects at all. An ANCOVA was performed and determined that overall MS did not lead females to have increased preferences for nutritional information on food products. Interestingly, young women between the ages of 18 and 24 revealed such an increase but only with moderate significance ($p = 0.074 < 0.1$) while men displayed no difference between the two groups ($p > 0.1$). **H5a is partially supported.**

The MS Prime was predicted to increase preferences for nutritional information on food products for females as compared to males while the control group was expected to reveal no differences between each gender. Among the participants in the control group, females reported increased preferences for nutritional information as compared to

males at a significant level ($p = 0.044 < 0.05$). Under the MS condition, this relationship was even stronger and the difference between the means was even greater ($p = 0.001 < 0.01$). **H5b is partially supported.**

LSE females were predicted to exhibit increased preferences for nutritional information on food products after being primed with MS however an ANCOVA revealed no significant differences ($p > 0.1$). Similarly, males also showed no significant differences as predicted. **H5c is rejected.**

Table 7.51 – Preferences for Nutritional Information on Food Products: Comparisons between the MS and Control Groups for Females.

	MS			Control		
	M	SD	N	M	SD	N
18 – 24 Years	5.4800*	1.0248	15	4.6526	1.4249	19
Total	5.1803	1.2015	71	5.1286	1.2938	84

*p < 0.1

Table 7.52 – Preferences for Nutritional Information on Food Products: Comparisons between Each Gender for the MS and Control Groups.

	Females			Males		
	M	SD	N	M	SD	N
MS	5.1803*	1.2015	71	4.5538	1.3787	65
Control	5.1286**	1.2937	84	4.7486	1.4091	70

*p < 0.01; **p < 0.05

7.6 Summary of Findings

The summary of findings from the results of the hypothesis testing will be presented in Table 7.61. A general discussion of the results will then be presented followed by concluding remarks that examine the limitations, future research and managerial implications of this study.

Table 7.6 – Summary of Research Findings

Hypotheses		**Findings**
Attitudes to Foreign Products		
H1a: MS - > Foreign Prods. (-)	China	Rejected: p > 0.1
	Japan	Rejected: p > 0.1
H1b: MS - > LSE - > Foreign Prods. (-) as compared to HSE	China	Rejected: p > 0.1
	Japan	Rejected: p > 0.1
H1c: MS - > LSE - > Foreign Prods. (-) as compared to control group	China	Rejected: p > 0.1
	Japan	Rejected: p > 0.1
Attitudes to Charitable Organizations		
H2a: MS - > Charitable Orgs. (+)		Rejected: p > 0.1
H2a: MS - > LSE - > Charitable Orgs. (+) as compared to HSE		Rejected: p > 0.1

Importance of Prestigious Items	
H3a: MS - > Pres. Items (+)	Rejected: $p > 0.1$
H3b: MS - > LSE -> Pres. Items (+) as compared to HSE	Rejected: $p > 0.1$
H3c: MS - > LSE - > Pres. Items. (+) as compared to control group	Rejected: $p > 0.1$
H3d: MS - > HSE - > Pres. Items (-) as compared to control group	Partially Supported: $p < 0.1$
H3e: MS - > Age and Pres. Items have Inverse Relationship	Partially Supported: $p < 0.1$
H3f: MS - > Younger Ppl. - > Pres. Items. (+) as compared to control group	Rejected: $p > 0.1$
H3g: MS - > Older Ppl - > Pres. Items (-) as compared to control group	Supported: $p < 0.05$
Risky Product Decision Making	
H4a: MS - > LSE - > Risky Prods. (+) as compared to HSE	Supported: $p < 0.05$
H4b: MS - > Females - > Risky Prods. (+) as compared to Males	Rejected: $p > 0.1$
H4c: MS - > Older Ppl - > Risky Prods. (+) as compared to Younger Ppl	Supported: $p < 0.05$

Preferences for Nutritional Information on Food Products		
H5a: MS ->	Females - > Nut. Info. (+) as compared to control group	Partially Supported: $p < 0.01$
	Males - > Nut. Info. (No Diff.) as compared to control group	$p > 0.1$
H5b:	MS - >Females - > Nut. Info. (+) as compared to Males	Partially Supported: $p < 0.05$
	Control group shows no difference between each gender	$p < 0.05$
H5c: MS ->	LSE Females - > Nut. Info. (+) as compared to control group	Rejected: $p > 0.1$
	LSE Males - > Nut. Info. (No Diff.) as compared to control group	$p > 0.1$

CHAPTER 8:

GENERAL DISCUSSION

Mortality salience effects have been proven in previous studies to impact perspectives, views and decision making processes. Cultural worldview defences tend to emerge following a delay from the MS prime and result in more pronounced affirmation of the in-group and unprompted hostility towards the out-group. This current research attempted to further validate terror management theory and its impact on consumer behaviour while addressing certain issues that have never been investigated before. This chapter will begin by discussing the unique attributes of this current research and how significant contributions have been made to the literature. The next section will focus on the impact of MS effects on risky purchase decision making and will detail the findings with regards to self-esteem and age differences followed by a discussion on how MS decreases importance for prestigious items among specific groups. Age and self-esteem differences will also be highlighted with regards to preferences for nutritional information and lastly, the lack of findings concerning attitudes to foreign products and charitable organizations will be thoroughly examined.

8.1 Contributions of this Study

The majority of studies that have focused on TMT, in and outside the discipline of marketing, consisted of methodological similarities that may have yielded biased results. For the most part, the combination of TMT and consumer behaviour research studies have been conducted in the United States where cultural worldview defences demonstrate

sharp reactions to relevant stimuli. Therefore, a unique attribute of this study was that it was conducted strictly among Canadian consumers with the intention of replicating the potency of previous findings obtained from south of the border.

College students have been used as the primary subjects in most TMT and consumer behaviour research studies. Since the effects are based on psychological mechanisms that have been shown to systematically elicit reactions among younger people, it was hoped that a study that focuses on older age levels might discover differing findings that shed a new light on the theory. Aside from the age and gender differences that were discovered in this study, country of origin was also unexpectedly discovered as a new element in the relationship between terror management and consumer behaviour.

The fact that the study obtained results online was another new element that had not been previously tested. The decision to conduct the study through an online survey was chosen because it was the easiest and least complicated way to reach a large sample of the population without having to solicit participants. As well, the similarities of findings in past research may have been attributed to the repeated use of university students isolated in a classroom for the duration of the experiment. Before distributing the surveys, it was not possible to determine if online distribution would help to emphasize the effects of MS or enable participants to concentrate less on the questions. Nonetheless, the risk was taken and the findings suggest that an online MS manipulation does have an effect.

8.2 The Impact of MS Effects on Risky Purchase Decision Making

While most hypotheses in this study were rejected, a number of interesting findings were obtained. Testing for the level of risk associated with risky purchases following an MS prime produced significant and informative results. Past research has demonstrated that LSE individuals become more risk averse following an MS prime as compared to HSE individuals. This study revealed that LSE individuals allocated higher amounts of risk to risky purchases as compared to HSE individuals following an MS prime (LSE Mean = 4.28, SD = 1.20; HSE Mean = 3.81, SD = 1.27; $p < 0.05$) while those in the control group showed absolutely no difference. This indicates that the effects of MS can result in the undertaking of more prudent measures towards consumer purchases for those with LSE. Interestingly, these results were even more significant for those that reported their country of origin as Canada (LSE Mean = 4.56, SD = 1.06; HSE Mean = 3.85, SD = 1.32; $p < 0.01$). While this may seem surprising considering that risky purchase decision making does not reflect country-specific attributes, focusing on the specific questions that were asked in the survey should provide keener insight into these findings.

The factor analysis for risky purchase decision making revealed that reliability between the items was 57.7%, below the recommended alpha of 70%. This could indicate that these items did not reliably measure the risky purchase decision making variable. As such, in order to better understand the results that were obtained, it is necessary to examine the items that were used for this measurement. The statements regarding risky purchases used in the measurement were as follows: buying a second-hand car that is five

years old; buying a refrigerator from an unknown brand name and buying an out-dated cell-phone model. Perhaps the LSE respondents who did not list their country of origin as Canada were more unfamiliar with these products. Nonetheless, MS led LSE individuals to consider these purchases riskier as compared to those with HSE regardless of country of origin.

Following an MS prime, higher association of risk to these products was hypothesized to increase with age. In this situation, the entire sample did not show any effects but when those with foreign countries of origin were omitted, very significant results provided support for this relationship (18-24 Mean = 3.79, SD = 1.14; 25-32 Mean = 4.14, SD = 1.07; 33-45 Mean = 4.51, SD = 1.44; $p < 0.05$) whereas the control group showed no differences. Therefore the items in the measurement did most likely reflect attributes that were country-specific to Canada.

For Canadian consumers who have lived in Canada their whole lives, second-hand cars, refrigerators and out-dated cell-phones are purchases that carry more risk as age increases when death anxiety is high. An explanation for why no difference exists among those with foreign countries of origin is that younger individuals may have not yet had experiences with such purchases in Canada therefore significant differences between the age groups are not observable. Even though reliability was not strong between the items in this measurement and country of origin surprisingly became an important factor, this study does demonstrate a very significant relationship between MS and risky purchase decision making.

Surprisingly, gender differences did not emerge in risky purchase decision making after the MS prime regardless of country of origin. Although males may be more prone to be bigger risk takers, neither the experimental nor the control group can confirm it. Perhaps MS does lead to bigger risk-taking among males when the risk is not associated with consumer purchases.

8.3 How MS Causes the Importance of Prestigious Items to Decrease

The effects of MS led to some interesting findings concerning the importance of prestige when shopping for clothes. Interestingly, no effects were found with regards to differences between the MS and control group; between LSE and HSE individuals in the MS group or among LSE individuals in the MS group. It is surprising that LSE was not a factor as the MS prime should have led to stronger efforts to augment and procure self-esteem. A possible explanation for the lack of findings is that those individuals who were categorized as having LSE did not base their self-esteem on clothing. While it was expected that on average, LSE individuals would place more importance on prestigious items following an MS prime, other types of products that also convey different levels of prestige may have been more relevant. In that case, products being tested should be esteem-relevant in order to obtain conclusive findings however HSE individuals did elicit reactions from the MS effects concerning the importance of prestigious clothing. Specifically among adults between the ages of 33 and 45, those with HSE significantly placed less importance on prestige when shopping for clothes after being primed with MS as compared to not being primed at all (MS Mean = 3.27, SD= 1.59; Control Mean = 3.98, SD = 1.59; $p < 0.05$).

This suggests that HSE is threatened when thoughts are focused on the importance of prestigious items (something meant to augment self-esteem) after an MS prime for mature adults. In other words, the distal defences that are activated following an MS manipulation detect that one's HSE might be vulnerable and in order to procure self-esteem, more negative reactions are exhibited towards the importance placed on prestigious items than would normally be. By doing this, MS leads HSE individuals to remove threats of insecurity by denouncing the artificial materialistic items meant to sustain self-esteem.

The inverse relationship between age and importance of prestigious items was observed after an MS prime ($\beta = -0.038$; $p = 0.061 < 0.1$) but not before ($\beta = -0.011$; $p > 0.1$). These results suggest that age plays a role in the relationship between terror management and consumer behaviour such that younger people will display the expected effects from MS while those who are older can actually reveal the opposite. As mentioned before, the use of university students in the majority of terror management studies has basically determined that MS affects those in a certain age group. This research has found that with regards to a specific consumer behaviour, older aged individuals will reveal reverse effects.

The explanation for these findings is that prestigious or high-status products might be closer connected to the self-esteem of younger individuals. The cultural worldview defences that are activated cause younger individuals to allocate increased importance on such products because they subconsciously buffer existential insecurities. Older aged

adults do not rely (as much or at all) on prestigious or high-status products as means of maintaining self-esteem. Normally, allocating importance to prestigious items is not a serious consideration however under MS, such products become associated with the procurement of self-esteem and thus are subconsciously viewed as an existential threat. As a reaction, decreased importance is allocated to prestigious items as a means of dismissing their influential anxiety-buffering abilities.

Among younger individuals (between the ages of 18 to 24), no differences were obtained between the MS and control groups regarding the importance of prestige when shopping for clothes. Since under normal conditions this age group would allocate more importance towards prestigious items as compared to older individuals, it is possible that following the MS prime, the difference was not substantial. Thus, it cannot be concluded that younger adults will reflect more positive reactions towards prestigious items when death anxiety is high.

On the contrary, older adults will reveal such an effect in the opposite direction (MS Mean = 3.32, SD = 1.56; Control Mean = 3.75, SD = 1.49; $p < 0.05$). Since prestigious items are not something that they closely connect to their self-esteem, the stimulation of death anxieties causes negative reactions in regards to the importance of such items as a means of justifying their lack of influence as an anxiety-buffer. Since more mature men produced even stronger results for this relationship (MS Mean = 3.53, SD = 1.70; Control Mean = 4.11, SD = 1.32; $P < 0.01$), it can be concluded that older males, as opposed to older females, are the least likely to consider prestigious items as

having an influence on self-esteem. Therefore, when they are presented with the notion that this relationship does exist (as a result of the MS prime), they react negatively to such products or else they face the reality that their existential insecurities are ever-present and must be quelled through the acquisition of inanimate objects.

8.4 Age and Gender Difference in Preferences for Nutritional Information

Preferences for nutritional information on food products were expected to increase for females following an MS prime while males were expected to show no differences. Surprisingly, these effects did not emerge across all the females in the sample whereas 18 to 24 year olds did exhibit these increases with moderate significance (MS Mean = 5.48, SD = 1.02; Control Mean = 4.65, SD = 1.42; $p < 0.1$). Males revealed no differences regardless of age.

It would have been less surprising if older, not younger women demonstrated increased preferences for nutritional information following the MS prime since a positive correlation was observed between age and preferences for nutritional information ($\beta = 0.029$; $p < 0.05$). When looked at more closely, this positive correlation is only significant among individuals in the control group but not the MS group ($p < 0.05$ vs. $p > 0.1$). In fact for the age group of 33 to 45 years old, preferences for nutritional information declined after the MS prime as compared to the control group (MS Mean = 4.9333; Control Mean = 5.2986; $p < 0.05$).

These findings are intriguing yet difficult to interpret. It appears as though the MS manipulation offset the effects of desiring nutritional information as age increases. The only possible explanation is that the distal defences that were activated following the MS prime caused older individuals to less prefer nutritional information as it might reveal aspects of an unhealthy diet. Only under MS do older individuals become less willing to see the nutritional value of their food products.

Gender differences did emerge with respect to preferences for nutritional information on food products following an MS prime. Although the control condition did reveal similar results (Female Mean = 5.12, SD = 1.29; Male Mean = 4.74, SD = 1.41; $p < 0.05$), the MS group produced findings with stronger significance (Female Mean = 5.18, SD = 1.20; Male Mean = 4.55, SD = 1.37; $p < 0.01$). As well, the difference between the means was larger and the standard deviations were smaller in the MS group as compared to the control condition. This would indicate that MS causes greater gender differences than would normally exist in regards to preferences for nutritional information.

This relationship is also prominent among LSE males and females with stronger significance in the MS group as compared to the control condition ($p = 0.007 < 0.01$ vs. $p = 0.077 < 0.1$). Interestingly, no gender differences emerged for HSE individuals in the control group however HSE females revealed increased preferences as compared to HSE males in the MS group with strong significance (HSE Female Mean = 5.23; HSE Male Mean = 4.68; $p < 0.05$). Therefore, HSE individuals do not normally exhibit gender

differences in regards to preferences for nutritional information however when mortality is made salient, females display higher preferences than males. Within each gender, no differences emerged between the MS and control groups regardless of level of self-esteem. Surprisingly, self-esteem was not a factor amongst females or males of any age group in regards to preferences for nutritional information

When the sample was narrowed down to Canadian country of origin, the control group did not display any gender differences however the MS group revealed a significantly strong difference (Female Mean = 5.21, SD = 1.18; Male Mean = 4.45, SD = 1.45; $p < 0.01$). No differences were discovered for individuals with a foreign country of origin regardless of whether they were primed with MS or not. This would suggest that for individuals who were born in Canada, women prefer nutritional information more than men but only after mortality is made salient. Perhaps growing up in a North American culture causes women to subconsciously prefer nutritional information on food products more than men. When mortality-related anxiety is awakened, the differences in preferences emerge probably because a nutritional diet is more important for females than males in this culture.

8.5 The Lack of Findings

Several of the hypotheses tested in this experiment did not reveal significant findings making it difficult to interpret the effects of MS on Canadian consumers. Surprisingly, absolutely no effects resulted from attitudes to foreign products. One explanation for the lack of findings can be grounded in the make-up of the sample. Canadian consumers may not feel a deep attachment to products produced and manufactured in their own country as compared to consumers from the United States. Therefore, MS might not lead to emphasized affirmation of the in-group nor exaggerated hostility to the out-group (products made from foreign countries). For example, in the United States, strong competition exists among American and Japanese auto manufacturers therefore attitudes to Japanese products should more likely decrease after an MS prime among Americans as compared to Canadians. This would also explain why no effects were found among LSE and HSE individuals or even between them.

A second possible explanation for why attitudes to foreign products yielded no effects could be related to the focus on foreign as opposed to domestic products. Typically, cultural worldviews that defend patriotic or nationalistic biases are reactions elicited from attitudes towards domestic stimuli (i.e. Nelson et al., 1997; Jonas et al., 2005). Perhaps because the emphasis was on foreign products, cultural worldview defences were not activated as strongly as compared to if the focus was on domestic products. While the majority of terror management studies that have focused on such

biases have been more oriented towards defending domestic stimuli, prior research has nonetheless revealed that MS leads to less positive reactions to foreign stimuli (i.e. Jonas et al., 2002; Fransen et al., 2008).

A third possible explanation for these undesired results is related to the lack of specificity in the questions. Terror management research is not immune to general attitudes however if this research attempted to be more specific in regards to actual products from China or Japan, stronger effects may have been obtained. Regardless of any explanation, this research did not find any significant effects for attitudes to foreign products after an MS prime and until future research proves differently, this relationship cannot be confirmed.

The lack of findings concerning attitudes to charitable organizations is even more surprising as this hypothesis was expected to be fully supported due to conclusions drawn from past research (i.e. Ferraro et al., 2005; Jonas et al., 2002 and Fransen et al., 2008). Perhaps stronger results would have been obtained if attitudes to charitable organizations questions were asked before the delay thus activating the proximal defences of terror management. It is possible that the proximal defences resulting from MS would have increased sensitivity and empathy towards those less fortunate thus affecting attitudes to charitable organizations. Considering the distal defences activate stronger allegiance to cultural worldviews, the delay after the MS prime may have negated more positive reactions to charities.

CHAPTER 9:

CONCLUSION

The following section will discuss the managerial implications of this current research in regards to how it can contribute to marketing practices. The limitations of this study will then be addressed and future research that builds on the findings obtained in this experiment will be suggested. A final conclusion will briefly summarize the main aspects of this study.

9.1 Managerial Implications

There are many that might be quick to dismiss the managerial or marketing implications of TMT. Managers and marketers can benefit from extensive research into this field considering that MS will affect reactions to their products or services and thus impact the potential of profitable gains. Significant events such as terrorist attacks, natural disasters or large-scale epidemics will undoubtedly alter the psyche of a population by activating psychological defences towards existential insecurities. These defences will most likely inhibit certain consumers from making purchases that consist of a variable degree of risk.

In times where MS is high among a population, managers can decrease prices for products containing risk and thus attract more consumers who otherwise would have been discouraged to go forward with the risky purchase. Marketers can alter marketing strategies by emphasizing the safety of certain purchases as well as focusing more on

product guarantees and warrantees. This research has revealed that HSE individuals might react differently than previously anticipated towards certain products following an MS prime. Managers and marketers who are selling products or services that they know interact with individual levels of self-esteem can alter their practices in times when death anxiety is rising. Since the link between MS and consumer behaviour is a relatively newly explored matter, future research can provide more in depth insight into more specific products and services which would thus have more pertinent managerial implications.

Aside from producing valuable information for managers or marketers, the combination of terror management and consumer behaviour should continue to be explored so that more information can be developed concerning the evolutionary processes of human psychology. The field of marketing is being constantly combined with other disciplines but a new trend has emerged which attempts to link evolved psychological capabilities to consumer behaviour. Evolutionary psychology and marketing can produce significant managerial implications while helping to develop a better understanding of human brain development throughout history.

TMT validates the theoretical attributes of evolutionary psychology by revealing archaeological and scientific evidence demonstrating that culture is a by-product of innate existential insecurities. This type of research has far-reaching implications as it informs humanity about its roots and the reasons for social connection and development.

With regards to consumer behaviour, this research can also provide a better understanding of economic history and the evolution of consumer practises throughout different eras and cultures.

9.2 Limitations

Many hypotheses were rejected yet a high number of interesting findings did emerge from this experiment. Nonetheless, there were certain limitations of this research which potentially inhibited the attainment of desired results and should be acknowledged. The first limitation refers to the lack of specificity in the majority of the questions on the survey. More significant results could have been obtained if the questions referred to specific brands or products instead of generalizing products from a certain country or asking general attitudes to charitable organizations. The fact that the risky purchase decision making variable produced the most significant results could be attributed to the fact that its statements referred to specific products (i.e. second-hand car, refrigerator).

Secondly, the time span in which the results were obtained may have also contributed to the shortcoming of significant findings. As previously mentioned, the surveys were collected from all over Canada within a five day period. If the survey distribution was split amongst different time periods, perhaps different results would have been obtained. As well, this five day period was approximately two weeks after the winter holiday season. While it is not expected that this could have affected the results, it is worth considering that consumer behaviour outcomes will reveal different patterns following a period of large consumer spending.

The third limitation is the absence of a manipulation check for the MS prime. While most terror management research does not engage in verifying whether the MS prime properly activated death-related thoughts or not, studies have incorporated manipulation checks wherein death-thought accessibility was measured following the delay after the prime. The respondents are asked to fill in incomplete words and those that reply with more death-oriented responses are considered to have higher death-thought accessibility which indicates that they have been properly manipulated by the prime. This research did not include a manipulation check because it would have extended the length of the survey thereby increasing the chances of receiving incomplete or inaccurate responses. As well, the manipulation check would also require a large amount of time to verify and was considered negligible since the findings were expected to reveal the proficiency of the manipulation.

Another limitation which must be acknowledged is the risky purchase decision making scale. This was a self-made scale that lacked sufficient reliability between the items. As such, its measurements do not accurately reflect risky purchase decision making. While this study claims that intriguing and reliable findings were obtained from this scale, a proper scale that has been previously validated would have proven to be more useful. Unfortunately, none were found to exist.

Lastly, the effects of self-esteem on various consumer behaviour outcomes following the MS prime may have yielded more significant findings if the products referred to esteem-relevant attributes of the individual respondents. Needless to say, this

would have been extremely difficult to organize among a sample of almost three hundred participants because esteem-relevant attributes of specific products for each individual would have to of been determined beforehand. Nonetheless, it should not be taken for granted that individuals with low or high self-esteem will react similarly towards different products after an MS prime.

9.3 Future Research

Limited support for the hypotheses in this study should not discourage further research from investigating the relationship between TMT and consumer behaviour. In fact, the conclusions drawn from this study should stimulate new queries about how specific consumer behaviour outcomes are affected by MS. Future research should delve more deeply into individually-specific esteem-relevant attributes that become impacted by MS manipulations. For example, participants can be asked about what products make them feel 'happy' and 'fulfilled' upon consumption or use. Interactions between MS manipulations and levels of self-esteem should reflect changes in perceptions of these specific products for the respective individual. This type of a study might require more qualitative analysis with a stronger focus on open-ended questions in a physical, not virtual environment however conducting these types of studies online should not be rejected either. Future research can incorporate manipulation checks to verify if the MS manipulation was successful for online participants.

For those that are interested in the relationship between MS and consumer behaviour, risky purchase decision making is an avenue that should be explored due to its

high potential of significant outcomes. More specifically, risky financial decisions such as investments and trades should be deliberated by participants before and after an MS prime in order to determine if differences emerge. It would be expected that LSE individuals would become more risk averse after the MS prime and would thus be more likely to be dissuaded from certain investments at times when thoughts of death hinge on the perimeter of consciousness. As well, since this research provided support for how country of origin affects reactions to the MS prime, future research might want to look more specifically at region, culture or even city of origin.

This research exposed the significance of HSE individuals primed with MS whereas previous research has tended to find powerful results only for LSE individuals. Future research would benefit from further exploring the effects of MS on HSE individuals with a focus on attitudes and perceptions towards different products. Preferences for prestigious items was found to decrease among HSE individuals following the MS prime therefore preferences for other high-status products should also encourage similar results. It seems that expensive cars or costly jewellery might lead HSE individuals primed with MS to elicit decreased interest or desire. Differences with regards to age and gender were also observed in relation to preferences for prestigious items with men and the older age group demonstrating decreased importance. Similarly, age was positively correlated with being risk aversive following an MS prime. Therefore, future research can investigate gender and age differences with regards to more specific risky purchase decisions or prestigious items.

Past research has revealed how MS impacts perceptions of national constructs but has never taken into consideration the country of origin of the sample. This study demonstrated that country of origin can have an influence on consumer-related stimuli. Although no effects were found for attitudes to foreign products despite limiting the sample to participants with Canadian country of origin, future research can investigate the relationship between MS and specific products from foreign countries while incorporating country of origin and self-esteem. More specifically, future researchers can determine which specific foreign products interact with an individual's self-esteem and then observe the impact that MS effects can have on attitudes or perceptions towards that foreign product.

9.4 Final Conclusion

As the world becomes increasingly interconnected and globalized, transfer of information and news is accelerated causing heightened awareness of tragic events. Terror management theory seeks to provide a comprehensive understanding of the impact of mortality salience on human behaviour. It has also revealed the impact of MS on consumer behaviour and will hopefully expand within this discipline as it has the potential to discover intriguing and important information.

This research has contributed to the terror management literature in several ways. It has confirmed the theory's impact on consumer behaviour choices and decisions and has unveiled the influence of gender, age and country of origin differences. It has demonstrated the effects of MS on risky purchase decision making, importance for

prestigious items and preferences for nutritional information on food products. It has opened the door for further research into these consumer behaviour choices and decisions and has implications for managers, marketers and academics who seek to better understand the significance of TMT.

REFERENCES

Arndt, J., Cook, A., & Routledge, C. (2004a). The Blueprint of Terror Management: Understanding the Cognitive Architecture of Psychological Defense against the Awareness of Death. In S. L. K. Jeff Greenberg, Tom Pyszczynski (Ed.), *Handbook of Experimental Existential Psychoogy*. New York: The Guilford Press.

Arndt, J., & Greenberg, J. (1999a). The effects of a self-esteem boost and mortality salience on responses to boost relevant and irrelevant worldview threats. *Personality and Social Psychology Bulletin, 25*(11), 1331-1341.

Arndt, J., Greenberg, J., & Cook, A. (2002a). Mortality salience and the spreading activation of worldview-relevant constructs: Exploring the cognitive architecture of terror management. *Journal of Experimental Psychology: General, 131*(3), 307-324.

Arndt, J., Greenberg, J., Pyszczynski, T., & Solomon, S. (1997b). Subliminal exposure to death-related stimuli increases defense of the cultural worldview. *Psychological Science, 8*(5), 379-385.

Arndt, J., Greenberg, J., Schimel, J., Pyszczynski, T., & Solomon, S. (2002b). To belong or not to belong, that is the question: Terror management and identification with gender and ethnicity. *Journal of Personality and Social Psychology, 83*(1), 26-43.

Arndt, J., Greenberg, J., Simon, L., Pyszczynski, T., & Solomon, S. (1998). Terror management and self-awareness: Evidence that mortality salience provokes avoidance of the self-focused state. *Personality and Social Psychology Bulletin, 24*(11), 1216-1227.

Arndt, J., Greenberg, J., Solomon, S., Pyszczynski, T., & Schimel, J. (1999b). Creativity and terror management: Evidence that creative activity increases guilt and social projection following mortality salience. *Journal of Personality and Social Psychology, 77*(1), 19-32.

Arndt, J., Greenberg, J., Solomon, S., Pyszczynski, T., & Simon, L. (1997a). Suppression, accessibility of death-related thoughts, and cultural worldview defense: Exploring the psychodynamics of terror management. *Journal of Personality and Social Psychology, 73*(1), 5-18.

Arndt, J., Schimel, J., & Goldenberg, J. L. (2003a). Death Can Be Good for Your Health: Fitness Intentions as a Proximal and Distal Defense Against Mortality Salience¹. *Journal of Applied Social Psychology, 33*(8), 1726-1746.

Arndt, J., & Solomon, S. (2003b). The control of death and the death of control: The effects of mortality salience, neuroticism, and worldview threat on the desire for control. *Journal of Research in Personality, 37*(2), 1-22.

Arndt, J., Solomon, S., Kasser, T., & Sheldon, K. M. (2004). The urge to splurge: A terror management account of materialism and consumer behavior. *Journal of Consumer Psychology, 14*(3), 198-212.

Arndt, J., Solomon, S., Kasser, T., & Sheldon, K. M. (2004b). The Urge to Splurge: A Terror Management Account of Materialism and Consumer Behavior. *Journal of Consumer Psychology, 14*(3), 198-212.

Balter, M. (1998). Why Settle Down? The Mystery of Communities. *Science, 282*, 1442-1445.

Beatson, R., Loughnan, S., & Halloran, M. (2009). Attitudes toward Animals: The Effect of Priming Thoughts of Human-Animal Similarities and Mortality Salience on the Evaluation of Companion Animals. *Society & Animals, 17*(1), 72-89.

Beatson, R. M., & Halloran, M. J. (2007). Humans rule! The effects of creatureliness reminders, mortality salience and self-esteem on attitudes towards animals. *British Journal of Social Psychology, 46*, 619-632.

Becker, E. (1973). *The Denial of Death.* New York: The Free Press.

Becker, E. (1975). *Escape From Evil.* New York: The Free Press.

Ben-Ari, O. T.-. (2004). Risk Taking in Adolescence: "To Be or Not to Be" Is Not Really the Question. In J. Greenberg, S. L. Kole & T. Pyszczynski (Eds.), *Handbook of Experimental Existential Psychology* (pp. 104-122). New York: The Guilford Press.

Ben-Ari, O. T., Florian, V., & Mikulincer, M. (1999). The impact of mortality salience on reckless driving: A test of terror management mechanisms. *Journal of Personality and Social Psychology, 76*(1), 35-45.

Bonsu, S. K., & Belk, R. W. (2003). Do Not Go Cheaply into That Good Night: Death-Ritual Consumption in Asante, Ghana. *Journal of Consumer Research, 30*, 41-55.

Brown, N. (1959). *Life Against Death: The Psychoanalytic Meaning of History*: Berkeley: University of California Press.

Burling, J. W. (1993). Death Concerns and Symbolic Aspects of the Self - The Effects of Mortality Salience on Status Concern and Religiosity. *Personality and Social Psychology Bulletin, 19*(1), 100-105.

Buss, D. M. (1997). Human Social Motivation in Evolutionary Perspective: Grounding Terror Management Theory. *Psychological Inquiry, 8*(1), 22.

Castano, E. (2004). In case of death, cling to the ingroup. *European Journal of Social Psychology, 34*(4), 375-384.

Castano, E., Yzerbyt, V., Paladino, M.-P., & Sacchi, S. (2002). I Belong, therefore, I Exist: Ingroup Identification, Ingroup Entitativity, and Ingroup Bias. *Personality & Social Psychology Bulletin, 28*(2), 135-143.

Cohen, F., Jussim, L., Harber, K. D., & Bhasin, G. (2009). Modern anti-Semitism and anti-Israeli attitudes. *Journal of Personality and Social Psychology, 97*(2), 290-306.

Cosmides, L., Tooby, J. (1992). The Psychological Foundations of Culture. In L. C. J. Barkow, J. Tooby (Ed.), *The Adapted Mind: Evolutionary Psychology and the Generation of Culture* (pp. 19-136). New York: Oxford University Press.

Cox, C. R., Goldenberg, J. L., Pyszczynsk, T., & Weise, D. (2007). Disgust, creatureliness and the accessibility of death-related thoughts. *European Journal of Social Psychology, 37*(3), 494-507.

Daly, M., & Wilson, M. I. (1982). Male Sexual Jealousy. *Ethology and Social Biology, 3*, 11-27.

Darling, J. R., & Arnold, D. R. (1988). The Competitive Position Abroad of Products and Marketing Practices of the United States, Japan, and Selected European Countries. *Journal of Consumer Marketing, 5*(Fall), 61-68.

Das, E., Bushman, B. J., Bezemer, M. D., Kerkhof, P., & Vermeulen, I. E. (2009). How terrorism news reports increase prejudice against outgroups: A terror management account. *Journal of Experimental Social Psychology, 45*(3), 453-459.

Dawson, S. (1992). A Consumer Values Orientation for Materialism and Its Measurement: Scale Development and Validation. *Journal of Consumer Research, 19*(December), 303-316.

Deacon, T. (1997). *The Symbolic Species: The co-evolution of language and the brain.* New York: Norton.

Dechesne, M., Greenberg, J., Arndt, J., & Schimel, J. (2000b). Terror management and the vicissitudes of sports fan affiliation: the effects of mortality salience on optimism and fan identification. *European Journal of Social Psychology, 30*(6), 813-835.

Dechesne, M., Janssen, J., & van Knippenberg, A. (2000a). Derogation and distancing as terror management strategies: The moderating role of need for closure and permeability of group boundaries. *Journal of Personality and Social Psychology, 79*(6), 923-932.

Dechesne, M., Pyszczynski, T., Arndt, J., Ransom, S., Sheldon, K. M., van Knippenberg, A., et al. (2003). Literal and symbolic immortality: The effect of evidence of literal immortality of self-esteem striving in response to mortality salience. *Journal of Personality and Social Psychology, 84*(4), 722-737.

Donald, M. (1991). *Origins of the Modern Mind: Three Stages in the Evolution of Culture and Cognition.* Cambridge: Harvard University Press.

Dorje, G. (2007). *The Tibetan Book of the Dead: A Brief Literary History of the Tibetan Book of the Dead* (deluxe ed.). New York: Penguin Classics.

Dukes, R. L., Bisel, T. M., Borega, K. N., Lobato, E. A., & Owens, M. D. (2003). Expressions of love, sex, and hurt in popular songs: A content analysis of all-time greatest hits. *The Social Science Jounral, 40*, 643-650.

Ferraro, R., Shiv, B., & Bettman, J. R. (2005). Let Us Eat and Drink, for Tomorrow We Shall Die: Effects of Mortality Salience and Self-Esteem on Self-Regulation in Consumer Choice. *Journal of Consumer Research, 32*, 65-75.

Fest, J. C. (1973). *Hitler*. New York: Vintage Books.

Florian, V., & Mikulincer, M. (1997). Fear of death and the judgment of social transgressions: A multidimensional test of terror management theory. *Journal of Personality and Social Psychology, 73*(2), 369-380.

Florian, V., Mikulincer, M., & Hirschberger, G. (2002). The anxiety-buffering function of close relationships: Evidence that relationship commitment acts as a terror management mechanism. *Journal of Personality and Social Psychology, 82*(4), 527-542.

Fransen, M. L., Fennis, B. M., Pruyn, A. T. H., & Das, E. (2008). Rest in peace? Brand-induced mortality salience and consumer behavior. *Journal of Business Research, 61*(10), 1053-1061.

Fransen, M. L., Smeesters, D., & Fennis, B. M. (2009). The Role of Social Presence in Mortality Salience Effects. *Journal of Business Research*(In Press).

Friedman, M. (2008). Religious Fundamentalism and Responses to Mortality Salience: A Quantitative Text Analysis. *International Journal for the Psychology of Religion, 18*(3), 216-237.

Friedman, M., & Rholes, W. S. (2007). Successfully challenging fundamentalist beliefs results in increased death awareness. *Journal of Experimental Social Psychology, 43*(5), 794-801.

Friedman, M., & Rholes, W. S. (2008). Religious Fundamentalism and Terror Management. *International Journal for the Psychology of Religion, 18*(1), 36-52.

Friedman, R. S., & Arndt, J. (2005). Reexploring the connection between terror management theory and dissonance theory. *Personality and Social Psychology Bulletin, 31*(9), 1217-1225.

Friese, M., & Hofmann, W. (2008). What would you have as a last supper? Thoughts about death influence evaluation and consumption of food products. *Journal of Experimental Social Psychology, 44*(5), 1388-1394.

Fritsche, I., Jonas, E., Fischer, P., Koranyi, N., Berger, N., & Fleischmann, B. (2007). Mortality salience and the desire for offspring. *Journal of Experimental Social Psychology, 43*(5), 753-762.

Gailliot, M. T., Schmeichel, B. J., & Maner, J. K. (2007). Differentiating the effects of self-control and self-esteem on reactions to mortality salience. *Journal of Experimental Social Psychology, 43*(6), 894-901.

Goldenberg, J. L., Arndt, J., Hart, J., & Brown, M. (2005). Dying To Be Thin: The Effects of Mortality Salience and Body Mass Index on Restricted Eating Among Women. *Personality and Social Psychology Bulletin, 31*(10), 1400-1412.

Goldenberg, J. L., Cox, C. R., Pyszczynski, T., Greenberg, J., & Solomon, S. (2002). Understanding Human Ambivalence about Sex: The Effects of Stripping Sex of Meaning. *Journal of Sex Research, 39*(4), 310.

Goldenberg, J. L., Goplen, J., Cox, C. R., & Arndt, J. (2007). "Viewing" pregnancy as an existential threat: The effects of creatureliness on reactions to media depictions of the pregnant body. *Media Psychology, 10*(2), 211-230.

Goldenberg, J. L., Landau, M. J., Pyszczynski, T., Cox, C. R., Greenberg, J., Solomon, S., et al. (2003). Gender-Typical Responses to Sexual and Emotional Infidelity as a Function of Mortality Salience Induced Self-Esteem Striving. *Pers Soc Psychol Bull, 29*(12), 1585-1595.

Goldenberg, J. L., McCoy, S. K., Pyszczynski, T., Greenberg, J., & Solomon, S. (2000a). The body as a source of self-esteem: The effect of mortality salience on identification with one's body, interest in sex, and appearance monitoring. *Journal of Personality and Social Psychology, 79*(1), 118-130.

Goldenberg, J. L., Pyszczynski, T., Greenberg, J., & Solomon, S. (2000b). Fleeing the body: A terror management perspective on the problem of human corporeality. *Personality and Social Psychology Review, 4*(3), 200-218.

Goldenberg, J. L., Pyszczynski, T., Greenberg, J., Solomon, S., Kluck, B., & Cornwell, R. (2001). I am not an animal: Mortality salience, disgust, and the denial of human creatureliness. *Journal of Experimental Psychology: General, 130*(3), 427-435.

Goldenberg, J. L., Pyszczynski, T., Greenberg, J., Solomon, S., Kluck, B., & Cornwell, R. (2001). I am not an animal: Mortality salience, disgust, and the denial of human creatureliness. *Journal of Experimental Psychology-General, 130*(3), 427-435.

Goldenberg, J. L., Pyszczynski, T., McCoy, S. K., Greenberg, J., & Solomon, S. (1999). Death, sex, love, and neuroticism: Why is sex such a problem? *Journal of Personality and Social Psychology, 77*(6), 1173-1187.

Goldenberg, J. L., & Roberts, T.-A. (2004). The Beast within the Beauty: An Existential Perspective on the Objectification and Condemnation of Women. In J. Greenberg, S. L. Koole & T. Pyszczynski (Eds.), *Handbook of Experimental Existential Psychology* (pp. 71-85). New York: The Guilford Press.

Gordijn, E. H., & Stapel, D. A. (2008). When controversial leaders with charisma are effective: The influence of terror on the need for vision and impact of mixed attitudinal messages. *European Journal of Social Psychology, 38*, 389-411.

Greenberg, J., Arndt, J., Schimel, J., Pyszczynski, T., & Solomon, S. (2001b). Clarifying the function of mortality salience-induced worldview defense: Renewed suppression or reduced accessibility of death-related thoughts? *Journal of Experimental Social Psychology, 37*(1), 70-76.

Greenberg, J., Arndt, J., Simon, L., Pyszczynski, T., & Solomon, S. (2000). Proximal and distal defenses in response to reminders of one's mortality: Evidence of a temporal sequence. *Personality and Social Psychology Bulletin, 26*(1), 91-99.

Greenberg, J., Martens, A., Jonas, E., Eisenstadt, D., Pyszczynski, T., & Solomon, S. (2003). Psychological defense in anticipation of anxiety. *Psychological Science, 14*(5), 516.

Greenberg, J., Porteus, J., Simon, L., Pyszczynski, T., & Solomon, S. (1995a). Evidence of a Terror Management Function of Cultural Icons - The Effects of Mortality Salience on the Inappropriate Use of Cherished Cultural Symbols. *Personality and Social Psychology Bulletin, 21*(11), 1221-1228.

Greenberg, J., Pyszczynski, T., Burling, J., Simon, L., Solomon, S., Rosenblatt, A., et al. (1992b). Why Do People Need Self-Esteem? - Converging Evidence that Self-Esteem Serves an Anxiety-Buffering Function. *Journal of Personality and Social Psychology, 63*(6), 913-922.

Greenberg, J., Pyszczynski, T., & Solomon, S. (1990b). Anxiety Concerning Social Exclusion - Innate Response or One Consequence of the Need for Terror Management. *Journal of Social and Clinical Psychology, 9*(2), 202-213.

Greenberg, J., Pyszczynski, T., Solomon, S., Pinel, E., Simon, L., & Jordan, K. (1993). Effects of Self-Esteem on Vulnerability-Denying Defensive Distortions - Further Evidence of an Anxiety-Buffering Function of Self-Esteem. *Journal of Experimental Social Psychology, 29*(3), 229-251.

Greenberg, J., Pyszczynski, T., Solomon, S., Simon, L., & Breus, M. J. (1994). Role of Consciousness and Accessibility of Death-Related Thoughts in Mortality Salience Effects. *Journal of Personality and Social Psychology, 67*(4), 627-637.

Greenberg, J., Schimel, J., Martens, A., Solomon, S., & Pyszcznyski, T. (2001a). Sympathy for the devil: Evidence that reminding whites of their mortality promotes more favorable reactions to white racists. *Motivation and Emotion, 25*(2), 113-133.

Greenberg, J., Simon, L., Harmon-Jones, E., Solomon, S., Pyszczynski, T., & Lyon, D. (1995b). Testing Alternative Explanations for Mortality Salience Effects - Terror Management, Value Accessibility, or Worrisome Thoughts. *European Journal of Social Psychology, 25*(4), 417-433.

Greenberg, J., Simon, L., Pyszczynski, T., Solomon, S., & Chatel, D. (1992a). Terror Management and Tolerance - Does Mortality Salience Always Intensify Negative Reactions to Others who Threaten Ones Worldview. *Journal of Personality and Social Psychology, 63*(2), 212-220.

Greenberg, J., Solomon, S., Veeder, M., Lyon, D., Pyszczynski, T., Rosenblatt, A., et al. (1990). Evidence for Terror Management Theory 2: The Effects of Mortality Salience on Reactions to those who Threaten or Bolster the Cultural Worldview. *Journal of Personality and Social Psychology, 58*(2), 308-318.

Greenberg, J., Solomon, S., Veeder, M., Lyon, D., Pyszczynski, T., Rosenblatt, A., et al. (1990a). Evidence for Terror Management Theory 2: The Effects of Mortality Salience on Reactions to those who Threaten or Bolster the Cultural Worldview. *Journal of Personality and Social Psychology, 58*(2), 308-318.

Greenberger, E., Chen, C., Dmitrieva, J., & Farruggia, S. P. (2003). Item-wording and the dimensionality of the Rosenberg Self-Esteem Scale: do they matter? *Personality and Individual Differences, 35*(6), 1241-1254.

Gupta, A. K. (2004). Origin of agriculture and domestication of plants and animals linked to early Holocene climate amelioration. *Current Science, 87*(1), 54-59.

Gurari, I., Strube, M. J., & Hetts, J. J. (2009). Death? Be Proud! The Ironic Effects of Terror Salience on Implicit Self-Esteem. *Journal of Applied Social Psychology, 39*(2), 494-507.

Haidt, J., & Algoe, S. (2004). Moral Amplification and the Emotions That Attach Us to Saints and Demons. In J. Greenberg, S. L. Kole & T. Pyszczynski (Eds.), *Handbook of Emperimental Existential Psychology* (pp. 322-336). New York: The Guilford Press.

Hansen, J., Winzeler, S., & Topolinski, S. (2009). When the death makes you smoke: A terror management perspective on the effectiveness of cigarette on-pack warnings. *Journal of Experimental Social Psychology, In Press, Corrected Proof.*

Harmon-Jones, E., Greenberg, J., Solomon, S., & Simon, L. (1996). The effects of mortality salience on intergroup bias between minimal groups. *European Journal of Social Psychology, 26*(4), 677-681.

Harmon-Jones, E., Simon, L., Greenberg, J., Pyszczynski, T., Solomon, S., & McGregor, H. (1997). Terror management theory and self-esteem: Evidence that increased self-esteem reduced mortality salience effects. *Journal of Personality and Social Psychology, 72*(1), 24-36.

Harmon-Jones, E., Simon, L., Greenberg, J., Pyszczynski, T., Solomon, S., & McGregor, H. (1997). Terror management theory and self-esteem: Evidence that increased self-esteem reduces mortality salience effects. *Journal of Personality and Social Psychology, 72*(1), 24-36.

Hart, J., Shaver, P. R., & Goldenberg, J. L. (2005). Attachment, Self-Esteem, Worldviews, and Terror Management: Evidence for a Tripartite Security System. *Journal of Personality and Social Psychology, 88*(6), 999-1013.

Hayes, J., Schimel, J., Faucher, E. H., & Williams, T. J. (2008). Evidence for the DTA hypothesis II: Threatening self-esteem increases death-thought accessibility. *Journal of Experimental Social Psychology, 44*(3), 600-613.

Hirschberger, G., & Ein-Dor, T. (2005). Does a candy a day keep the death thoughts away? The terror management function of eating. *Basic and Applied Social Psychology, 27*(2), 179-186.

Hoyt, C. L., Simon, S., & Reid, L. (2009). Choosing the best (wo)man for the job: The effects of mortality salience, sex, and gender stereotypes on leader evaluations. *Leadership Quarterly, 20*(2), 233-246.

Johnson, S. L., Ballister, C., & Joiner, T. E. (2005). Hypomanic vulnerability, terror management, and materialism. *Personality and Individual Differences, 38*(2), 287-296.

Jonas, E., & Fischer, P. (2006). Terror management and religion: Evidence that intrinsic religiousness mitigates worldview defense following mortality salience. *Journal of Personality and Social Psychology, 91*(3), 553-567.

Jonas, E., Fritsche, I., & Greenberg, J. (2005). Currencies as cultural symbols - an existential psychological perspective on reactions of Germans toward the Euro. *Journal of Economic Psychology, 26*(1), 129-146.

Jonas, E., & Greenberg, J. (2004). Terror management and political attitudes: the influence of mortality salience on Germans' defence of the German reunification. *European Journal of Social Psychology, 34*(1), 1-9.

Jonas, E., Greenberg, J., & Frey, D. (2003). Connecting terror management and dissonance theory: Evidence that mortality salience increases the preference for supporting information after decisions. *Personality and Social Psychology Bulletin, 29*(9), 1181-1189.

Jonas, E., Schimel, J., Greenberg, J., & Pyszczynski, T. (2002). The Scrooge effect: Evidence that mortality salience increases prosocial attitudes and behavior. *Personality and Social Psychology Bulletin, 28*(10), 1342-1353.

Kashima, E. S., Halloran, M., Yuki, M., & Kashima, Y. (2004). The effects of personal and collective mortality salience on individualism: Comparing Australians and Japanese with higher and lower self-esteem. *Journal of Experimental Social Psychology, 40*(3), 384-392.

Kasser, T., & Kasser, V. G. (2001). The Dreams of People High and Low in Materialism. *Journal of Economic Psychology, 22*(6), 693-719.

Kasser, T., & Sheldon, K. M. (2000). Of Wealth and Death: Materialism, Mortality Salience, and Consumption Behavior. *Psychological Science, 11*(4), 348.

Kazen, M., Baumann, N., & Kuhl, J. (2005). Self-regulation after mortality salience - National pride feelings of action-oriented German participants. *European Psychologist, 10*(3), 218-228.

Kirmani, A., Sood, S., & Bridges, S. (1999a). The Ownership Effect in Consumer Responses to Brand Line Stretches. *Journal of Marketing 63*(January), 88-101.

Kirmani, A., Sood, S., & Bridges, S. (1999b). The Ownership Effect in Consumer Responses to Brand Line Stretches. *Journal of Marketing, 63*(January), 88-101.

Klein, J. G., Ettinson, R., & Morris, M. D. (1998). The Animosity Model of Foreign Product Purchase: An Empirical Test in the People's Republic of China. *Journal of Marketing Research, 62*(January), 89-100.

Kosloff, S., & Greenberg, J. (2009). Pearls in the desert: Death reminders provoke immediate derogation of extrinsic goals, but delayed inflation. *Journal of Experimental Social Psychology, 45*(1), 197-203.

Kosloff, S., Greenberg, J., weise, D., & Solomon, S. (2009). The effects of mortality salience on political preferences: The roles of charisma and political orientation. *Journal of Experimental Social Psychology, In Press, Corrected Proof.*

Lam, S. R., Rios Morrison, K., & Smeesters, D. (2009). Gender, Intimacy, and Risky Sex: A Terror Management Account. *Pers Soc Psychol Bull, 35*(8), 1046-1056.

Landau, M. J., Goldenberg, J. L., Greenberg, J., Gillath, O., Solomon, S., Cox, C., et al. (2006). The siren's call: Terror management and the threat of men's sexual attraction to women. *Journal of Personality and Social Psychology, 90*(1), 129-146.

Landau, M. J., & Greenberg, J. (2006). Play It Safe or Go for the Gold? A Terror Management Perspective on Self-Enhancement and Self-Protective Motives in Risky Decision Making. *Personality & Social Psychology Bulletin, 32*(12), 1633-1645.

Landau, M. J., Greenberg, J., Solomon, S., Pyszczynski, T., & Martens, A. (2006). Windows into nothingness: Terror management, meaninglessness, and negative reactions to modern art. *Journal of Personality and Social Psychology, 90*(6), 879-892.

Landau, M. J., Greenberg, J., & Sullivan, D. (2009a). Managing terror when self-worth and worldviews collide: Evidence that mortality salience increases reluctance to self-enhance beyond authorities. *Journal of Experimental Social Psychology, 45*(1), 68-79.

Landau, M. J., Greenberg, J., Sullivan, D., Routledge, C., & Arndt, J. (2009b). The protective identity: Evidence that mortality salience heightens the clarity and coherence of the self-concept. *Journal of Experimental Social Psychology, 45*(4), 796-807.

Landau, M. J., Johns, M., Greenberg, J., Pyszczynski, T., Martens, A., Goldenberg, J. L., et al. (2004). A Function of Form: Terror Management and Structuring the Social World. *Journal of Personality and Social Psychology, 87*(2), 190-210.

Lifton, R. J. (1968). *Revolutionary Immortality*: Random House.

Mandel, N., & Heine, S. J. (1999). Terror Management and marketing: He Who Dies With the Most Toys Wins. *Advances in Consumer Research, 26*(1), 527-532.

Mandel, N., & Smeesters, D. (2008). The Sweet Escape: Effects of Mortality Salience on Consumption Quantities for High- and Low-Self-Esteem Consumers. *Journal of Consumer Research, 35*, 309-323.

Mandel, N., & Smeesters, D. (2008). The sweet escape: Effects of mortality salience on consumption quantities for high- and low-self-esteem consumers. *Journal of Consumer Research, 35*(2), 309-323.

Marchlewski, T., & Fetchenhauer, D. (2006). Mortality Salience and Regional Consumer Behavior Effects of Mortality Salience on Ethnocentric Consumer Behavior at a Regional Level. *Advances in Consumer Research, 33*(1), 322-323.

McCarter, J. (2009). Rage Against the Art Gene (Publication. Retrieved September 30 2009, from Newsweek: http://www.newsweek.com/id/191399

McGregor, H. A., Lieberman, J. D., Greenberg, J., Solomon, S., Arndt, J., Simon, L., et al. (1998). Terror management and aggression: Evidence that mortality salience motivates aggression against worldview-threatening others. *Journal of Personality and Social Psychology, 74*(3), 590-605.

Mertz, B. (2007). *Temples, Tombs, and Hieroglyphs: A Popular History of Ancient Egypt*. New York: Harper Collins.

Mikulincer, M., & Florian, V. (2002). The Effects of Mortality Salience on Self-Serving Attributions--Evidence for the Function of Self-Esteem as a Terror Management Mechanism. *Basic & Applied Social Psychology, 24*(4), 261-271.

Mikulincer, M., Florian, V., & Hirschberger, G. (2003). The Existential Function of Close Relationships: Introducing Death Into the Science of Love. *Personality & Social Psychology Review (Lawrence Erlbaum Associates), 7*(1), 20-40.

Mithen, S. (1996). *The Prehistory of the Mind: The Cognitive Origins of Art, Religion and Science*. London: Thames and Hudson.

Moorman, C. (1998). Market-Level Effects of Information: Competitive Responses and Consumer Dynamics. *Journal of Marketing Research, 35*(February), 82-98.

Moskalenko, S., McCauley, C., & Rozin, P. (2006). Group identification under conditions of threat: College students' attachment to country, family, ethnicity, religion, and university before and after September 11, 2001. *Political Psychology, 27*(1), 77-97.

Muniz, A. M., & Schau, H. J. (2005). Religiosity in the abandoned Apple Newton brand community. *Journal of Consumer Research, 31*(4), 737-747.

Mushet, R. (1973). *The Book of Symbols* (second ed.). London: Neill and Company.

Nail, P. R., & McGregor, I. (2009). Conservative Shift among Liberals and Conservatives Following 9/11/01. *Social Justice Research, 22*(2-3), 231-240.

Nail, P. R., McGregor, I., Drinkwater, A. E., Steele, G. M., & Thompson, A. W. (2009). Threat causes liberals to think like conservatives. *Journal of Experimental Social Psychology, 45*(4), 901-907.

Nelson, L. J., Moore, D. L., Olivetti, J., & Scott, T. (1997). General and personal mortality salience and nationalistic bias. *Personality and Social Psychology Bulletin, 23*(8), 884-892.

Niesta, D., Fritsche, I., & Jonas, E. (2008). Mortality salience and its effects on peace processes - A review. *Social Psychology, 39*(1), 48-58.

Norenzayan, A., Dar-Nimrod, I., Hansen, I. G., & Proulx, T. (2009). Mortality salience and religion: Divergent effects on the defense of cultural worldviews for the religious and the non-religious. *European Journal of Social Psychology, 39*(1), 101-113.

Norenzayan, A., & Hansen, I. G. (2006). Belief in supernatural agents in the face of death. *Personality and Social Psychology Bulletin, 32*(2), 174-187.

Peck, D. T. (1998). Misconceptions and Myths Related to the "Fountain of Youth" and Juan Ponce de Leon's 1513 Exploration Voyage [Electronic Version], 21. Retrieved October 25 2009, from http://www.newworldexplorersinc.org/FountainofYouth.pdf

Peters, H. J., Greenberg, J., Williams, J. M., & Schneider, N. R. (2005). Applying terror management theory to performance: Can reminding individuals of their mortality increase strength output? *Journal of Sport & Exercise Psychology, 27*(1), 111-116.

Putatunda, R. (2008). Mayan Pyramids [Electronic Version]. Retrieved October 12 2009, from http://www.buzzle.com/articles/mayan-pyramids.html

Pyszczynski, T. (2004). What Are We So Afraid Of? A Terror Management Theory Perspective on the Politics of Fear. *Social Research, 71*(4), 827-848.

Pyszczynski, T., Abdollahi, A., Solomon, S., Greenberg, J., Cohen, F., & Weise, D. (2006). Mortality salience, martyrdom, and military might: The great satan versus the axis of evil. *Personality and Social Psychology Bulletin, 32*(4), 525-537.

Pyszczynski, T., Greenberg, J., & Solomon, S. (1997). Why Do We Need What We Need? A Terror Management Perspective on the Roots of Human Social Motivation. *Psychological Inquiry, 8*(1), 1.

Pyszczynski, T., Greenberg, J., & Solomon, S. (1999). A dual-process model of defense against conscious and unconscious death-related thoughts: An extension of terror management theory. *Psychological Review, 106*(4), 835-845.

Pyszczynski, T., Greenberg, J., Solomon, S., & Maxfield, M. (2006). On the unique psychological import of the human awareness of mortality: Theme and variations. *Psychological Inquiry, 17*(4), 328-356.

Pyszczynski, T., Solomon, S., & Greenberg, J. (2003). *In The Wake of 9/11: The Psychology of Terror*. Washington, D.C.: American Psychological Association.

Pyszczynski, T., & Wicklund, R. A. (1996). Whistling in the Dark: Exaggerated Consensus Estimates in Response to Incidental Reminders of Mortality. *Psychological Science, 7*(6), 332-336.

Rank, O. (1932). *Art and Artist: Creative Urge and Personality Development* (C. F. Atkinson, Trans.). New York: Agathon Press, Inc.

Redman, C. E. (1978). *Rise of Civilization: From Early Hunters to Urban Society in the Ancient Near East*. San Francisco: Freeman.

Richins, M. L. (1991). Social Comparison and the Idealized Images of Advertising. *Journal of Consumer Research, 18*(June), 71-83.

Rindfleisch, A., & Burroughs, J. E. (2004). Terrifying thoughts, terrible materialism? Contemplations on a terror management account of materialism and consumer behavior. *Journal of Consumer Psychology, 14*(3), 219-224.

Rindfleisch, A., Burroughs, J. E., & Wong, N. (2008). The Safety of Objects: Materialism, Existential Insecurity, and Brand Connection. *Journal of Consumer Research, 36*, 1-16.

Rindfleisch, A., Burroughs, J. E., & Wong, N. (2009). The Safety of Objects: Materialism, Existential Insecurity, and Brand Connection. *Journal of Consumer Research, 36*(1), 1-16.

Rindos, D. (1987). *The Origins of Agriculture: An Evolutionary Perspective.* : Academic Press.

Roberts, T.-A., Goldenberg, J. L., Power, C., & Pyszczynski, T. (2002). "Feminine Protection": The Effects of Menstruation on Attitudes Towards Women. *Psychology of Women Quarterly, 26*(2), 131.

Rosenblatt, A., Greenberg, J., Solomon, S., Pyszczynski, T., & Lyon, D. (1989). Evidence for Terror Management Theory 1: The Effects of Mortality Salience on Reactions to those who Violate or Uphold Cultural Values. *Journal of Personality and Social Psychology, 57*(4), 681-690.

Rothschild, Z. K., Abdollahi, A., & Pyszczynski, T. (2009). Does peace have a prayer? The effect of mortality salience, compassionate values, and religious fundamentalism on hostility toward out-groups. *Journal of Experimental Social Psychology, 45*(4), 816-827.

Routledge, C., Arndt, J., & Goldenberg, J. L. (2004). A Time to Tan: Proximal and Distal Effects of Mortality Salience on Sun Exposure Intentions. *Personality and Social Psychology Bulletin, 30*(10), 1347-1358.

Routledge, C., Arndt, J., Sedikides, C., & Wildschut, T. (2008). A blast from the past: The terror management function of nostalgia. *Journal of Experimental Social Psychology, 44*(1), 132-140.

Sani, F., Herrera, M., & Bowe, M. (2009). Perceived collective continuity and ingroup identification as defence against death awareness. *Journal of Experimental Social Psychology, 45*(1), 242-245.

Schimel, J., Hayes, J., Williams, T., & Jahrig, J. (2007). Is death really the worm at the core? Converging evidence that worldview threat increases death-thought accessibility. *Journal of Personality and Social Psychology, 92*(5), 789-803.

Schimel, J., Simon, L., Greenberg, J., Pyszczynski, T., Solomon, S., Waxmonsky, J., et al. (1999). Stereotypes and terror management: Evidence that mortality salience enhances stereotypic thinking and preferences. *Journal of Personality and Social Psychology, 77*(5), 905-926.

Schmeichel, B. J., Gailliot, M. T., Filardo, E.-A., McGregor, I., Gitter, S., & Baumeister, R. F. (2009). Terror management theory and self-esteem revisited: The roles of implicit and explicit self-esteem in mortality salience effects. *Journal of Personality and Social Psychology, 96*(5), 1077-1087.

Schmeichel, B. J., & Martens, A. (2005). Self-affirmation and mortality salience: Affirming values reduces worldview defense and death-thought accessibility. *Personality and Social Psychology Bulletin, 31*(5), 658-667.

See, Y. H. M., & Petty, R. E. (2006). Effects of Mortality Salience on Evaluation of Ingroup and Outgroup Sources: The Impact of Pro- Versus Counterattitudinal Positions. *Personality and Social Psychology Bulletin, 32*(3), 405-416.

Sharer, R. J., & Morley, S. G. (1994). *The Ancient Maya* (fifth edition ed.). New York: Stanford University Press.

Sheldon, S., Jeff, G., & Tom, P. (2000). Pride and Prejudice: Fear of Death and Social Behavior. *Current Directions in Psychological Science, 9*(6), 200-204.

Silvia, P. J. (2001). Nothing or the opposite: intersecting terror management and objective self-awareness. *European Journal of Personality, 15*(1), 73-82.

Simon, L., Greenberg, J., Arndt, J., Pyszczynski, T., Clement, R., & Solomon, S. (1997b). Perceived Consensus, Uniqueness, and Terror Management: Compensatory Responses to Threats to Inclusion and Distinctiveness Following Mortality Salience. *Pers Soc Psychol Bull, 23*(10), 1055-1065.

Simon, L., Greenberg, J., Harmon-Jones, E., Solomon, S., Pyszczynski, T., Arndt, J., et al. (1997a). Terror management and cognitive-experiential self-theory: Evidence that terror management occurs in the experiential system. *Journal of Personality and Social Psychology, 72*(5), 1132-1146.

Solomon, S., Greenberg, J., & Psyzczynski, T. (2004). The Cultural Animal: Twenty Years of Terror Management Theory and research. In S. L. K. Jeff Greenberg, Tom Pyszczynski (Ed.), *Handbook of Experimental Existential Psychoogy*. New York: The Guilford Press.

Solomon, S., Greenberg, J., & Psyzczynski, T. (2004b). The Cultural Animal: Twenty Years of Terror Management Theory and research. In S. L. K. Jeff Greenberg, Tom Pyszczynski (Ed.), *Handbook of Experimental Existential Psychoogy*. New York: The Guilford Press.

Solomon, S., Greenberg, J., Psyzczynski, T., & Pryzbylinski, J. (1995). The Effects of Mortality Salience on Personally-Relevant Persuasive Appeals. *Social Behavior and Personality, 23*(2), 177-190.

Solomon, S., Greenberg, J., & Pyszczynski, T. (1991). A Terror Management Theory of Social-Behavior - The Psychological Functions of Self-Esteem and Cultural Worldviews. *Advances in Experimental Social Psychology, 24*, 93-159.

Solomon, S., Greenberg, J., Schimel, J., Arndt, J. & Pyszczynski, T. (2004). Human Awareness of Mortality and the Evolution of Culture. In M. a. G. Schaller, C. (Ed.), *The Psychological Foundations of Culture* (pp. 15-40). New Jersey: Lawrence Erlbaum Associates Inc.

Solomon, S., Greenberg, J., Schimel, J., Arndt, J. & Pyszczynski, T. (2004a). Human Awareness of Mortality and the Evolution of Culture. In M. a. G. Schaller, C. (Ed.), *The Psychological Foundations of Culture* (pp. 15-40). New Jersey: Lawrence Erlbaum Associates Inc.

Strachan, E., Schimel, J., Arndt, J., Williams, T., Solomon, S., Pyszczynski, T., et al. (2007). Terror Mismanagement: Evidence That Mortality Salience Exacerbates Phobic and Compulsive Behaviors. *Pers Soc Psychol Bull, 33*(8), 1137-1151.

Taubman-Ben-Ari, O., & Findler, L. (2005). Proximal and distal effects of mortality salience on willingness to engage in health promoting behavior along the life span. *Psychology & Health, 20*(3), 303-318.

Tigay, J. H. (1982). *The Evolution of the Gilgamesh Epic*. Philadelphia: University of Pennsylvania Press.

TIME-Magazine. (1934). Germany: Second revolution? [Electronic Version]. Retrieved October 10 2009, from http://www.time.com/time/magazine/article/0,9171,754321-1,00.html

Veblen, T. (1899). *The Theory of the Leisure Class: an economic study of institutions*. New York: Dover Publicationa.

Vess, M., Arndt, J., Cox, C. R., Routledge, C., & Goldenberg, J. L. (2009). Exploring the existential function of religion: The effect of religious fundamentalism and mortality salience on faith-based medical refusals. *Journal of Personality and Social Psychology, 97*(2), 334-350.

Watson, D., & Clark, L. A. (1994). *The PANAS-X: Manual for the Positive and Negative Affect Schedule*. Iowa City: University of Iowa.

Webb, D. J., Green, C. L., & Brashear, T. G. (2000). Development and Validation of Scales to Measure Attitudes Influencing Monetary Donations to Charitable Organizations. *JAMS, 28*(2), 299-309.

Weber, M. (1958). *The Protestant Ethic and the Spirit of Capitalism*. New York: Scribner.

Wisman, A., & Goldenberg, J. L. (2005). From the Grave to the Cradle: Evidence That Mortality Salience Engenders a Desire for Offspring. *Journal of Personality and Social Psychology, 89*(1), 46-61.

Wisman, A., & Koole, S. L. (2003). Hiding in the crowd: Can mortality salience promote affiliation with others who oppose one's worldviews? *Journal of Personality and Social Psychology, 84*(3), 511-526.

Yum, Y. O., & Schenck-Hamlin, W. (2005). *Reactions to 9/11 as a function of terror management and perspective taking.*

APPENDICES

Appendix A: EFA for Self-esteem

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.659	60.986	60.986	3.659	60.986	60.986
2	.755	12.583	73.569			
3	.501	8.355	81.924			
4	.462	7.695	89.619			
5	.349	5.813	95.432			
6	.274	4.568	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
VAR00001	.747
VAR00005	.712
VAR00006	.772
VAR00008	.760
VAR00009	.845
VAR00010	.841

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix B: EFA for Attitudes to Foreign Products (China)

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.809	56.176	56.176	2.809	56.176	56.176
2	.759	15.185	71.361			
3	.611	12.216	83.577			
4	.484	9.681	93.258			
5	.337	6.742	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
CHI1	.788
CHI3	.748
CHI4	.716
CHI5	.847
CHI6	.631

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix C: EFA for Attitudes to Foreign Products (Japan)

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.473	69.467	69.467	3.473	69.467	69.467
2	.627	12.545	82.012			
3	.434	8.671	90.683			
4	.273	5.465	96.148			
5	.193	3.852	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
JAP1	.880
JAP3	.860
JAP4	.697
JAP5	.901
JAP6	.813

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix D: EFA for Attitudes to Charitable Organizations

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.806	70.141	70.141	2.806	70.141	70.141
2	.489	12.226	82.368			
3	.371	9.285	91.652			
4	.334	8.348	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
CHAR1	.826
CHAR3	.836
CHAR4	.851
CHAR5	.837

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix E: EFA for Importance of Prestigious Items

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.517	83.895	83.895	2.517	83.895	83.895
2	.341	11.371	95.266			
3	.142	4.734	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
VAR00001	.933
VAR00002	.873
VAR00003	.940

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix F: EFA for Risky Product Purchase Decisions

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.659	55.300	55.300	1.659	55.300	55.300
2	.851	28.366	83.666			
3	.490	16.334	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
VAR00001	.631
VAR00002	.849
VAR00005	.735

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix G: EFA for Nutritional Information on Food Products

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.957	79.135	79.135	3.957	79.135	79.135
2	.462	9.247	88.383			
3	.227	4.533	92.915			
4	.185	3.700	96.616			
5	.169	3.384	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
VAR00001	.890
VAR00002	.886
VAR00003	.890
VAR00004	.860
VAR00005	.920

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix H: EFA for Positive Mood Affects

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.153	51.527	51.527	5.153	51.527	51.527
2	.998	9.979	61.506			
3	.817	8.174	69.680			
4	.646	6.457	76.137			
5	.526	5.256	81.392			
6	.477	4.774	86.166			
7	.398	3.983	90.149			
8	.360	3.599	93.748			
9	.349	3.487	97.235			
10	.276	2.765	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
INTERESTED	.613
EXCITED	.704
STRONG	.703
ENTHUSIASTIC	.814
PROUD	.783
ALERT	.531
INSPIRED	.776
DETERMINED	.791
ATTENTIVE	.654
ACTIVE	.758

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix I: EFA for Negative Mood Affects

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.664	56.644	56.644	5.664	56.644	56.644
2	.798	7.978	64.623			
3	.744	7.443	72.065			
4	.591	5.911	77.976			
5	.538	5.383	83.359			
6	.486	4.858	88.217			
7	.405	4.047	92.264			
8	.352	3.524	95.788			
9	.245	2.453	98.242			
10	.176	1.758	100.000			

Extraction Method: Principal Component Analysis.

Appendix J: ANCOVA for H1

H1a

Tests of Between-Subjects Effects

Dependent Variable:ChineseProducts

CountryofOrigin: Canada	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
1.00	Corrected Model	4.215[a]	3	1.405	1.292	.278
	Intercept	204.719	1	204.719	188.226	.000
	PositiveAffects	3.677	1	3.677	3.381	.067
	NegativeAffects	.263	1	.263	.242	.623
	MSControlSplit	.093	1	.093	.085	.770
	Error	293.658	270	1.088		
	Total	4653.120	274			
	Corrected Total	297.873	273			
2.00	Corrected Model	2.411[b]	3	.804	.517	.679
	Intercept	24.880	1	24.880	15.992	.002
	PositiveAffects	1.675	1	1.675	1.077	.320
	NegativeAffects	1.373	1	1.373	.883	.366
	MSControlSplit	1.706	1	1.706	1.096	.316
	Error	18.669	12	1.556		
	Total	352.320	16			
	Corrected Total	21.080	15			

a. R Squared = .014 (Adjusted R Squared = .003)

b. R Squared = .114 (Adjusted R Squared = -.107)

Tests of Between-Subjects Effects

Dependent Variable:JapaneseProducts

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4.117[a]	3	1.372	1.452	.228
Intercept	454.307	1	454.307	480.759	.000
PositiveAffects	1.919	1	1.919	2.031	.155
NegativeAffects	2.281	1	2.281	2.414	.121
MSControlSplit	.323	1	.323	.342	.559
Error	270.264	286	.945		
Total	7713.600	290			
Corrected Total	274.381	289			

a. R Squared = .015 (Adjusted R Squared = .005)

H1b

Tests of Between-Subjects Effects

Dependent Variable:ChineseProducts

Country of Origin: Canada	MSControlSplit	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
1.00	.00	Corrected Model	8.105[a]	3	2.702	2.438	.067
		Intercept	96.963	1	96.963	87.504	.000
		PositiveAffects	6.749	1	6.749	6.091	.015
		NegativeAffects	.660	1	.660	.596	.441
		SelfEsteemSplit	3.864	1	3.864	3.487	.064
		Error	158.458	143	1.108		
		Total	2480.320	147			
		Corrected Total	166.563	146			
	1.00	Corrected Model	1.218[b]	3	.406	.384	.765
		Intercept	99.817	1	99.817	94.463	.000
		PositiveAffects	.260	1	.260	.246	.621
		NegativeAffects	.770	1	.770	.729	.395
		SelfEsteemSplit	.112	1	.112	.106	.745
		Error	129.971	123	1.057		
		Total	2172.800	127			
		Corrected Total	131.189	126			
2.00	.00	Corrected Model	1.392[c]	2	.696	.531	.624
		Intercept	12.048	1	12.048	9.202	.039
		PositiveAffects	1.062	1	1.062	.811	.419
		NegativeAffects	.017	1	.017	.013	.915
		SelfEsteemSplit	.000	0	.	.	.
		Error	5.237	4	1.309		
		Total	162.200	7			
		Corrected Total	6.629	6			
	1.00	Corrected Model	3.596[d]	3	1.199	.570	.659
		Intercept	14.490	1	14.490	6.887	.047
		PositiveAffects	.384	1	.384	.182	.687
		NegativeAffects	2.534	1	2.534	1.204	.322
		SelfEsteemSplit	.011	1	.011	.005	.944

	Error	10.520	5	2.104		
	Total	190.120	9			
	Corrected Total	14.116	8			

a. R Squared = .049 (Adjusted R Squared = .029)

b. R Squared = .009 (Adjusted R Squared = -.015)

c. R Squared = .210 (Adjusted R Squared = -.185)

d. R Squared = .255 (Adjusted R Squared = -.192)

Tests of Between-Subjects Effects

Dependent Variable:JapaneseProducts

MSControlSplit	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	Corrected Model	.407[a]	3	.136	.140	.936
	Intercept	245.808	1	245.808	253.420	.000
	PositiveAffects	.283	1	.283	.292	.590
	NegativeAffects	.199	1	.199	.205	.651
	SelfEsteemSplit	.039	1	.039	.040	.841
	Error	145.494	150	.970		
	Total	4054.120	154			
	Corrected Total	145.902	153			
1.00	Corrected Model	4.996[b]	3	1.665	1.784	.153
	Intercept	199.191	1	199.191	213.348	.000
	PositiveAffects	2.173	1	2.173	2.327	.130
	NegativeAffects	2.970	1	2.970	3.181	.077
	SelfEsteemSplit	.038	1	.038	.041	.840
	Error	123.241	132	.934		
	Total	3659.480	136			
	Corrected Total	128.237	135			

a. R Squared = .003 (Adjusted R Squared = -.017)

b. R Squared = .039 (Adjusted R Squared = .017)

H1c

Tests of Between-Subjects Effects

Dependent Variable:ChineseProducts

SelfEsteemSplit	CountryofOrigin: Canada	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	1.00	Corrected Model	2.853[a]	3	.951	1.071	.364
		Intercept	116.609	1	116.609	131.265	.000
		PositiveAffects	1.970	1	1.970	2.217	.139
		NegativeAffects	1.303	1	1.303	1.467	.228
		MSControlSplit	.059	1	.059	.066	.797
		Error	117.262	132	.888		
		Total	2323.400	136			
		Corrected Total	120.115	135			
	2.00	Corrected Model	2.357[b]	3	.786	.488	.701
		Intercept	18.883	1	18.883	11.734	.011
		PositiveAffects	1.124	1	1.124	.699	.431
		NegativeAffects	.797	1	.797	.495	.504
		MSControlSplit	2.000	1	2.000	1.243	.302
		Error	11.265	7	1.609		
		Total	233.680	11			
		Corrected Total	13.622	10			
1.00	1.00	Corrected Model	6.662[c]	3	2.221	1.743	.161
		Intercept	82.673	1	82.673	64.897	.000
		PositiveAffects	3.025	1	3.025	2.374	.126
		NegativeAffects	2.031	1	2.031	1.594	.209
		MSControlSplit	.649	1	.649	.510	.477
		Error	170.703	134	1.274		
		Total	2329.720	138			
		Corrected Total	177.365	137			
	2.00	Corrected Model	.153[d]	2	.076	.022	.979
		Intercept	4.287	1	4.287	1.208	.386
		PositiveAffects	.050	1	.050	.014	.917
		NegativeAffects	.146	1	.146	.041	.858
		MSControlSplit	.000	0	.	.	.

	Error	7.095	2	3.548		
	Total	118.640	5			
	Corrected Total	7.248	4			

a. R Squared = .024 (Adjusted R Squared = .002)

b. R Squared = .173 (Adjusted R Squared = -.181)

c. R Squared = .038 (Adjusted R Squared = .016)

d. R Squared = .021 (Adjusted R Squared = -.958)

Tests of Between-Subjects Effects

Dependent Variable:JapaneseProducts

SelfEsteemSplit	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	Corrected Model	.438[a]	3	.146	.170	.917
	Intercept	256.570	1	256.570	298.284	.000
	PositiveAffects	.010	1	.010	.012	.912
	NegativeAffects	.370	1	.370	.430	.513
	MSControlSplit	.002	1	.002	.002	.966
	Error	123.002	143	.860		
	Total	3840.560	147			
	Corrected Total	123.440	146			
1.00	Corrected Model	5.773[b]	3	1.924	1.848	.141
	Intercept	191.352	1	191.352	183.718	.000
	PositiveAffects	3.913	1	3.913	3.757	.055
	NegativeAffects	2.158	1	2.158	2.072	.152
	MSControlSplit	.802	1	.802	.770	.382
	Error	144.776	139	1.042		
	Total	3873.040	143			
	Corrected Total	150.549	142			

a. R Squared = .004 (Adjusted R Squared = -.017)

b. R Squared = .038 (Adjusted R Squared = .018)

Appendix K: ANCOVA for H2

H2a

Tests of Between-Subjects Effects

Dependent Variable:CharitableOrganizations

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1.259[a]	3	.420	.420	.739
Intercept	479.269	1	479.269	479.181	.000
PositiveAffects	.522	1	.522	.522	.470
NegativeAffects	.249	1	.249	.249	.618
MSControlSplit	.510	1	.510	.510	.476
Error	286.052	286	1.000		
Total	8108.125	290			
Corrected Total	287.311	289			

a. R Squared = .004 (Adjusted R Squared = -.006)

H2b

Tests of Between-Subjects Effects

Dependent Variable:CharitableOrganizations

MSControlSplit	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	Corrected Model	3.688[a]	3	1.229	1.287	.281
	Intercept	260.008	1	260.008	272.220	.000
	PositiveAffects	1.880	1	1.880	1.969	.163
	NegativeAffects	2.451	1	2.451	2.566	.111
	SelfEsteemSplit	.300	1	.300	.314	.576
	Error	143.271	150	.955		
	Total	4365.375	154			
	Corrected Total	146.959	153			
1.00	Corrected Model	1.406[b]	3	.469	.447	.720
	Intercept	209.902	1	209.902	200.191	.000
	PositiveAffects	.245	1	.245	.234	.630
	NegativeAffects	1.048	1	1.048	.999	.319
	SelfEsteemSplit	.732	1	.732	.698	.405
	Error	138.403	132	1.049		
	Total	3742.750	136			
	Corrected Total	139.809	135			

a. R Squared = .025 (Adjusted R Squared = .006)

b. R Squared = .010 (Adjusted R Squared = -.012)

Appendix L: ANCOVA for H3

H3a

Tests of Between-Subjects Effects

Dependent Variable:PrestigiousItems

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	55.845[a]	3	18.615	8.422	.000
Intercept	85.257	1	85.257	38.575	.000
PositiveAffects	31.713	1	31.713	14.349	.000
NegativeAffects	16.975	1	16.975	7.680	.006
MSControlSplit	4.304	1	4.304	1.947	.164
Error	632.102	286	2.210		
Total	4852.778	290			
Corrected Total	687.947	289			

a. R Squared = .081 (Adjusted R Squared = .072)

H3b

Tests of Between-Subjects Effects

Dependent Variable:PrestigiousItems

MSControlSplit	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	Corrected Model	19.305[a]	3	6.435	2.930	.036
	Intercept	67.444	1	67.444	30.705	.000
	PositiveAffects	17.700	1	17.700	8.058	.005
	NegativeAffects	.074	1	.074	.034	.854
	SelfEsteemSplit	1.052	1	1.052	.479	.490
	Error	329.479	150	2.197		
	Total	2670.889	154			
	Corrected Total	348.785	153			
1.00	Corrected Model	48.032[b]	3	16.011	7.332	.000
	Intercept	18.587	1	18.587	8.511	.004
	PositiveAffects	17.586	1	17.586	8.053	.005
	NegativeAffects	20.626	1	20.626	9.445	.003
	SelfEsteemSplit	2.035	1	2.035	.932	.336
	Error	288.261	132	2.184		
	Total	2181.889	136			

H3c and H3d

Tests of Between-Subjects Effects

Dependent Variable:PrestigiousItems

SelfEsteemSplit	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	Corrected Model	28.040[a]	3	9.347	4.752	.003
	Intercept	51.171	1	51.171	26.019	.000
	PositiveAffects	7.793	1	7.793	3.962	.048
	NegativeAffects	13.446	1	13.446	6.837	.010
	MSControlSplit	.221	1	.221	.113	.738
	Error	281.239	143	1.967		
	Total	2504.000	147			
	Corrected Total	309.279	146			
1.00	Corrected Model	34.467[b]	3	11.489	4.662	.004
	Intercept	32.352	1	32.352	13.128	.000
	PositiveAffects	27.166	1	27.166	11.023	.001
	NegativeAffects	.998	1	.998	.405	.526
	MSControlSplit	3.817	1	3.817	1.549	.215
	Error	342.555	139	2.464		
	Total	2348.778	143			
	Corrected Total	377.023	142			

a. R Squared = .091 (Adjusted R Squared = .072)

b. R Squared = .091 (Adjusted R Squared = .072)

H3d: Effects for HSE Females

Tests of Between-Subjects Effects

Dependent Variable:PrestigiousItems

SelfEsteemSplit	GenderSplit	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	.00	Corrected Model	37.539[a]	3	12.513	6.785	.000
		Intercept	24.908	1	24.908	13.505	.000
		PositiveAffects	.192	1	.192	.104	.748
		NegativeAffects	30.783	1	30.783	16.691	.000
		MSControlSplit	.003	1	.003	.001	.970
		Error	145.703	79	1.844		
		Total	1250.778	83			
		Corrected Total	183.242	82			
	1.00	Corrected Model	4.764[b]	3	1.588	.894	.450
		Intercept	37.218	1	37.218	20.952	.000
		PositiveAffects	4.287	1	4.287	2.413	.126
		NegativeAffects	.694	1	.694	.391	.534
		MSControlSplit	.118	1	.118	.066	.798
		Error	106.581	60	1.776		
		Total	1253.222	64			
		Corrected Total	111.345	63			
1.00	.00	Corrected Model	23.617[c]	3	7.872	3.534	.019
		Intercept	22.867	1	22.867	10.265	.002
		PositiveAffects	11.217	1	11.217	5.035	.028
		NegativeAffects	.981	1	.981	.440	.509
		MSControlSplit	8.433	1	8.433	3.785	.056
		Error	151.480	68	2.228		
		Total	1165.222	72			
		Corrected Total	175.097	71			
	1.00	Corrected Model	16.569[d]	3	5.523	1.996	.123
		Intercept	8.473	1	8.473	3.063	.085
		PositiveAffects	16.287	1	16.287	5.887	.018
		NegativeAffects	.206	1	.206	.074	.786
		MSControlSplit	.101	1	.101	.037	.849

	Error	185.353	67	2.766		
	Total	1183.556	71			
	Corrected Total	201.922	70			

a. R Squared = .205 (Adjusted R Squared = .175)

b. R Squared = .043 (Adjusted R Squared = -.005)

c. R Squared = .135 (Adjusted R Squared = .097)

d. R Squared = .082 (Adjusted R Squared = .041)

H3d: Effects for Older-Aged HSE Males

Tests of Between-Subjects Effects

Dependent Variable:PrestigiousItems

AgeGroupSplit	SelfEsteemSplit	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	.00	Corrected Model	4.215[a]	3	1.405	.615	.610
		Intercept	39.865	1	39.865	17.441	.000
		PositiveAffects	.242	1	.242	.106	.747
		NegativeAffects	1.664	1	1.664	.728	.399
		MSControlSplit	3.251	1	3.251	1.422	.241
		Error	77.715	34	2.286		
		Total	617.556	38			
		Corrected Total	81.930	37			
	1.00	Corrected Model	9.185[b]	3	3.062	1.053	.383
		Intercept	6.526	1	6.526	2.245	.144
		PositiveAffects	5.311	1	5.311	1.827	.186
		NegativeAffects	3.289	1	3.289	1.131	.296
		MSControlSplit	.003	1	.003	.001	.976
		Error	93.037	32	2.907		
		Total	678.222	36			
		Corrected Total	102.222	35			
1.00	.00	Corrected Model	13.044[c]	3	4.348	2.796	.051
		Intercept	19.326	1	19.326	12.427	.001
		PositiveAffects	6.717	1	6.717	4.319	.044
		NegativeAffects	1.507	1	1.507	.969	.330

		MSControlSplit	.475	1	.475	.305	.583
		Error	68.428	44	1.555		
		Total	1000.222	48			
		Corrected Total	81.472	47			
	1.00	Corrected Model	5.306[d]	3	1.769	.688	.564
		Intercept	13.136	1	13.136	5.112	.029
		PositiveAffects	4.891	1	4.891	1.904	.175
		NegativeAffects	.068	1	.068	.026	.872
		MSControlSplit	.179	1	.179	.070	.793
		Error	105.351	41	2.570		
		Total	710.778	45			
		Corrected Total	110.657	44			
2.00	.00	Corrected Model	17.904[e]	3	5.968	3.145	.032
		Intercept	4.279	1	4.279	2.255	.139
		PositiveAffects	11.246	1	11.246	5.926	.018
		NegativeAffects	3.687	1	3.687	1.943	.169
		MSControlSplit	.305	1	.305	.161	.690
		Error	108.179	57	1.898		
		Total	886.222	61			
		Corrected Total	126.084	60			
	1.00	Corrected Model	34.850[f]	3	11.617	5.380	.002
		Intercept	7.925	1	7.925	3.670	.060
		PositiveAffects	27.240	1	27.240	12.615	.001
		NegativeAffects	.130	1	.130	.060	.807
		MSControlSplit	12.664	1	12.664	5.865	.019
		Error	125.243	58	2.159		
		Total	959.778	62			
		Corrected Total	160.093	61			

a. R Squared = .051 (Adjusted R Squared = -.032)

b. R Squared = .090 (Adjusted R Squared = .005)

c. R Squared = .160 (Adjusted R Squared = .103)

d. R Squared = .048 (Adjusted R Squared = -.022)

H3e Regression

Coefficients[a]

MSControlSplit	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
.00	1	(Constant)	4.209	.569		7.403	.000
		Age	-.011	.018	-.048	-.588	.558
1.00	1	(Constant)	4.841	.626		7.732	.000
		Age	-.038	.020	-.161	-1.893	.061

a. Dependent Variable: PrestigiousItems

H3e Regression among Entire Sample

ANOVA[b]

MSControlSplit	Model		Sum of Squares	df	Mean Square	F	Sig.
.00	1	Regression	.790	1	.790	.345	.558[a]
		Residual	347.995	152	2.289		
		Total	348.785	153			
1.00	1	Regression	8.756	1	8.756	3.582	.061[a]
		Residual	327.538	134	2.444		
		Total	336.293	135			

a. Predictors: (Constant), Age

b. Dependent Variable: PrestigiousItems

H3f and H3g

Tests of Between-Subjects Effects

Dependent Variable:PrestigiousItems

AgeGroupSplit	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	Corrected Model	7.405[a]	3	2.468	.971	.411
	Intercept	43.671	1	43.671	17.187	.000
	PositiveAffects	2.197	1	2.197	.864	.356
	NegativeAffects	3.134	1	3.134	1.234	.271
	MSControlSplit	1.552	1	1.552	.611	.437
	Error	177.863	70	2.541		
	Total	1295.778	74			
	Corrected Total	185.267	73			
1.00	Corrected Model	17.353[b]	3	5.784	2.754	.047
	Intercept	34.899	1	34.899	16.617	.000
	PositiveAffects	4.957	1	4.957	2.360	.128
	NegativeAffects	10.883	1	10.883	5.182	.025
	MSControlSplit	.017	1	.017	.008	.928
	Error	186.922	89	2.100		
	Total	1711.000	93			
	Corrected Total	204.275	92			
2.00	Corrected Model	45.843[c]	3	15.281	7.563	.000
	Intercept	13.395	1	13.395	6.629	.011
	PositiveAffects	37.916	1	37.916	18.765	.000
	NegativeAffects	1.098	1	1.098	.543	.462
	MSControlSplit	9.940	1	9.940	4.919	.028
	Error	240.450	119	2.021		
	Total	1846.000	123			
	Corrected Total	286.293	122			

a. R Squared = .040 (Adjusted R Squared = -.001)

b. R Squared = .085 (Adjusted R Squared = .054)

c. R Squared = .160 (Adjusted R Squared = .139)

H3g: Gender and Age Split

Tests of Between-Subjects Effects

Dependent Variable:PrestigiousItems

AgeGroup Split	GenderSplit	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	.00	Corrected Model	16.268[a]	3	5.423	2.550	.074
		Intercept	8.290	1	8.290	3.898	.058
		PositiveAffects	3.664	1	3.664	1.723	.199
		NegativeAffects	5.342	1	5.342	2.512	.123
		MSControlSplit	7.796	1	7.796	3.666	.065
		Error	63.801	30	2.127		
		Total	515.444	34			
		Corrected Total	80.069	33			
	1.00	Corrected Model	.189[b]	3	.063	.023	.995
		Intercept	38.704	1	38.704	14.001	.001
		PositiveAffects	.126	1	.126	.046	.832
		NegativeAffects	.014	1	.014	.005	.943
		MSControlSplit	.021	1	.021	.008	.931
		Error	99.519	36	2.764		
		Total	780.333	40			
		Corrected Total	99.708	39			
1.00	.00	Corrected Model	18.553[c]	3	6.184	3.357	.026
		Intercept	16.915	1	16.915	9.183	.004
		PositiveAffects	4.251	1	4.251	2.308	.135
		NegativeAffects	11.107	1	11.107	6.030	.018
		MSControlSplit	.090	1	.090	.049	.826
		Error	86.575	47	1.842		
		Total	958.889	51			
		Corrected Total	105.129	50			
	1.00	Corrected Model	1.999[d]	3	.666	.262	.852
		Intercept	18.388	1	18.388	7.230	.011
		PositiveAffects	.508	1	.508	.200	.657
		NegativeAffects	1.149	1	1.149	.452	.505
		MSControlSplit	.243	1	.243	.095	.759
		Error	96.650	38	2.543		

		Total	752.111	42			
		Corrected Total	98.648	41			
2.00	.00	Corrected Model	13.247[e]	3	4.416	2.024	.119
		Intercept	16.880	1	16.880	7.739	.007
		PositiveAffects	5.708	1	5.708	2.617	.111
		NegativeAffects	3.430	1	3.430	1.573	.214
		MSControlSplit	2.047	1	2.047	.938	.336
		Error	143.961	66	2.181		
		Total	941.667	70			
		Corrected Total	157.208	69			
	1.00	Corrected Model	40.068[f]	3	13.356	8.018	.000
		Intercept	.721	1	.721	.433	.514
		PositiveAffects	35.516	1	35.516	21.321	.000
		NegativeAffects	.007	1	.007	.004	.950
		MSControlSplit	14.897	1	14.897	8.943	.004
		Error	81.622	49	1.666		
		Total	904.333	53			
		Corrected Total	121.690	52			

a. R Squared = .203 (Adjusted R Squared = .123)

b. R Squared = .002 (Adjusted R Squared = -.081)

c. R Squared = .176 (Adjusted R Squared = .124)

Appendix M: ANCOVA for H4

H4a

Tests of Between-Subjects Effects

Dependent Variable:RiskyDecisions

MSControlSplit	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	Corrected Model	1.507[a]	3	.502	.337	.799
	Intercept	161.222	1	161.222	108.148	.000
	PositiveAffects	.622	1	.622	.417	.519
	NegativeAffects	.935	1	.935	.627	.430
	SelfEsteemSplit	.903	1	.903	.605	.438
	Error	223.613	150	1.491		
	Total	2799.667	154			
	Corrected Total	225.120	153			
1.00	Corrected Model	13.807[b]	3	4.602	3.029	.032
	Intercept	82.378	1	82.378	54.211	.000
	PositiveAffects	4.900	1	4.900	3.225	.075
	NegativeAffects	.735	1	.735	.484	.488
	SelfEsteemSplit	7.968	1	7.968	5.243	.024
	Error	200.585	132	1.520		
	Total	2411.778	136			
	Corrected Total	214.392	135			

a. R Squared = .007 (Adjusted R Squared = -.013)

b. R Squared = .064 (Adjusted R Squared = .043)

H4b

Tests of Between-Subjects Effects

Dependent Variable:RiskyDecisions

MSControlSplit	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	Corrected Model	3.338[a]	3	1.113	.753	.523
	Intercept	161.252	1	161.252	109.061	.000
	PositiveAffects	.460	1	.460	.311	.578
	NegativeAffects	.400	1	.400	.271	.604
	GenderSplit	2.734	1	2.734	1.849	.176
	Error	221.783	150	1.479		
	Total	2799.667	154			
	Corrected Total	225.120	153			
1.00	Corrected Model	6.677[b]	3	2.226	1.414	.241
	Intercept	79.638	1	79.638	50.609	.000
	PositiveAffects	2.636	1	2.636	1.675	.198
	NegativeAffects	3.203	1	3.203	2.035	.156
	GenderSplit	.837	1	.837	.532	.467
	Error	207.716	132	1.574		
	Total	2411.778	136			
	Corrected Total	214.392	135			

a. R Squared = .015 (Adjusted R Squared = -.005)

b. R Squared = .031 (Adjusted R Squared = .009)

H4c

Tests of Between-Subjects Effects

Dependent Variable:RiskyDecisions

MSControl Split	CountryofOrigin: Canada	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	.00	Corrected Model	8.636[a]	4	2.159	1.242	.316
		Intercept	23.856	1	23.856	13.721	.001
		PositiveAffects	1.472	1	1.472	.847	.365
		NegativeAffects	.467	1	.467	.269	.608
		AgeGroupSplit	5.356	2	2.678	1.540	.232
		Error	48.684	28	1.739		
		Total	620.556	33			
		Corrected Total	57.320	32			
	1.00	Corrected Model	5.121[b]	4	1.280	.906	.463
		Intercept	109.492	1	109.492	77.497	.000
		PositiveAffects	.026	1	.026	.018	.893
		NegativeAffects	.062	1	.062	.044	.835
		AgeGroupSplit	5.117	2	2.558	1.811	.168
		Error	154.002	109	1.413		
		Total	2064.000	114			
		Corrected Total	159.123	113			
	2.00	Corrected Model	8.137[c]	4	2.034	16.652	.057
		Intercept	7.091	1	7.091	58.052	.017
		PositiveAffects	3.562	1	3.562	29.160	.033
		NegativeAffects	.005	1	.005	.044	.853
		AgeGroupSplit	.667	2	.333	2.728	.268
		Error	.244	2	.122		
		Total	115.111	7			
		Corrected Total	8.381	6			
1.00	.00	Corrected Model	6.025[d]	4	1.506	1.222	.349
		Intercept	8.932	1	8.932	7.246	.018
		PositiveAffects	2.237	1	2.237	1.815	.201
		NegativeAffects	2.477	1	2.477	2.010	.180
		AgeGroupSplit	2.728	2	1.364	1.106	.360

	Error	16.024	13	1.233		
	Total	240.222	18			
	Corrected Total	22.049	17			
1.00	Corrected Model	18.105[e]	4	4.526	3.069	.020
	Intercept	75.154	1	75.154	50.963	.000
	PositiveAffects	.108	1	.108	.073	.788
	NegativeAffects	8.600	1	8.600	5.832	.017
	AgeGroupSplit	11.622	2	5.811	3.941	.022
	Error	153.365	104	1.475		
	Total	2068.000	109			
	Corrected Total	171.470	108			
2.00	Corrected Model	2.922[f]	4	.730	.581	.694
	Intercept	3.888	1	3.888	3.092	.153
	PositiveAffects	.088	1	.088	.070	.804
	NegativeAffects	.014	1	.014	.011	.921
	AgeGroupSplit	2.881	2	1.441	1.146	.404
	Error	5.029	4	1.257		
	Total	103.556	9			
	Corrected Total	7.951	8			

a. R Squared = .151 (Adjusted R Squared = .029)

b. R Squared = .032 (Adjusted R Squared = -.003)

c. R Squared = .971 (Adjusted R Squared = .913)

d. R Squared = .273 (Adjusted R Squared = .050)

e. R Squared = .106 (Adjusted R Squared = .071)

f. R Squared = .367 (Adjusted R Squared = -.265)

Appendix N: ANCOVA for H5

H5a

Tests of Between-Subjects Effects

Dependent Variable:NutritionalInformation

GenderSplit	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	Corrected Model	16.930[a]	3	5.643	3.818	.011
	Intercept	205.896	1	205.896	139.320	.000
	PositiveAffects	16.801	1	16.801	11.368	.001
	NegativeAffects	.432	1	.432	.292	.589
	MSControlSplit	.258	1	.258	.174	.677
	Error	223.157	151	1.478		
	Total	4354.680	155			
	Corrected Total	240.087	154			
1.00	Corrected Model	9.682[b]	3	3.227	1.689	.172
	Intercept	125.998	1	125.998	65.951	.000
	PositiveAffects	3.537	1	3.537	1.851	.176
	NegativeAffects	4.392	1	4.392	2.299	.132
	MSControlSplit	1.413	1	1.413	.739	.391
	Error	250.273	131	1.910		
	Total	3185.040	135			
	Corrected Total	259.954	134			

a. R Squared = .071 (Adjusted R Squared = .052)

b. R Squared = .037 (Adjusted R Squared = .015)

H5a: Effects for Young Females

Tests of Between-Subjects Effects

Dependent Variable:NutritionalInformation

Gender Split	AgeGroupSplit	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	.00	Corrected Model	14.587[a]	3	4.862	3.440	.029
		Intercept	35.948	1	35.948	25.434	.000
		PositiveAffects	8.605	1	8.605	6.088	.020
		NegativeAffects	.024	1	.024	.017	.897
		MSControlSplit	4.840	1	4.840	3.424	.074
		Error	42.402	30	1.413		
		Total	913.000	34			
		Corrected Total	56.989	33			
	1.00	Corrected Model	3.101[b]	3	1.034	.667	.577
		Intercept	69.266	1	69.266	44.691	.000
		PositiveAffects	2.625	1	2.625	1.694	.199
		NegativeAffects	.099	1	.099	.064	.801
		MSControlSplit	.191	1	.191	.123	.727
		Error	72.844	47	1.550		
		Total	1407.560	51			
		Corrected Total	75.945	50			
	2.00	Corrected Model	9.408[c]	3	3.136	2.147	.103
		Intercept	96.198	1	96.198	65.871	.000
		PositiveAffects	6.556	1	6.556	4.489	.038
		NegativeAffects	2.077	1	2.077	1.422	.237
		MSControlSplit	1.832	1	1.832	1.255	.267
		Error	96.387	66	1.460		
		Total	2034.120	70			
		Corrected Total	105.795	69			
1.00	.00	Corrected Model	2.048[d]	3	.683	.283	.837
		Intercept	26.636	1	26.636	11.062	.002
		PositiveAffects	1.982	1	1.982	.823	.370
		NegativeAffects	.007	1	.007	.003	.958
		MSControlSplit	.008	1	.008	.003	.955

	Error	86.687	36	2.408		
	Total	871.960	40			
	Corrected Total	88.735	39			
1.00	Corrected Model	4.373[e]	3	1.458	.642	.593
	Intercept	51.137	1	51.137	22.529	.000
	PositiveAffects	.045	1	.045	.020	.889
	NegativeAffects	4.334	1	4.334	1.909	.175
	MSControlSplit	.004	1	.004	.002	.967
	Error	86.252	38	2.270		
	Total	921.440	42			
	Corrected Total	90.625	41			
2.00	Corrected Model	5.591[f]	3	1.864	1.404	.253
	Intercept	39.839	1	39.839	30.011	.000
	PositiveAffects	3.387	1	3.387	2.551	.117
	NegativeAffects	.281	1	.281	.212	.647
	MSControlSplit	3.630	1	3.630	2.735	.105
	Error	65.046	49	1.327		
	Total	1391.640	53			
	Corrected Total	70.637	52			

a. R Squared = .256 (Adjusted R Squared = .182)

b. R Squared = .041 (Adjusted R Squared = -.020)

c. R Squared = .089 (Adjusted R Squared = .048)

d. R Squared = .023 (Adjusted R Squared = -.058)

e. R Squared = .048 (Adjusted R Squared = -.027)

f. R Squared = .079 (Adjusted R Squared = .023)

H5b

Tests of Between-Subjects Effects

Dependent Variable:NutritionalInformation

MSControlSplit	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	Corrected Model	17.568[a]	3	5.856	3.329	.021
	Intercept	188.895	1	188.895	107.371	.000
	PositiveAffects	10.317	1	10.317	5.864	.017
	NegativeAffects	2.668	1	2.668	1.517	.220
	GenderSplit	7.271	1	7.271	4.133	.044
	Error	263.892	150	1.759		
	Total	4063.760	154			
	Corrected Total	281.460	153			
1.00	Corrected Model	23.707[b]	3	7.902	4.913	.003
	Intercept	126.966	1	126.966	78.934	.000
	PositiveAffects	10.080	1	10.080	6.266	.014
	NegativeAffects	.619	1	.619	.385	.536
	GenderSplit	18.581	1	18.581	11.552	.001
	Error	212.323	132	1.609		
	Total	3475.960	136			
	Corrected Total	236.030	135			

a. R Squared = .062 (Adjusted R Squared = .044)

b. R Squared = .100 (Adjusted R Squared = .080)

H5c

Tests of Between-Subjects Effects

Dependent Variable:NutritionalInformation

Gender Split	SelfEsteemSplit	Source	Type III Sum of Squares	df	Mean Square	F	Sig.
.00	.00	Corrected Model	11.231[a]	3	3.744	2.671	.053
		Intercept	102.255	1	102.255	72.967	.000
		PositiveAffects	11.030	1	11.030	7.871	.006
		NegativeAffects	.596	1	.596	.425	.516
		MSControlSplit	.089	1	.089	.063	.802
		Error	110.709	79	1.401		
		Total	2289.960	83			
		Corrected Total	121.940	82			
	1.00	Corrected Model	6.781[b]	3	2.260	1.384	.255
		Intercept	96.484	1	96.484	59.076	.000
		PositiveAffects	6.701	1	6.701	4.103	.047
		NegativeAffects	.386	1	.386	.236	.629
		MSControlSplit	.263	1	.263	.161	.689
		Error	111.059	68	1.633		
		Total	2064.720	72			
		Corrected Total	117.840	71			
1.00	.00	Corrected Model	4.240[c]	3	1.413	.750	.526
		Intercept	84.925	1	84.925	45.083	.000
		PositiveAffects	3.280	1	3.280	1.741	.192
		NegativeAffects	.067	1	.067	.036	.851
		MSControlSplit	.652	1	.652	.346	.559
		Error	113.024	60	1.884		
		Total	1404.280	64			
		Corrected Total	117.264	63			
	1.00	Corrected Model	19.287[d]	3	6.429	3.594	.018
		Intercept	44.301	1	44.301	24.762	.000
		PositiveAffects	12.024	1	12.024	6.721	.012

	NegativeAffects	5.900	1	5.900	3.298	.074
	MSControlSplit	.412	1	.412	.230	.633
	Error	119.868	67	1.789		
	Total	1780.760	71			
	Corrected Total	139.155	70			

a. R Squared = .092 (Adjusted R Squared = .058)

b. R Squared = .058 (Adjusted R Squared = .016)

c. R Squared = .036 (Adjusted R Squared = -.012)

d. R Squared = .139 (Adjusted R Squared = .100)

Appendix O: Survey Questionnaire

1.

This is a Personality & Attitude Test Survey.

All recorded information will be kept private and confidential.

This study intends to collect data from random people across Canada.

Your honest answers would be greatly appreciated.

This is to state that I agree to participate in this program of research.
I am aware that any information I provide will be kept private and confidential.
I will notify the researcher of any problems I have with the experiment should any occur.
I understand that the data from this study may be published.

Please click on the Agree button to move forward or you may exit the survey if you wish not to continue.

Agree

I have carefully studied the above and understand this agreement. I freely consent and voluntarily agree to participate in this study. ○

If at any time you have questions about the proposed research, please contact: http://www.surveycenter.com
If at any time you have questions about your rights as a research participant, please contact the Research Ethics and Compliance Advisor, Concordia University, Dr. Brigitte Des Rosiers, at (514) 848-2424 x7481 or by email at bdesrosi@alcor.concordia.ca

2.

Please indicate how much you agree with the following statements.

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Strongly Agree
On the whole I am satisfied with myself.	○	○	○	○	○	○	○
At times I think that I am no good at all.	○	○	○	○	○	○	○
I feel that I have a number of good qualities.	○	○	○	○	○	○	○
I am able to do things as well as most other people.	○	○	○	○	○	○	○
I feel I do not have much to be proud of.	○	○	○	○	○	○	○
I certainly feel useless at times.	○	○	○	○	○	○	○
I feel that I am a person of worth, at least the equal of others.	○	○	○	○	○	○	○
I wish I could have more respect for myself.	○	○	○	○	○	○	○
All in all, I am inclined to feel that I am a failure.	○	○	○	○	○	○	○
I take a positive attitude toward myself.	○	○	○	○	○	○	○

3.

Please indicate how much you agree with the following statements:

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Strongly Agree
The well-being of my friends is important to me.	○	○	○	○	○	○	○
If a friend gets a prize, I would feel proud.	○	○	○	○	○	○	○
If a relative were in financial difficulty, I would help within my means.	○	○	○	○	○	○	○
It is important to maintain harmony within my group.	○	○	○	○	○	○	○
I like sharing little things with my neighbours.	○	○	○	○	○	○	○
I feel good when I cooperate with others.	○	○	○	○	○	○	○
My happiness depends very much on the happiness of those around me.	○	○	○	○	○	○	○
To me, pleasure is spending time with others.	○	○	○	○	○	○	○

4.

On the following page are two open-ended questions, please respond to them with your first, natural response.

We are looking for peoples' gut-level reactions to these questions.

5.

The Projective Life Attitudes Assessment

This assessment is a recently developed, innovative personality assessment. Recent research suggests that feelings and attitudes about significant aspects of life tell us a considerable amount about the individual's personality. Your responses to this survey will be content-analyzed in order to assess certain dimensions of your personality. Your honest responses to the following questions will be appreciated.

Please briefly describe the emotions that the thought of your own death arouses in you.

Jot down, as specifically as you can, what you think will happen to you as you physically die and once you are physically dead.

5.

The Projective Life Attitudes Assessment

This assessment is a recently developed, innovative personality assessment. Recent research suggests that feelings and attitudes about significant aspects of life tell us a considerable amount about the individual's personality. Your responses to this survey will be content-analyzed in order to assess certain dimensions of your personality. Your honest responses to the following questions will be appreciated.

Please briefly describe the emotions that the thought of going to the dentist arouses in you.

Jot down, as specifically as you can, what type of pain you might experience at the dentist and describe what it would feel like.

6.

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way right now. Use the following scale to record your answers:

	Very Slightly or Not at all			Moderately			Extremely
Interested	○	○	○	○	○	○	○
Distressed	○	○	○	○	○	○	○
Excited	○	○	○	○	○	○	○
Upset	○	○	○	○	○	○	○
Strong	○	○	○	○	○	○	○
Guilty	○	○	○	○	○	○	○
Scared	○	○	○	○	○	○	○
Hostile	○	○	○	○	○	○	○
Enthusiastic	○	○	○	○	○	○	○
Proud	○	○	○	○	○	○	○
Irritable	○	○	○	○	○	○	○
Alert	○	○	○	○	○	○	○
Ashamed	○	○	○	○	○	○	○
Inspired	○	○	○	○	○	○	○
Nervous	○	○	○	○	○	○	○
Determined	○	○	○	○	○	○	○
Attentive	○	○	○	○	○	○	○
Jittery	○	○	○	○	○	○	○
Active	○	○	○	○	○	○	○
Afraid	○	○	○	○	○	○	○

7.

The personality portion of the survey is over. Now, we would like you to complete a few different attitude tasks.

Research suggests that attitudes and perceptions about even very common everyday items may be related to basic personality characteristics. To further examine this idea, we would like you to locate as many words as you can in the following exercize.

The words may be located horizontally, vertically or backwards.

S	R	E	T	U	P	M	O	C	O
W	P	H	O	N	E	R	E	E	B
A	M	U	S	I	C	P	Z	S	N
B	T	N	R	O	T	C	A	S	K
B	M	R	K	S	E	D	E	A	O
R	F	O	A	G	O	L	B	R	O
E	L	G	V	I	Z	B	O	G	B
P	A	N	U	I	N	E	L	W	Q
A	G	T	A	B	E	T	G	D	O
P	S	C	H	O	O	L	N	I	T

Write down as many words as you can from the puzzle.

1 |
2 |
3 |
4 |
5 |
6 |
7 |
8 |
9 |
10 |
11 |
12 |

8.

Please indicate on this scale the level of risk associated with the following purchases.

	Not at All Risky						Very Risky
Buying a second-hand car that is 5 years old.	○	○	○	○	○	○	○
Buying a refrigerator from an unknown brand name.	○	○	○	○	○	○	○
Signing up for a credit card that offers 30% interest rate.	○	○	○	○	○	○	○
Buying a brand new car with no auto insurance.	○	○	○	○	○	○	○
Buying an out-dated cell phone model.	○	○	○	○	○	○	○
Buying a Laptop that does not work with any anti-virus software.	○	○	○	○	○	○	○

9.

Please indicate how much you agree with the following statements.

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Strongly Agree
Products made in China are carefully produced and have fine workmanship.	○	○	○	○	○	○	○
Products made in China are generally of a lower quality than similar products available from other countries.	○	○	○	○	○	○	○
Products made in China show a very high degree of technological advancement.	○	○	○	○	○	○	○
Products made in China usually show a clever use of color and design.	○	○	○	○	○	○	○
Products made in China are usually quite reliable and seem to last the desired length of time.	○	○	○	○	○	○	○
Products made in China are usually a good value for the money.	○	○	○	○	○	○	○

10.

Please indicate how much you agree with the following statements.

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Strongly Agree
The money given to charities goes for good causes.	○	○	○	○	○	○	○
Much of the money donated to charity is wasted.	○	○	○	○	○	○	○
My image of charitable organizations is positive.	○	○	○	○	○	○	○
Charitable organizations have been quite successful in helping the needy.	○	○	○	○	○	○	○
Charitable organizations perform a useful function for society.	○	○	○	○	○	○	○

11.

Please indicate how much you agree about the importance that the following has on your decision-making when you go shopping for clothes.

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly agree	Agree	Strongly Agree
Prestige	○	○	○	○	○	○	○
Exclusivity	○	○	○	○	○	○	○
Status	○	○	○	○	○	○	○

12.

Please indicate how much you agree with the following statements regarding nutritional information on food products.

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Strongly Agree
I want to know more about nutrition information.	○	○	○	○	○	○	○
I wish more nutrition information were widely available.	○	○	○	○	○	○	○
I enjoy reading about nutrition information.	○	○	○	○	○	○	○
I am interested in looking for nutrition information on labels.	○	○	○	○	○	○	○
I would like to receive additional nutritional information about food products.	○	○	○	○	○	○	○

13.

Please indicate how much you agree with the following statements.

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Strongly Agree
Products made in Japan are carefully produced and have fine workmanship.	○	○	○	○	○	○	○
Products made in Japan are generally of a lower quality than similar products available from other countries.	○	○	○	○	○	○	○
Products made in Japan show a very high degree of technological advancement.	○	○	○	○	○	○	○
Products made in Japan usually show a clever use of color and design.	○	○	○	○	○	○	○
Products made in Japan are usually quite reliable and seem to last the desired length of time.	○	○	○	○	○	○	○
Products made in Japan are usually a good value for the money.	○	○	○	○	○	○	○

14.

The survey is almost over. Please answer these last questions.

Are You Male or Female?

- ○ Male
- ○ Female

What is your date of birth?

Please select a month, date and year.

Month | Date | Year

Please select the country where you were born.

Country of origin:

How many years have you lived in Canada?

Years:

15.

The survey is now over.

Thank you for your participation.

Please click on 'Done' so that we may process the survey.

If you are interested to know what the purpose of it was, please read below.

The purpose of this experiment was to prime individuals with certain thoughts and then observe the impact of the manipulation on their consumption choices. Half of the people who participated in this survey were primed with thoughts related to their own mortality. The other half were part of a control condition and were primed with thoughts related to visiting the dentist.