

## **On the Need to Distinguish the Mortality Salience of Loved Ones (MSLO) from the Mortality Salience of Self (MSS) in Consumer Studies**

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### **ABSTRACT:**

Past mortality salience research has largely focussed on awareness of one's own death (Greenberg, Solomon, and Pyszczynski 1997). This paper extends past research by arguing that there are two types of mortality salience, namely mortality salience of self (MSS), which refers to the awareness of one's own death, and mortality salience of a loved one (MSLO), which refers to the awareness of a loved one's death. This research begins by reviewing past mortality salience research in consumer studies and addresses the importance of distinguishing MSLO from MSS. Empirical evidence of the differing impacts of MSS and MSLO on self-concept and negative emotions is presented here to support the researcher's argument that simply analogizing MSS with MSLO, as in past research, may not be sufficient. This study therefore calls for the distinguishing between MSS and MSLO in future studies.

### **KEYWORDS:**

Mortality salience, self- concept, negative emotions

Every day we receive information that reminds us either of our own inevitable death, or of the death of a loved one. For example, while watching a television ad for the *Heart & Stroke Foundation*, an individual may become increasingly aware of his own mortality if he has a heart condition, or he may become increasingly aware of the death of a loved one if the person has chronic heart disease. Past research has largely focused on thoughts about one's own death, thoughts that create an awareness of death which has been termed mortality salience (Greenberg, Solomon, and Pyszczynski 1997). This paper extends past research by designating the awareness of one's own death as mortality salience of self (MSS), and the awareness of the death of a loved one as mortality salience of a loved one (MSLO). Here, loved ones refer to one's spouse, children, parents, siblings and other important family members (Harvey 1998). Research has shown that besides coping with the primitive fear of one's own biological death, human beings constantly confront the fear of eternal separation from a loved one through death (Bowlby, 1982; Stroebe, 2002). This separation anxiety can be experienced more intensely, and for a longer period, than the fear of one's own death. A survey conducted by Anxiety Disorders Association of America (ADAA) in 2008 presented fairly consistent results: when asked, "*How do your worries compare with those surveyed?*" 31% of participants were anxious about losing a loved one through death, while only 10% worried about their own death. Thus, it is important that researchers understand how MSLO impacts consumer behaviours in comparison to MSS.

Past research has largely considered mortality salience to be a single construct representing awareness of one's own death, and as a result it hasn't distinguished between

MSS and MSLO. For example, terror management studies have largely focused on MSS, proposing that humans have developed certain mechanisms to buffer the fear evoked by thoughts of their own death (Greenberg, Solomon, and Pyszczynski 1997). MSS has been researched extensively in psychology, sociology, anthropology, and to a lesser extent, in consumer behaviour (Burke, Marten and Faucher 2010), but among all the mortality salience studies, only a few have explored the effect of MSLO (Greenberg et al. 1994; Davis & McKearney 2003; Bonsu and Belk 2003). Moreover, in these MSLO studies it was assumed that MSLO would serve as a reminder of an individual's own mortality, since loved ones and the self are likely to be related concepts according to the spreading activation model of memory (Taubman-Ben-Ari & Katz-Ben-Ami 2008; Mikulincer, Florian & Hirschberger 2003). As a result, the underlying assumption in past research has been that MSLO and MSS influence consumer behaviour in a similar manner. However, studies have shown that simply analogizing MSLO with MSS is not in itself sufficient. For example, in their terror management experiment, by comparing the impact of MSS and MSLO on cultural worldviews, Greenberg et al. (1994) found that MSS participants exhibited a significantly greater defense of their worldview than MSLO participants. Similarly, when asking participants to think about the death of a close friend from cancer, Liu and Aaker (2007) found only a small percentage (9%) of participants expressed anxiety and fear over their own death, whereas a majority (72%) of participants entertained concrete thoughts about their personal visions of life. Apparently, MSLO elicits more than just the terror of one's own death. The uniqueness of MSLO relative to MSS cannot be explained if MSLO and MSS are understood to be similar constructs. Thus, the present paper calls for the distinction to be made between MSS and MSLO. The following section reviews past consumer

research on MSS; it then discusses conceptual understandings and empirical evidence which show the divergence of MSS and MSLO in terms of their effects on self-concept and the negative emotions they produce. In the final section, this research envisions a change in future mortality salience studies and provides suggestions for future research.

### **MSS and Consumer Studies**

Past research on mortality salience, such as terror management studies has focused heavily on MSS. Based on terror management theory (TMT, Greenberg et al. 1997), the awareness that one's own death is always potentially imminent and ultimately inevitable forces an individual to encounter his existential anxiety. In the following sections, this paper synthesizes past consumer research on MSS in terms of its effects on five key outcome variables: prosocial behavior, food choice and consumption, risk-taking behavior, brand choice, and materialistic consumption (see table 1).

Table 1: Past Research on Mortality Salience of Self (MSS)

		Manipulation		Second IV	DV	Results
		MS Group	Control Group			
Prosocial behaviour	Ferraro, Shiv & Bettman (2005) --- exp3	MAPS	DP	Virtue-related esteem: High/Low	Donation to charity	Among individuals privileging virtue as a source of self-esteem, the decision to give to charity, the amount donated to the charity, and intentions to engage in socially conscious behaviors were higher when MS was high than when it was low.
	Hirschberger, Ein-Dor & Almakias (2008)	MAPS Death fliers	DP Pain fliers	1. Type of organization: evoking concerns about personal death or not 2. Person: In wheelchair or standing	1. Reported willingness to donate 2. Actual donation 3. Actual helping	MS increased charitable donations and increased help to a walking confederate. However, MS significantly decreased organ donation card signings and decreased help to a wheelchair-bound confederate.
	Joireman & Duell (2005)	MAPS	DP	Social value orientation	Evaluation towards prosocial behavior	MS made proselves more likely to endorse self-transcendent values (vs. a control group), whereas MS has no impact on the self-transcendent values of prosocials.
	Joireman & Duell (2007)	MAPS	DP	Self-transcendent values: High/Low	Evaluation of people-oriented charities	MS increased evaluations of charities, but only among participants scoring low in self-transcendent values.
	Jonas, Schimel, Greenberg & Pyszczynski (2002)	1. In front of funeral home 2. MAPS	1. three blocks away from the funeral home 2. DP	None	1. Ratings of charities 2. donation to U.S. vs. foreign charities	MS participants reported more favorably toward charities and gave more money to a charity supporting an American cause than control participants.
	Fransen et al. (2008)	Showing the logo for a life insurance company	Showing the logo for a personal care product	None	How much to donate to charity	MS participants gave more money to the charity foundation than control participants.

Food Consumption	Ferraro, Shiv & Bettman (2005) --- exp1,2	MAPS	DP	Body-esteem: High/Low	Choice between chocolate cake and fruit salad	High MS led to less indulgent food choices among participants who had high body esteem, and more indulgent choices for participants for whom body shape was not an important source of esteem.
	Goldenberg, Arndt & Brown (2004)	MAPS	DP	Body mass index scores: High / Low	Fattening snack food intake	MS decreases the intake of nutritious yet fattening snack food. This effect is especially prominent among women who had higher body mass index scores.
	Landau & Greenberg (2006)	MAPS	DP	Self-esteem: High / Low	Decision on high-gain/high risk and low-gain/low-risk choices	MS leads high, but not low, self-esteem participants faced with a risky decision to pursue opportunities for excellence despite substantial risks of failure.
Consumer's risk-taking behavior	Hansen, Winzeler & Topolinski (2010)	Death-related warning	Appearance-related warning	Smoking self-esteem	Attitude towards cigarette on-pack warnings	MS warnings increased the tendency to favor smoking among participants who considered smoking to be a means of self-esteem.
	Martin & Kamins (2010)	MAPS	DP	Smoking self-esteem	Likelihood of quitting smoking	MS interacts with self-esteem in terms of influencing the probability of smoking in the short term, whereas social exclusion appeals have a stronger impact on reducing long-term smoking intentions.
	Miller & Taubman-Ben-Ari (2004)	MAPS	Food	Self-esteem: High / Low	Reported risky diving behaviors (mock scenarios)	Mortality salience led to a greater willingness to take risks in diving vs. control condition, but only among divers with low self-esteem and low diving related self-efficacy. No such effects were found for high self-esteem persons.
	Miller & Mulligan (2002)	Death survey	TV survey	Locus of Control: External / Internal	1. Reported risky behaviors (drink & drive) 2. Assessment of personal risk	Mortality salience increased the actual risk-taking and the assessed level of risk of individuals with an external locus of control. MS participants with an internal locus of control showed decreased risk-taking and increased risk assessment.
	Routledge, Arndt & Goldenberg (2004)	MAPS	DP / Uncertain	1. Time delay or not 2. Ad featured:	1. Interest in high SPF	When thoughts about death were (not) the focus of attention, participants increased (decreased)

			y	suntanned woman or beach ball	sunscreen 2. Interest in suntan products	intentions to protect themselves from dangerous sun exposure. <i>MS</i> participants primed to associate tanned skin with an attractive appearance have increased interest in tanning products and services.
	Taubman-Ben-Ari (2004)	MAPS	TV	None	Willingness to engage in risky sexual behaviors	Making mortality salient led to a higher willingness to engage in risky sexual behaviors, in comparison to a control conditions.
	Taubman-Ben-Ari, Florian & Mikulincer (1999)	MAPS FPDS	Food	Driving esteem: High / Low	1. Reported risky driving behaviors 2. Driving speed in video game	Mortality salience inductions led to more risky driving than the control condition only among individuals who perceived driving as relevant to their self-esteem.
	Taubman-Ben-Ari, Florian & Mikulincer (2000)	Car crash ad	Food ad	Driving esteem: High / Low	1. Reported risky driving behaviors 2. Driving speed in video game simulator	A road trauma film led to less reported intentions of reckless driving, but to higher driving speeds than a neutral film. These effects were only found among participants who perceived driving as relevant to their self-esteem.
	Fransen et al. (2008)	Showing the logo for a life insurance company	Showing the logo for a personal care product	None	Consumers' preferences for domestic and foreign food products.	Individuals who unconsciously observe a life insurance brand rate domestic products more favorably and foreign products less favorably than individuals in the control condition.
Brand Preference	Cutright et al. (2011)	MAPS	DP	System threat on consumption choices	Consumers' choice of national versus international brand among three pairs of items (cars, beer mugs and duffle bags)	Mortality salience leads to greater choice of national brands than the control condition.
	Jonas, Fritsche & Greenberg (2005)	1. MAPS 2. In front	1. DP 2. three	None	1. Reactions of Germans	1. A mortality salience prime led to a decreased liking of the new European currency compared to

		of funeral home	blocks away from the funeral home		towards new Euro and German Mark. 2. Preference of Germans towards German items and non-German items.	a control prime and marginally increased liking of German Mark. 2. Mortality salience participants preferred German items over non-German items.
	Friese & Hofmann (2008)	MAPS	DP	None	Rating of local versus foreign brand (soft drinks and chocolate)	Relative to control conditions, MS led to more accentuated evaluative preferences and greater actual consumption for local as compared to foreign products.
	Kasser & Sheldon (2000)	MAPS	Music	None	1. Prediction of future financial worth 2. Greed	MS leads to higher financial expectations for participants, in terms of both their overall worth and the amount they spend on pleasurable items. MS participants became greedier and consumed more resources in a forest-management game.
	Mandel & Heine (1999)	FDS	Depression Scale	None	Valuing of high-status products (Rolex, Lexus)	High-status items are evaluated more favorably by individuals who are subtly reminded of their own mortality than by control subjects.
Materialism	Fransen, Fennis, Pruyn & Das (2008) – exp1	Insurance brand logo	No brand logo	None	Intention for excessive spending	Explicit exposure to an insurance brand increases the accessibility of death-related thoughts, which, in turn, increases personal spending intentions.
	Rindfleisch, Burroughs & Wong (2009)	FDS MAPS	DP	None	Brand connection	The fear of death encourages materialistic individuals to form strong connections with their brands.
	Choi, Kwon & Lee (2007)	Survey on fear of becoming a terrorist victim	The same survey	Self-esteem: High/Low Ego involvement in material: High/Low	Brand name consumption & compulsive consumption	People with a greater fear of becoming a terrorist victim showed a greater tendency for brand name consumption and compulsive consumption.



	Lee & Shrum (2008)	MAPS	DP	Self-esteem: High/Low	Extrinsic goal aspiration (financial success)	MS leads to stronger financial success goal orientation, especially among subjects with low self-esteem.
	Bonsu & Belk (2003)	Death of a loved one		None	Spending on the funeral	In the Asante society in Ghana, after someone dies, bereaved relatives spend outlandish amounts (the equivalent of five times their annual incomes) for ostentatious and highly competitive displays of material and social wealth in elaborate death-ritual performances.
	Christopher et al. (2006)	DPO, high	DPO, low	None	Materialism	Concerns about one's own death and materialism were positively related to each other. Personal insecurity partially mediated the relationship between concerns about one's own death and materialism.

Note: Abbreviations are listed in alphabetical order under the relevant column title. Blank cells mean that the information was not available in the original study. Heading abbreviations: DV=dependent variable; IV=independent variable; MS=mortality salience. Study abbreviations: exp=experiment. MS group abbreviations: DP=Death Perspectives Questionnaire (Spilka et al., 1997); FDS=Fear of Death Scale (Boyar, 1964); FPDS =Fear of Personal Death Survey (Florian & Kravetz, 1983); MAPS=Mortality Attitude Personality Survey (Rosenblatt, Greenberg, Solomon, Pyszczynski & Lyon, 1989), which asks participants to write one sentence about what first comes to mind when they think about their own death and about what will happen when they are literally dead.

## ***Prosocial Behavior***

Past research on prosocial behavior has mainly investigated the effect of MSS on individuals' evaluations of charities, their willingness to engage in socially conscious behavior, and their actual prosocial behavior. Overall, studies have shown that MSS can enhance prosocial attitudes and behaviors. Three major findings are of note in this area of research. First, it has been found that MSS improves individuals' evaluations of charities. For example, Jonas et al. (2002) found that individuals interviewed in front of a funeral home reported more favorable attitudes toward charities than those interviewed three blocks away from the funeral home. This finding has been replicated in studies where MSS was manipulated by asking participants to answer death-related questions (e.g., Joireman and Duell 2007). In addition, Joireman and Duell (2007) found that an individual's self-transcendent values moderate the effect of MSS on the individual's evaluations of charities. In particular, their studies revealed that MSS led participants who rated high in self-transcendent values to evaluate charities more favourably (vs. a control group), whereas MSS had no such impact on participants with low self-transcendent values.

Second, it has been shown that MSS can elevate one's willingness to engage in socially conscious behaviors. For example, Hirschberger, Ein-Dor, and Almakias (2008) report that willingness to donate money to the Caring Heart organization was significantly greater in the mortality salience condition compared to the control condition. However, this effect of MSS disappeared when individuals were asked to donate organs. Moreover, individuals' self-esteem was found to moderate the effect of MSS on socially conscious behaviors. For example, Ferraro, Shiv, and Bettman (2005) found that MSS significantly increased an individual's intention to

engage in socially conscious consumer behaviors if virtue was a source of his self-esteem. In contrast, they found that MSS decreased this intention if virtue was not a source of an individual's self-esteem.

Lastly, studies have shown that MSS can promote individuals' actual prosocial behavior. For example, Jonas et al. (2002) and Hirschberger et al. (2008) found that after answering questions about their own death, individuals gave more money to charities than those who answered questions on a control topic. In addition, there is evidence for an in-group bias towards donations to charitable foundations. For example, Jonas et al (2002) reported that following an MSS prime, U.S college students donated more money to U.S. charities than to foreign charities. Furthermore, individual differences have been found to moderate the effect of MSS on prosocial behavior. For example, Joireman and Duell (2005) found that MSS encouraged charitable donations among proselves (i.e., those who value their own well-being), but not among prosocials (i.e., those who value the well-being of others). Moreover, Ferraro et al. (2005) reported that MSS increased the amount donated to charities among individuals who considered helping others as a source of self-esteem. In contrast, the effect of MSS was not significant among individuals who didn't consider helping others to be a source of self-esteem.

### ***Food Choice***

Past research on food choice has investigated the effect of MSS on consumption quantity and choice of food. Two major findings are of note in this area of research. First, it has been shown that MSS can increase the purchase and consumption of food. For example, Mandel & Smeesters (2008) found that consumers who had recently been reminded of their

impending mortality wished to purchase higher quantities of food products and actually ate larger quantities than their control counterparts. Furthermore, this effect of MSS was moderated by individuals' self-esteem. Specifically, MSS can increase amounts of purchasing and consumption among consumers with low self-esteem, but not among those with high self-esteem (Mandel & Smeesters 2008).

Second, studies have demonstrated that individual differences can moderate the effect of MSS on choice of food. For example, Ferraro et al. (2005) found that following MSS manipulation, individuals were more likely to choose chocolate cake over fruit salad, but only when they were low in body esteem. In contrast, for individuals with high body esteem, MSS could lead to restricted eating. For example, Goldenberg, Arndt, and Brown (2004) found that women in the MSS condition ate less of a nutritious but fattening snack food that might compromise efforts to maintain an attractive figure. The restricted eating effect of MSS was more prevalent among women who ranked high in body mass index scores.

### ***Risk Taking Behavior***

Past research on risk taking behavior has investigated the effect of MSS in the context of driving, diving, gambling, and health-related behavior. The major finding in this area of research is that MSS can lead to a higher intention to undertake risky endeavors, and this effect is moderated by individuals' self-esteem. For example, in the context of driving behavior, MSS has been found to increase risky driving behavior, both in self-reports and on a driving simulator, among those who value their driving ability as a source of self-esteem (Taubman-Ben-Ari, Florian, and Mikulincer 1999, 2000; Miller and Mulligan 2002). Furthermore, in the context of

diving behavior, MSS could lead to greater willingness to take risks in diving among divers for whom diving was an important source of self-esteem (Miller and Taubman Ben-Ari 2004). Moreover, in the context of gambling, in a task of choosing between a high-payoff/high-risk and a low-payoff/low-risk option, MSS can lead to individuals with high, but not low, self-esteem to favor the high-risk option (Landau and Greenberg 2006). Meanwhile, in the context of health-related risk-taking behaviors, research has indicated that MSS can elevate the intention of smoking and lower the likelihood of quitting smoking among individuals who consider smoking to be a means of self-esteem, in comparison to those who don't (Martin and Kamins 2010; Hansen, Winzeler, and Topolinski 2010). Likewise, MSS can lower an individual's intention to protect oneself from dangerous exposure to the sun if getting tanned is related to his or her self-esteem (Routledge, Arndt, and Goldenberg 2004).

### ***Brand Preference***

Past research on brand preference has investigated the effect of MSS on a consumer's preference for domestic and foreign brands. The major finding in this area is that people tend to prefer domestic brands over foreign ones when mortality is salient. For example, Friese and Hofmann (2008) found that after answering death-related questions, individuals reported stronger preferences and greater actual consumption of local brands as compared to foreign brands of soft drinks and chocolate. This effect of MSS on brand preferences has been replicated in other product categories, such as cars, beer, mugs, duffle bags, currencies, travel destinations etc. (Cutright et al. 2011; Jonas, Fritsche, and Greenberg 2005). The robustness of these results has been demonstrated through different manipulations of MSS, such as

subliminally exposing participants to a life insurance brand logo (Fransen et al. 2010), and interviewing participants in front of a funeral home (Jonas et al. 2005).

### ***Materialistic Consumption***

Past research on materialistic consumption has investigated the effect of MSS on preference for high-status products, financial goal aspirations and excessive spending. Overall, it has been found that MSS can increase materialistic consumption. Three major findings are of note in this area of research. First, it has been shown that MSS can elevate consumers' preference for high-status products. For example, Mandel and Heine (1999) found that after answering death-related questions, compared with those in a control condition, individuals expressed more favorable attitudes towards high-status products such as luxury vehicles and watches, but not towards low-status products such as economical vehicles and snacks. Likewise, Kasser and Sheldon (2000) found that MSS resulted in a stronger emphasis on the future accumulation of luxury possessions. In line with this, Choi, Kwon, and Lee (2007) reported that individuals with a greater fear of becoming a terrorist victim tended to choose prestigious brands and preferred to buy products with designer names. Moreover, Heine, Harihara, and Niiya (2002) found consistent results in a non-Western culture and showed that MSS could also increase the tendency of Japanese subjects to prefer high-status over low-status products. Studies also revealed that MSS can encourage materialistic individuals to form stronger connections and attachments to their high-status brands (Rindfleisch, Burroughs, and Wong 2009).

Second, studies have shown that MSS can promote one's financial goal aspirations. For example, Kasser and Sheldon (2000) found that individuals in the MSS condition had higher financial expectations in terms of their future overall financial worth, compared with those in the control condition. Similarly, Lee and Shrum (2008) reported that MSS can promote individuals' goal orientation toward financial success. Furthermore, their results also indicated the moderating effects of self-esteem. Specifically, they found that MSS individuals with low self-esteem would be more likely to focus on financial success than MSS individuals with high self-esteem.

Lastly, MSS has been found to encourage excessive spending. For example, Fransen et al. (2010) found that after being exposed to a life insurance logo, individuals reported a higher inclination for excessive spending on entertainment and food, compared to a control group. Likewise, Kasser and Sheldon (2000) reported that MSS can increase individuals' expectation of the amount they will spend on pleasurable items. Furthermore, one's ego involvement was found to moderate the effect of MSS on excessive spending. Specifically, MSS participants who saw acquisition and possession of material objects in relation to self-concept were more likely to exhibit excessive spending, compared with mortality salient participants who didn't link material objects with self-concept (Choi, Kwon, and Lee 2007).

In summary, past mortality salience research on consumer behavior has mainly focused on MSS. The few studies on MSLO have mainly emphasized how MSLO may remind individuals of their own mortality. It was even suggested that MSLO individuals' responses might follow the patterns of MSS individuals' (e.g., Greenberg et al., 1994; Davis & McKearney, 2003; Bonsu &

Belk, 2003). The present research extends past research by arguing that MSS and MSLO should be distinguished from each other as two distinct constructs due to their different impacts on individuals' self-concept and negative emotions.

### **MSS, MSLO and Self-Concept**

To understand how MSLO differs from MSS, it is essential to know what loved ones signify within one's self-concept. Belk (1988) uses the terms "self," "sense of self," and "identity" as synonyms for how a person subjectively perceives who he or she is. Specifically, Belk (1988) sees consumers as possessing a core self that is expanded to include items that then become part of the extended self. For example, an individual's "body, internal processes, ideas, and experiences" are likely to be part of his core self, whereas the "persons, places, and things to which he feels attached" are more likely to be seen as part of his extended self. The argument that the self is part of an associative network that includes others with whom we have strong social ties was shared by other researchers. A century ago, James (1890/1950/1963) had already referred to the notion of the family as a possession: "*a man's self is the sum total of all that he can call his, not only his body and his psychic powers, but his wife and children, his ancestors and friends, his reputation*" (pp. 291-292). Regarding the specific relationship between our loved ones and the self, Freud (1915) described how "*these loved ones are inner possessions, components of our own ego.*" Dittmar (1992) also suggested that it is common for people to psychologically experience the connection between self and various modes of possession including other people. Through empirical studies, Aron et al. (1991) have shown that close relationships (e.g., friendship, parent-child, and marriage) entail a



fusion of identities in which one's sense of self grows to include loved others. The idea of close relationships as including others within the notion of the self is also elegantly expressed in Lgvinger and Snoek's (1972) Venn diagrams, which draw on the idea that in a close relationship, the person acts as if some or all aspects of the partner are partially the person's own.

Because loved ones are inseparable components of our self-concept, thoughts of the death of a loved one will consequently implicate one's sense of self. The death of a loved one, posited as an extreme loss to us, is listed among the most stressful life events on the Social Readjustment Rating Scale presented by Holmes and Rahe (1967). Evidence reveals that the bereaved perceives the loss of the loved person as subtracting an important part of his self-identity from him; therefore, part of him no longer actively exists (Staudacher, 1987). Hence, based on the aforementioned research on self-concept, one's own death brings about the termination of self, whereas the death of a loved one radically alters the survivor's sense of self, since part of him no longer actively exists. As a result, based on Belk's (1988) notion of self-concept, when mortality is salient, MSS will threaten one's core self, whereas MSLO will threaten one's extended self. Therefore, MSS and MSLO individuals have to deal with different anxieties induced by the threat accordingly.

Based on Terror Management Theory (TMT), a MSS individual primarily deals with his existential anxiety, because death means the termination of his core self (e.g., Becker 1971, 1973). This study argues that because a MSLO individual's extended self is modified, he then has to deal primarily with eternal-separation anxiety concerning a loved one. Separation anxiety has attracted a great deal of attention on the part of psychoanalysts and behaviourists.

For example, Freud (1926) considered the early experience of separation from one's protective mother as the prototypical anxiety situation. Similarly, behaviourists argue that separation anxiety may be conditioned or prompted by one's innate reactions to separation from a loved one (Blandin, Parquet and Bailly, 1994). In his attachment theory, Bowlby (1973) discussed the importance of the profound bio-psychosocial transitions occasioned by the eternal separation from loved ones through death (Bowlby, 1982; Parkes, 1996; Stroebe, 2002). Therefore, it is possible that a MSLO individual's separation anxiety prevails over his existential anxiety. This argument was tested in a pilot study. Specifically, 100 college students were asked to name a loved one who was very important in their life (82 participants mentioned a parent figure). They were then asked to describe their first reaction to the thought that someday this loved one would die (see Table 2). Only 11% of the participants expressed anxiety and fear over their own death, whereas a majority (70%) of participants expressed thoughts related to the eternal separation from the loved one, such as confusion and disorientation, longing, a lost or changed identity, hardship in coping with the loss, behavioural or mental dysfunctions, and searching or questions concerning the meaning of life. This result is consistent with Liu and Aaker's (2007) research on the mortality salience of close friends. Thus, due to their different impact on one's self-concept, it is necessary to distinguish MSLO from MSS and explore their respective effects on consumer behaviour.

Table 2: MSLO Participants' (Sample Size: 100) First Reaction

<p><b>Behavioural/mental dysfunction</b></p> <p><i>e.g. I would be deeply saddened and likely not be able to resume normal daily life for an extended period of time</i></p>	<b>24</b>
<p><b>Confusion &amp; disorientation</b></p> <p><i>e.g. wouldn't really know what to do or how to move on.</i></p>	<b>21</b>
<p><b>Hardship in coping the loss</b></p> <p><i>e.g. would have a hard time getting through it.</i></p>	<b>17</b>
<p><b>Avoidance the thinking</b></p> <p><i>e.g. don't even want to think about it</i></p>	<b>19</b>
<p><b>Thought of terminating one's self existence</b></p> <p><i>e.g. I want to die when I think of this person dying</i></p>	<b>11</b>
<p><b>A lost/changed identity</b></p> <p><i>e.g., he's my best friend and part of myself. I'd feel like a part of mine is dead too.</i></p>	<b>17</b>
<p><b>Searching/questioning meaning in life</b></p> <p><i>e.g. feel empty because lost someone something meaningful in my life.</i></p>	<b>4</b>
<p><b>Longing</b></p> <p><i>e.g. wish I could have him back. My days would seem longer and more lonely.</i></p>	<b>3</b>

## MSS, MSLO and Negative Emotions

Past terror management studies assumed that MSS individuals developed two psychological mechanisms to buffer fear resulting from their existential anxiety. This research argues that MSLO individuals may deal with different negative emotions since they have to buffer eternal-separation anxiety instead. To understand the emotional difference between MSS and MSLO participants, 707 university students were asked to list emotions related to their own death or the death of a loved one. Their answers were coded independently by two coders, using a scheme adapted from emotion research (Fehr & Russell, 1984). Agreement between the two coders was 0.94 over the entire corpus of responses and discrepancies were resolved by discussion. In all, 686 units of emotion-related information were collected among 357 MSLO participants; while 445 units were collected among 350 MSS participants (see Table 3). The emotions associated with death are multifaceted; therefore, some subjects provided more than one emotional key word in their answers. Emotion words were categorized based on Laros and Steenkamp's (2005) study. Statistically speaking, MSLO participants ( $M=1.92$ ) provided more units of emotion information than MSS participants ( $M=1.27$ ,  $\chi^2=84.8$ ,  $p<0.001$ ). Moreover, MSLO participants tend to add significantly more adverbs such as "very", "extremely", or "deeply" to amplify the arousal of emotion (83 cases, 12%) compared to MSS participants (10 cases, 2%,  $\chi^2=148$ ,  $p<.001$ ). Overall, the dominant emotions mentioned by MSS and MSLO participants are "fear" and "sadness" respectively (Table 3). Specifically, 219 out of 350 MSS participants mentioned fear (e.g., afraid, scary, terrified, fear). In contrast, 315

out of 357 MSLO participants mentioned sadness (e.g., depressing, sadness, upset). These results indicate that fear may be the dominant emotion for MSS individuals, whereas sadness may be the dominant emotion for MSLO individuals.

Table 3: Emotions Induced By MSS and MSLO

<b>MSS (350)</b>	<b>MSLO(357)</b>
<p><b>Fear (187)</b></p> <p>afraid (2) / scared, scare, scary, scared (68)/ scared to die, scared like hell (2) / fear, fearful (64), great fear, intense fear, lots of fear, powerful fear, total fear, serious fear (7) / frighten, frightened (5)/ terrified (2) /horrifying (2)/dreadful (1)/ dread, dreadful (2)/ freaked out (1)/angst (1)/ panic, panicked (4)/anxiety, anxious (16)</p>	<p><b>Fear (51)</b></p> <p>Fear (24)/ scared (6)/ a lot of scare (1)/ intense terror (1)/horrible, horrifying (5)/ terrified (2)/ panic (4)/anxiety, anxious (8)</p>
<p><b>Sadness (65)</b></p> <p>sad, sadness (54) / deeply sad (1)/ upset (1)/ grieve (1)/Depressed, Depressing (8)</p>	<p><b>Sadness (259)</b></p> <p>Sadness, sad (132)/ a lot of sadness, extreme sadness, deep sadness, great sadness, incredible sadness, total sadness, unexplainable sadness, very much sadness, horrible sadness, very sad, really sad, extremely sad, deep completely sad, deeply saddened, very saddened (50)/ upset, upsetting (5)/ very upset, so truly upset (4)/Depression, depressed, depressing, depressive (56)/ very depressed, really depressed, extreme depressed, extremely depressing, deep depression, completely depressed (10)/ melancholy (2)</p>

<b>Curiosity, Curious, intrigue (18)</b>	<b>Curiosity (1)</b>
<b>Indifference (17)</b> apathy (3)/ indifference (1)/ impartial (1)/ no emotion (4)/ none (5) / nothing major (3)	<b>Indifference (2)</b>
<b>Uncertainty, indefinite (8)</b>	<b>Uncertainty (1)</b>
<b>Lonely, loneliness, desolation (7)</b>	<b>Lonely, loneliness (36)</b> Loneliness, lonely (33)/ incredible loneliness, very lonely (3)
<b>Painful, Pain (7)</b>	<b>Pain (31)</b> Pain, painful (20)/ deep pain, intense pain, lots of pain, extremely painful (4)/ agony (2)/ hurt (3)/ deeply emotional hurt (1)/ distress (1)
<b>Confused, Confusion (5)</b>	<b>Confused, Confusion (12)</b> Confused, confusion (11)/ incomprehension (1)
<b>Angry (4)</b> Angry, anger (2), anguish (1), resent (1)	<b>Anger (41)</b> Angry, anger (35), rage (3), resentment (3)
<b>Overwhelmed (4)</b>	<b>Overwhelmed (1)</b>
<b>Unhappy, anguish (4)</b>	<b>Unhappy (2)</b>
<b>Empty, emptiness (3)</b>	<b>Empty, emptiness (28)</b>
<b>Bad (3)</b>	<b>Bad (3)</b> Bad (2), extremely bad (1)
<b>Disappointment, disappointed (3)</b>	<b>Disappointment (2)</b>

<b>Regret, regretful (3)</b>	<b>Regret, regretful (13)</b> Regret, regretful (11)/ remorse (2)
<b>Despair (2)</b>	<b>Despair (20)</b>
<b>Helpless (2)</b>	<b>Helpless (5)</b>
<b>Nostalgia (2)</b>	<b>Nostalgia (1)</b>
<b>Lost (1)</b>	<b>Lost (31)</b> Lost (29)/ incredible lost, completely lost (2)
<b>Hopeless (1)</b>	<b>Hopeless (5)</b>
<b>Sorrow (1)</b>	<b>Sorrow (8)</b> Sorrow (5)/ deep sorrow, immense sorrow (3)
<b>Frustrated (1)</b>	<b>Frustrated (4)</b>
<b>Disturbing (1)</b>	<b>Disturbing (1)</b>
<b>Vulnerability (1)</b>	<b>Vulnerable (1)</b>
<b>Not Scared (16)</b> not scared (5)/ not afraid (3)/no fear (5)/no frightened (3)/no real panic (1)	
<b>Happy (14)</b> Happy, happiness (9)/ pleasurable(2)/ joy (1)/ content (2)	
<b>Nervous (7)</b>	
<b>Worry, worried (7)</b>	
<b>Peaceful (17)</b> Peaceful, peace, peacefulness (14), at	

peace (2), at rest (1)	
<b>Relief, relieve (5)</b>	
<b>Excited, exciting, excitement (3)</b>	
<b>Comfort (2)</b>	
<b>Not worried (2)</b>	
<b>Grim (2)</b>	
	<b>Devastating (19)</b>  Devastating, devastated (15)/ destroyed (3)/ absolutely devastating (1)
	<b>Grief (17)</b>  Grief (13)/ great grief, intense grief, uncontrollable grief (4)
	<b>Shock (10)</b>  Shock (9), very shocking (1)
	<b>Distraught (5)</b>  Distraught (4)/ bewildered
	<b>Heartbreaking, heartbroken (5)</b>
	<b>Insecure (5)</b>
	<b>Unfair (4)</b>  Unfair, unfairness (2)/ injustice (2)
	<b>Stressed (4)</b>
	<b>Denial (2)</b>
	<b>Incomplete (2)</b>



	<b>Powerless (2)</b>
	<b>Abandonment (2)</b>
	<b>Disbelief (3)</b>
	<b>Guilty (2)</b>
	<b>Numbness (2)</b>
<b>Others (18)</b>  Concern (1), complacency (1), frustrated (1), insufficientness (1), mystery(1), nauseous (1), not bad (1), not upset (1), pity (1), relaxing(1), surprise (1), tense (1), uncomfortable (1), uneasy (1), unfair (1), vulnerability (1), suck (1), fucked up (1), doubt (1)	<b>Others (13)</b>  Betrayal (1), bitterness (1), coldness (1), crippling (1), discomfort (1), disgust (1), disorientation (1), hatred (1), incapacitated (1), isolation (1), miserable (1), suffering (1), unbearable (1)

Past studies have shown that the meaning structures underlying fear and sadness are different, which may lead to different motivations for subsequent behaviors (Frijda, Kuipers, and Ter Shure 1989, Lazarus 1991). Specifically, fear is defined by high uncertainty over an outcome and low control over a situation. Raghunathan and Pham (1999) suggest that fear motivates individuals to reduce the sense of uncertainty and regain the sense of control. For example, in modern materialistic societies, status possessions can provide a sense of control, stability and continuity in an otherwise less stable existence (Vinsel et al. 1981). As a result, fear might drive MSS individuals to favor material possessions (e.g., Kasser & Sheldon 2000). On the other hand, sadness is defined by the loss or absence of a cherished object or person (Lazarus 1991). Raghunathan and Pham (1999) suggested sadness motivates individuals to seek

pleasurable stimuli as a suitable replacement or compensation for the loss. For example, experiences can better remind people of the pleasure they shared with their loved ones than can materialistic possessions (Van Boven 2005). As a result, sadness might drive MSLO individuals to favor experiences. Overall, MSS and MSLO may lead to divergent effects on consumer behaviors, reinforcing our call for distinguishing between MSS and MSLO.

The abovementioned content-analyzed emotions are the *immediate reaction* to the death thought. In terror management literature (Greenberg, Solomon, and Pyszczynski 1997), after manipulation, participants were normally asked several filler questions before completing the Positive and Negative Affect Scale (PANAS), which measures affect (Watson, Clark, and Tellegen 1988). The purpose of filler tasks was to allow time for activation to spread, while removing thoughts of death from immediate consciousness (Greenberg et al. 1994, Arndt et al. 2003). After all, there is normally a delay between a death thought and our consumption behavior in our daily lives. So, to understand how MSS and MSLO individuals differ in emotional response, a further pilot study was conducted to check the subjects' emotions after some temporal delay. Specifically, 77 participants in a marketing class were randomly assigned to answer questions related to their own death, the death of a loved one, or seeing a dentist. After the manipulation, participants finished a filler task and filled out a revised PANAS, which includes the original 20 emotion items in the scale and measurement for "fear" and "sadness". Specifically, the items to measure these two emotions are embedded in the PANAS. Fear is measured by "afraid", "scared", "frightened" and "nervous"; while sadness is measured by

“sad”, “blue”, “upset”, “gloomy”, and “depressed”. The items are rated in a 0-5 scale, where 0 indicates “not at all” and 5 indicates “very much”.

ANOVA on PANAS items revealed insignificant treatment effects on general negative affect, positive affect and fear ( $p > .30$ ), and significant treatment effect on sadness ( $F(2,74) = 3.11, p = .05$ ). Pairwise comparison indicates that the treatment effect on sadness is mainly contributed by the significant difference between MSS ( $M = .89$ ) and MSLO ( $M = 1.86, p = .05$ ). In a word, this test revealed that MSS participants’ mood states are unaffected by the manipulation relative to control participants’ after a temporal delay, which is consistent with previous terror management literature (Arndt et al, 2003). Because fear implies threat, participants managed to place the stimuli into their unconscious attention and buffer the fear effectively. However, sadness has a different mechanism. When MSLO participants are primed by the thought of losing a loved one through death, they are significantly sadder than MSS participants and control participants, even after a temporal delay. Therefore, it is necessary to distinguish between MSS and MSLO in mortality salience studies, so that the effect of sadness may be accounted for in understanding the effect of MSLO on consumer behaviours.

### **Future Studies on MSS and MSLO**

This paper briefly reviewed past consumer research on MSS and addressed the importance of distinguishing MSLO from MSS. By presenting empirical evidence of the different impacts of MSS and MSLO on self-concept and negative emotions, this paper argues that simply analogizing MSS with MSLO may not be sufficient. Therefore, future studies can complement

existing mortality salience studies in three ways. First, researchers can conduct experiments to compare the effects of MSS and MSLO on certain consumer behaviours such as brand preference and product choice. Second, if the empirical evidence shows divergent effects, researchers can further explore the underlying mechanisms that explain the divergence in the context of consumption. Third, researchers can further examine variables such as relationship intensity that may moderate the effects of MSLO. In particular, this research provides below several suggestions for future studies.

#### *The Manipulation of MSS and MSLO*

Past research has applied several methods to manipulate MSS, such as directly asking participants to answer two open-ended questions regarding their own death, exposing them to gory video scenes or death-priming news, asking them to fill out the fear of death inventories, or interviewing them in front of a funeral home (Boyar 1964; Greenberg et al. 1994; Nelson et al. 1997). The studies reviewed above show that past research has only used an open-ended questions approach to manipulate both MSS and MSLO (e.g., Greenberg et al. 1994).

Specifically, MSS participants responded to questions such as: (a) "Please briefly describe the emotions that the thought of your own death awakens in you" and (b) "Describe, as specifically as you can, what you think will happen to you as you physically die and once you are physically dead." In contrast, MSLO participants firstly chose a loved one to keep in mind and responded to questions such as: (a) "Please briefly describe the emotions that the thought of this loved one's death arouses in you," and (b) "Describe, as specifically as you can, what you think will happen to this loved one as he or she dies, and once he or she has died." Future research can

replicate this manipulation approach in the studies. An alternative method to manipulate MSS and MSLO could involve asking participants to fill out the Collett-Lester fear of death sub-scale (Collet & Lester, 1969) on death of self, or death of a loved one, respectively (see Appendix 1). The underlying logic of this manipulation approach is that the sub-scales can activate participants' thoughts related to MSS or MSLO accordingly. Future research could try to verify the effectiveness of this manipulation method.

### *The Measurement of Fear and Sadness*

As shown in our pilot study, content analysis shows that fear is the dominant emotion for MSS participants, and sadness is dominant for MSLO participants. Therefore, fear and sadness might account for the divergent effects of MSS and MSLO. As a result, reliable measures of emotions are crucial if researchers intend to examine the possible mediating roles of fear and sadness. In our pilot studies, participants' self-reports via PANAS reveal that sadness among MSLO participants lingers, while fear among MSS participants quickly fades. The effects of MSS on participants' affect are consistent with past mortality salience studies. Past research has shown that as a coping strategy, MSS individuals tend to remove thoughts of death from their immediate consciousness (Greenberg et al. 1994). As a result, fear evoked by MSS could be active in MSS individuals' subconscious mind (Arndt et al. 2004). Under this circumstance, self-report measures of emotion cannot accurately reflect individuals' emotional reactions to mortality salience manipulation. Thus, emotion measures based on brain states such as electroencephalography (EEG) and neuroimaging may be better measurement tools for fear and sadness evoked by MSS and MSLO.

### *The Moderators of the Effect of MSLO*

There are three possible moderators of the effect of MSLO that future research can investigate. The first one is relationship intensity. Previous studies have shown that the degree to which a given person perceives his loss after the death of a loved one depends on how close (or engaging or mutually dependent) the relationship was (Levinger 1992). As a result, the strength of the relationship with a loved one may influence the effect of MSLO. For example, MSLO individuals may be significantly sadder when thinking of the death of a deeply beloved parent than their counterparts who consider the death of a moderately beloved parent. The second moderator is the “who” of the loved one, which is somehow correlated to relationship intensity. For example, in general, it could be that for a college student MSLO related to a parent may lead to more intensive sadness than MSLO related to a distant uncle. In his attachment theory, Bowlby (1973) claimed that a child’s attachment to a caregiver (e.g., a parent) is instinctive; the loss of a parent terminates the financial, emotional and instrumental support for the child. In comparison with parental loss, loss of other significant loved ones for a college student, such as girlfriend or boyfriend, or siblings, might not always lead to the same consequences (Harvey 1998; Genevro, Marshall, and Miller 2004). Hence, future research could assess the effect of MSLO when different family members are considered (e.g., parents, spouse, siblings, children etc.). The third moderator of the effect of MSLO is the participant’s life stage, which can be measured by age. On average, younger people, such as high-school students who are still in their youth, may be less concerned about their own deaths compared to older members of the population (Martens et al. 2004). Furthermore, they have less experience of

losing a loved one through death compared to their elders (Harvey 1998). As a result, for younger people, MSS and MSLO might activate the concept of death as a more temporally distant concern in its connection to themselves and to their loved ones. Future research could provide a valuable service by recruiting participants from different age groups to examine how the effects of MSS and MSLO differ as a function of age or past experience.

In summary, the present research opens promising new directions in the incorporation of MSLO within the existing mortality salience studies. This article aims at informing and facilitating further research with the goal of distinguishing MSLO from MSS and disclosing how MSLO affects consumer behavior. This new line of research may provide a more comprehensive understanding of the relationship between an individual's thoughts of death and consumer behavior.

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**Appendix 1:** The Collet-Lester (Collet & Lester, 1969) Fear of Death Sub-Scales

Here is a series of general statements. You are to indicate how much you agree or disagree with them. Read each item and decide quickly how you feel about it; then record the extent of your agreement or disagreement.

-3	-2	-1	+1	+2	+3
Strong	Moderate	Slight	Slight	Moderate	Strong
disagreement	disagreement	disagreement	agreement	agreement	agreement

Death of self (MSS manipulation)

I would avoid death at all costs.

The total isolation of death frightens me.

I would not mind dying young.

I view death as a release from earthly suffering.

I am disturbed by the shortness of life.

The feeling that I might be missing out on so much after I die bothers me.

Not knowing what it feels like to be dead does not bother me.

The idea of never thinking or experiencing again after I die does not bother me.

I am not disturbed by death being the end of life as I know it.

Death of a loved one (MSLO manipulation)

I would experience a great loss if someone close to me died.

I accept the death of loved ones as the end of their life on earth.

I would easily adjust after the death of someone close to me.

I would like to be able to communicate with the spirit of a loved one who has died.

I would not mind having to identify the corpse of a loved one.

I would never get over the death of someone close to me.

I do not think of death people as having an existence of some kind.

If someone close to me died, I would miss him/her very much.

I could not accept the finality of the death of a loved one.

It would upset me to have to see a loved one who was dead.