

Brand Attitude:

The Role of Social Presence in Mortality Salience Effects

K.V. Ludwig Psychology University of Twente 29th august 2008

First supervisor: Marieke L. Fransen Second supervisor: Loes Janssen

Abstract

The current research is based on Terror Management Theory, which provides a framework to examine the effects of mortality salience on consumer behaviour. A hypothesis claims when mortality is made salient, people will evaluate a more luxurious brand more positively than a less luxurious brand. Additionally this effect will become stronger when individuals are aware that others will evaluate their behaviour. The present findings show that reminding people of their own death enhances brand attitude, especially under the influence of social presence. The results indicate that the perceived luxury of the brand is the underlying factor that determines the effects of mortality salience and social presence, which can affect consumer behaviour.

BRAND ATTITUDE: THE ROLE OF SOCIAL PRESENCE IN MORTALITY SALIENCE EFFECTS

Understanding the factors explaining consumer behaviour has been the ultimate goal of marketers for ages. A reasonable share in determining behaviour has been ascribed to human needs. The motivations accounting for human behaviour have been formulated by Maslow (1943) in his basic needs pyramid. At the bottom of the pyramid the so-called lower needs such as physical needs and health needs are located. Needs such as social needs, esteem needs, and self-actualisation are located at the top of the hierarchy being called higher needs. When applying Maslow's implementations to consumer behaviour it can be inferred that variety in purchase decisions might be caused by the motive a consumer currently strives to satisfy.

Fulfilling functional concepts thus satisfying lower needs by the consumption of food, the providing of clothes and shelter is existential to humans. But also symbolic and experiential concepts that correspond to higher needs, play an essential role in consumerism (Park, Jaworski, & MacInnis, 1986). Purchase choices can be made to express social images (Solomon, 1983) and wealth (Levy, 1959), to gain love and companionship, or are simply for pleasure or the sake of possessing (Blackwell, Miniard, & Engel, 2006). The consistence of what a product expresses and the need the consumer values induces the formation of an attitude of the product, which ultimately guides the behaviour performed (Homer & Kahle, 1988).

At times consumers are aware of the effects their needs and values have on them. The conscious process of motivational influence is called need recognition and occurs when a discrepancy between the actual state of the consumer and the desired state is detected (Blackwell et al., 2006). Mostly however people are unaware that they are driven by motives. One of the concepts activating an unconscious influence of needs is the fear of death.

1

Reminders of death have been detected to be responsible for variety in behaviour by addressing social and esteem needs (Greenberg, Pyszczynski, & Solomon, 1986). Recently the effect of death-related thoughts has been applied to consumer behaviour (Arndt, Solomon, Kasser, & Sheldon, 2004a; Maheswaran & Agrawal, 2004; Rindfleisch & Burroughs, 2004; Arndt, Solomon, Kasser, & Sheldon, 2004b; Fransen, Fennis, & Pruyn, 2008). It has been argued that, because of the considerable importance of material value and consumption in the Western world, it is legitimate to consider mortality implications to influence product attitudes and behaviour. In accordance with this people spend more money rather than save it (Cohen, Grodkiewicz, Glushakow, Aiello, & Solomon, 2005), have a greater preference for brand name consumption and consume more compulsively (Choi, Kwon, & Lee, 2007) when reminded of their own death.

The purpose of the current study is to explain consumer behaviour, namely brand attitude, under the influence of death-related thoughts. The underlying question is whether the attitude towards luxury brands changes by making mortality salient and whether mortality salience interacts with social presence. Expanding former research by the interaction with another situational factor, a deeper insight into the applicability of fear of death in consumer research will be provided by this article.

Terror Management Theory

Terror Management Theory (Greenberg et al., 1986) is a developing area of study that provides a theoretical explanation for differences in human social behaviour. The theory is based on the assumption that humans share an instinctive drive with all animals, the drive to stay alive. But because of unique cognitive abilities humans are aware that death is inevitable. The combination of this instinctive drive of self-preservation with the awareness of human mortality can potentially engender a "paralysing terror". To cope with this terror people use either proximal or distal defence mechanisms, which serve as an anxiety-buffer (Pyszczynski, Solomon, & Greenberg, 1999). Proximal mechanisms are conscious strategies in response to a conscious awareness of one's own death. Repression, rationalisation and denial are used to alter conscious and cognitive perceptions thus coping with the fear of death. When reminders of death are central to focal attention people deal with their fear by overstating their health and hardiness, promising themselves to live more healthy (Pyszczynski, Greenberg, & Solomon, 2000) or simply denying their vulnerability (Greenberg, Pyszczynski, Solomon, Pinel, Simon, & Jordan, 1993).

Distal mechanisms are unconscious defence strategies and control a threat of death by means of a cultural anxiety buffer consisting of two components. First of all people create a cultural view of the world which provides a sense of meaning for life, standards for behaviour, and the possibility of literal or symbolic continuity of existence. The second component is self-esteem which can be gained by living up to the standards of the cultural worldview. The function of self-esteem is to buffer against the terror resulting from the horrifying thought of inescapable human mortality (Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004). Self-esteem provides protection by decreasing anxiety. Correspondingly, raising self-esteem reduces the impact of vivid images of death on anxiety (Greenberg et al., 1992). Because of the importance of these components to create an anxiety-buffer against the terror of death, it is believed that great effort is put into the enhancement or maintenance of self-esteem and one's own cultural worldview. One's ideology protects against the possibility that humans are merely transient beings destined to spend life in a meaningless world and eventually die. The need to give life a meaning promotes the protection of the worldview and an increase in self-esteem decreasing anxiety caused by the terror of death. Indeed, substantial research has provided evidence for the effect of unconscious awareness of one's own death and the engagement in distal defence mechanisms.

In one of their first studies Rosenblatt, Greenberg, Solomon, Pyszczynski, and Lyon (1989) found that judges being reminded of their own death assigned a much higher bond for an alleged prostitute than judges in the control condition (Ms =\$455 and \$50, respectively). Yet they also found that mortality salience leads to a greater deterioration of the violation of cultural values while at the same time mortality salience boosts the appraisal of people upholding cultural values. Thus mortality salience not only triggers disapproval of those who threaten their own worldview but also the praise of those who promote it. In congruence with this finding Schimel et al. (1999) found that Euro-Americans prefer minority members like African Americans and homosexual men who conform to cultural norms to members of their own group who deviate from cultural norms. In a series of studies mortality salience evoked a more positive evaluation of a pro-American author and a more negative evaluation of an anti-American author, elicited more agreement with immigration policies by Germans, and inhibited American students from ruining an American flag and from using a crucifix to solve a problem (Greenberg, Solomon, & Pyszczynski, 1997). All participants either refrained from acting contradictory to their cultural ideology or blindly defended it when reminded of mortality. Mortality salience was even found to encourage actual physical aggression towards someone who had attacked the participant's worldview before (McGregor et al., 1999).

These findings provide proof for the influence of mortality salience on both self-esteem and cultural worldview defence. Whether the impact has a positive or negative tendency depends on which norm is being activated. Adaptive in-group behaviour is generally appreciated while divergent behaviour and out-group values are despised. Since in-group favouritism and out-group bias are associated with prejudices, racism, and other negative stereotypes the effects of mortality salience seem to have a negative appeal. However, it has been proved that the triggering of norms like tolerance elicited more positive reactions. Greenberg, Simon, Pyszczynski, Solomon, & Chatel (1992) primed subjects to think about their own morality, which led to more positive evaluations of dissimilar others when openmindedness was ingrained in their political ideology.

Concluding one can say that mortality salience reinforces norm conforming behaviour. The norms and values emerge from people's believes about appropriate behaviour. People acting accordingly are the only ways to prove their accuracy, which is existential for their maintenance. Because protecting one's worldview is the goal of someone threatened with his mortality, the cultural norms are highly appreciated. Furthermore a person living up to the norms is well respected. Being approved by others is a confirmation of proper behaviour, which boosts self-esteem. The conformance to the cultural values thus reinforces the validity of the ideology and provides a source of self-esteem, because one demonstrates to be a worthy member of society.

Distal Defence Mechanisms and Consumer Behaviour

The investigation of the impact of mortality salience has recently been extended to the field of consumer behaviour (Arndt et al., 2004a; Maheswaran & Agrawal, 2004; Rindfleisch & Burroughs, 2004; Arndt et al., 2004b; Fransen et al., 2008). This extension is based on the assumption that consumerism and materialism can be seen as important values of the Western worldview and are therefore also likely to be influenced by the thought of one's own death. According to Arndt et al. (2004a), to the extent that consumerism and materialism are included in a worldview it can be influenced by mortality salience.

Indeed, people seem to have higher financial expectations for their own future and engage in higher resource consumption in a social-dilemma situation when mortality is salient (Kasser & Sheldon, 2000). In order to fulfil the cultural norm of consumerism and to live up to their worldview people alter the quality and quantity of their consumption. Therefore highstatus products are evaluated more favourably and low-status products less favourably when participants are subtly reminded of their own death (Mandel & Heine, 1999). This could be confirmed by research conducted by Choi et al. (2007). The analysis of their survey among US citizen showed that people with a greater fear of becoming a victim of terrorism also showed a greater tendency for brand consumption and compulsive consumption. Because of the importance ascribed to material value in the US, people seem to find comfort in the consumption of goods when mortality is salient. In a study by Cohen et al. (2005) students were asked to hypothetically allocate money for consumption, savings, and/or charity. Participants induced with thoughts of death spend significantly less money for savings than those in the control condition. Apparently, when thinking about their death people are more thinking about what is important to them in the present and are not as willing to wait for a long-term savings bond to mature. However the applicability of Terror Management Theory in consumer behaviour is still at an initial stage and little is know about the underlying mechanisms. The present paper aims to address this issue.

Social Presence

The influence of death related thoughts on behaviour is based on the assumption that selfesteem is gained by proving to be a valuable member of society through conforming to cultural norms. Yet proper and improper behaviour is validated by others seen as worthy representatives of one's worldview. Thus it can be argued that the urge to enhance one's selfesteem by living up to social standards is driven by the evaluation of others rather than by the own perception of appropriate behaviour. Therefore what people do if they perceive their actions to be public often differs a lot from what they do if they believe to be in private. In his Social Impact Theory Latané (1981) proposed that a change in behaviour can be elicited by the mere presence of others. This can be confirmed in a study by Van Rompay, Vonk, & Fransen (2008) in which participants displayed more helping behaviour when a surveillance camera was present than it being absent.

In the field of consumer research it is argued that not only death anxiety promotes consumerism but that social forces play a role, too. Since the social environment partially influences the development of material value it would also have an influence on consumer behaviour (Rindfleisch & Burroughs, 2004). In accordance with this argumentation a public choice of candy bars has been found to lead to more variety-seeking behaviour, than a private choice, despite the fact that one had to choose less favourable products. People engaged in this behaviour because they believed that more variety in their choice would be evaluated more positively by others (Ratner & Kahn, 2002). A similar effect of mere social presence on choice was found in a retail setting. Participants chose the more luxurious brand significantly more often when others were present, than when they were alone (Argo, Dahl, Manchanda, 2005).

Concluding from these studies it can be stated that people engage in certain behaviour simply to impress others. This impression management is used as a strategy to gain acceptance, by acting in ways expected to be evaluated positively by others (Ariely & Levav, 2000). A basic need of belonging and acceptance by others was already identified by Maslow (1943) in his hierarchy of motivational needs. According to this hierarchy the people's behaviour is marked by their strivings to satisfy their needs. This includes the ambition to maintain relationships which motivates people to adapt their behaviour to societal norms. A comparable motive system was proposed by Pyszczynski, Greenberg, and Solomon (1997) in line with the Terror Management Theory. Desired end states, they declare, are evoked by different motives, which explain human behaviour. The motives are ranked in a set order with concrete behaviour at the bottom and more and more abstract goals towards the top. Yet all motives are ultimately driven by life preservation instincts. Therefore, they argue, people care about what others think of them and engage in behaviour to create favourable impressions because people depend on these others to maintain their worldview. Accordingly fear of death is managed by social acceptance through enhancing self-esteem.

Inferring from Terror Management Theory and other research a reminder of death promotes the defence of one's worldview, which causes people to appreciate social norms and to conform to them. The apparent value of consumerism and materialism in Western society should thus also be influenced by thoughts of one's own death. In accordance with the effect of death-related thoughts on the worldview, luxury will be appreciated more when mortality is salient. Concluding the attitude of luxurious brands can be enhanced by reminding people that they will eventually die. The implication that others will approve or disapprove of the attitude boosts the evaluation of a brand as well. Hence, it is proposed that social presence plays a moderating role in the relation between mortality salience and brand attitude. Based on the aforementioned research the following hypotheses could be derived:

- H₁: Participants reminded of their mortality will evaluate a luxurious brand more positively than participants in a control condition.
- H₂: Social presence moderates the effect of mortality salience on brand attitude for a luxurious brand in such a way that the effect of mortality salience on the brand attitude is stronger under conditions of social presence. This effect is not expected for a control brand.

Adapted from the hypotheses a conceptual model has been specified, shown in figure 1. The model depicts the relationships expected for the brand attitudes.

8



Figure 1. Conceptual model for brand attitude

In the following the study, which was set up to test this model, is described. After presenting and analysing the results attained from the collected data a conclusion for future research will be drawn.

Method

Design and Participants

The current study used a 2 (mortality salience vs. control condition) x 2 (social presence vs. control condition) x 2 (luxury brand vs. control brand) design with the first two factors as between subjects factors and the last factor as a within subject factor. One-hundred-and-nineteen students (44 male and 75 female) from the University of Twente took part in this study. Participants were between 18 and 28 years old with an average age of 21.43 (SD = 2.19). Forty-seven percent of the participants were Dutch and the remaining fifty-three percent were German. Participants received either course credit or 6€ for participating in the study.

Procedure

On arrival in the lab the experimenter placed each participant in a separate cubicle with a computer that provided all further instructions. After answering some demographic questions, participants were randomly assigned to one of the four experimental conditions to which the experimenter was blind. First, participants in the experimental condition received a mortality

salience manipulation while participants in the control condition were questioned about taking an exam. Next, participants had to fill in two extensive personality questionnaires as filler action to distract them from conscious thoughts about the mortality manipulation, before evaluating the brands in form of two value-expressive advertisements. A previous research has shown that mortality salience effects mainly occur after the distraction from conscious thoughts about death (Greenberg, Pyszczynski, Solomon, Simon, &, Breus, 1994). To make participants aware of the social presence in the experimental condition it was stated that their answers would be seen and evaluated by another student. In the control condition no such statement was made.

Measures

Mortality salience. Participants were asked two open-ended questions to arrange the experimental setup. In the mortality salience condition participants were asked to answer questions concerning their thoughts and feelings about their own death: (1) "Please briefly describe the emotions that the thought of your own death arouses in you," and (2) "Please write down, as specifically as you can, what you think physically will happen to you as you die." (cf. Greenberg, et al., 1997). Participants in the control condition answered the same questions concerning a difficult exam (cf. Heine, Harihara, & Niiya, 2002). This alternative questioning for the control condition was chosen because all participants were students. The questions about an exam were thus aligned with the context of the participants.

Social Presence. The concept of social presence was activated by telling half the students their ratings would be evaluated by another student. The other half of the participants did not receive this message. This manipulation served to give participants the feeling that another person would see their answers and therefore could approve or disapprove the ratings, they would make.

Advertisement. The stimuli for the dependent variable consisted of two valueexpressive advertisements of German car brands. Value-expressive appeals were used, because they are more likely to be processed on peripheral cues like appearance and address the consumer's image (Johar & Sirgy, 1991). For the luxury brand an advertisement for the S-Class by Mercedes (see Appendix A) was used and an advertisement for Opel Vectra (see Appendix B) was chosen to represent the control brand. A pilot study was conducted to assure a significant difference with regard to luxury between the two brands. Participants (N = 16) were asked to indicate on a seven-point Likert scale which rate of luxury they associated with each brand. The Mercedes (M = 5.69) was rated higher than the Opel (M = 3,69), as expected (F(1, 15) = 36.92, p < .001). There was no difference between gender (F(1, 14) < .001, p =1) or nationality (F(1, 14) < .001, p = 1) as might have been the case for German cars.

Brand evaluation. To evaluate the advertised brand, participants had to answer a questionnaire about product attitude (Berens, 2005). Although the questions stated asked about the product the only clue which could serve as basis for the evaluation was the brand of the car. Therefore, the evaluations represent the attitude towards the brand, which was confirmed by participants' remarks. The eight items ($\alpha = 0.9$) of the scale represented the three dimensions quality, appeal, and reliability. The dimensions quality and appeal were indicated by three items respectively and reliability was measured by two items (see Appendix C). Each item was rated on a seven-point Likert scale from very low agreement to very high agreement. All items were summed up and divided by eight to achieve an average score which was used for the analysis.

Results

In order to test the proposed hypotheses a 2 (mortality salience vs. control condition) x 2 (social presence vs. control condition) x 2 (luxury brand vs. control brand) ANOVA with

repeated measures on the last factor, was performed. Eleven participants were excluded for the analysis because of strongly deviant data. The results did not find a significant main effect of brand (F(1, 103) = 0.97, ns), yet nationality was found to be a significant covariate (F(1, 103) = 11.47, p = .001) and was therefore included in the analysis. The attitude towards the Mercedes and the attitude towards the Opel were found to be equal. Furthermore, a significant three-way interaction effect was detected between brand, mortality salience and social presence (F(1, 103) = 4.44, p = .04). This three-way interaction confirms the second hypothesis which states that the influence of social presence on mortality salience will only be present for the luxurious brand, but not for the control brand. The two-way interactions between mortality salience and brand (F(1, 103) = 2.17, ns) and between social presence and brand (F(1, 103) = 1.44, ns) were not significant. There was no indication to assume there would be a difference, therefore these findings were not included into the hypotheses. The results of means and standard deviations per group are displayed in table 1.

		Social Presence		Control	
		Mean	SD	Mean	SD
Mercedes	Mortality Salience	5.6	.15	5.1	.15
	Control	5.2	.15	5.4	.15
Opel	Mortality Salience	4.83	.1	4.51	.1
	Control	4.85	.1	4.49	.1

 Table 1

 Mean Attitude Ratings and Standard Deviations of Luxurious and Control Brand

An additional ANOVA could not support the first hypothesis to be true for the Mercedes. It was predicted that mean attitudes towards the luxurious brand would be more positive for the mortality salience group than for the control group. Ratings of the luxury brand indicated about equal attitude means for the mortality salience and control group (F(1, 103) = .07, ns). The main effect of social presence was also not significant (F(1, 103) = .77, ns), but an interaction effect for the Mercedes (F(1, 103) = 5.77, p = .02) was revealed. This is in line with the second hypothesis predicting an increasing influence of social presence on attitude means in the mortality salience group for the luxurious brand. Indeed, participants' attitude towards the Mercedes was more positive in the mortality salience condition with social presence (M = 5.6, SD = .15) than the attitude of participants without social presence manipulation (M = 5.1, SD = .15). In contrast people in the control condition rated the brand less positively with social presence (M = 5.2, SD = .15) than participants without social presence is not supported by earlier research. The findings concerning the luxury brand are presented in figure 2.



Figure 2. Mean brand attitude ratings for the luxury brand

For the control brand significant main effects were found for mortality salience (F(1, 103) = 4.99, p = .03) and for social presence (F(1, 103) = 6.35, p = .01). Participants' attitude towards the Opel was more positive in the mortality salience condition (M = 4.83, SD = .1) than participants' attitude in the control group (M = 4.51, SD = .1). Likewise participants' evaluations in the social presence condition (M = 4.49, SD = .1). The main effect of mortality salience and social presence were not included in the hypotheses, but the findings of an enhancing effect of both manipulations are consistent with earlier research. According to the second hypothesis an interaction effect was not expected to be found for the control brand. As predicted the interaction between mortality salience and social presence was not significant (F(1, 103) = 0.05, ns). Figure 3 depicts the mean attitude ratings for the control brand.



Figure 3. Mean Attitude ratings for the control brand

Summing up this study could confirm the second but not the first hypothesis. Although, there was no main effect of mortality salience for the luxury brand as predicted by the first hypothesis, a significant interaction of mortality salience with social presence was found. A significant enhancing effect of mortality salience on attitude was found for the control brand. Additionally, a main effect of social presence was detected. Therefore, the study supported the hypothesis of an interaction between brand, mortality salience, and social presence. Yet the rather decreasing effect of social presence on brand attitude for the luxurious brand was unexpected. Below the results and possible reasons for the deviant outcomes will be discussed.

Discussion

The current study was performed to investigate the role of death-related thoughts comparing a luxurious brand to a control brand. The determining factors have been extended to general social presence and the interaction of social presence with mortality salience.

An interaction between mortality salience and social presence for the luxury brand and main effects of social presence and mortality salience for the control brand could be identified by the present study. These findings have shown that mortality salience, social presence, and the luxury of the brand interactively influence the attitude towards a brand.

Based on Terror Management Theory (Greenberg et al., 1986) it was expected that a luxurious brand would be evaluated more positively under the influence of mortality salience and that this effect would even be stronger when social presence was implied. This is confirmed by the present study. Mortality salience did indeed promote a positive attitude of the luxurious brand, when social presence was indicated. The reversed effect was found for the control group which received no mortality salience manipulation. Control group participants who received a social presence manipulation had a less positive brand attitude than people who did not receive the manipulation. It was surprising that participants tended to express a more negative attitude when manipulated with either mortality salience or social presence compared to people in the condition without mortality salience and without social presence. However these differences were not significant, therefore, they could be related to nationality which has been found to be a covariate in this study.

According to research performed by Fransen, Fennis, Pruyn, & Das (2008) national products are preferred to foreign products when reminded of one's own death. However, certain foreign products, including German cars, are considered status-products and are often preferred to local brands (Batra, Ramaswamy, Alden, Steenkamp, & Ramachander, 2000). This is quite noteworthy as there are no comparable Dutch car brands. The pilot study, performed prior to the study, confirmed that German and Dutch students equally indicated a significant difference of perception between the brands' luxury. Nonetheless, the small difference between nationalities about the advertised brands in the actual study, which was identified as covariate, could be the reason for the distortion causing the unexpected results of the control group for the luxury brand.

The attitude rating of the control brand was equal to the luxury brand, yet the effects of mortality salience and social presence were rather different. Making mortality salient to the participants enhanced the mean attitude significant as well as indicating social presence. In contrast to the luxury brand an interaction of the two effects could not be found.

A significant difference in luxury between the two brands was confirmed by the pilot study with Opel scoring about average and Mercedes scoring well above average. Therefore Opel did not account for a non-luxurious brand, for which expected results would have been different. But according to the pilot study Opel is still a less luxurious brand than the Mercedes and was accredited as a control brand. In spite of the perceived differences in luxury the mean attitude scores of the control brand did not differ significantly from the mean attitude score of the luxury brand. It can therefore be assumed that variance in attitude ratings elicited by mortality salience and social presence is due to the difference in luxury.

A factor that was not included in this study is the possible influence of the advertisements used. In order to prevent differences in the groups due to the advertisement appeal, two value-expressive advertisements have been chosen. The value-expressive appeal addresses the consumer's image and therefore encourages the expression of the self-concept (Johar & Sirgy, 1991). There are several self-concepts that can be activated. Being reminded of death nationality or luxury are considerable self-concepts people wish to defend (Fransen et al., 2008; Mandel & Heine, 1999). Given two different nationalities the priming of a defence motive versus an impression motive is a determinant that could be responsible for variance in the results. Referring to this, when a defence motive was activated foreign students would be more likely to evaluate the brand more negatively than when an impression motive was activated (Maheswaran & Agrawal, 2004). In the current study the luxurious car supposedly stimulates an impression motive, but it is also possible that a defence motive was provoked. Because both brands were evaluated by each student and the number of Dutch and German students was comparable it is unlikely that differences in the motive account for the results. Furthermore, by taking the appeal into account other features might have an effect. Factors like the positioning of the car and the environment of the car potentially account for preference expressions of the participants. Future research needs to establish whether different motives cause variation in attitudes of a brand and if so under what circumstances which motive is being activated and what factors influence the activation.

Despite some minor influences caused by two nationalities included, this study provided further insight into the effects of mortality salience in the field of consumer behaviour. In fact, a consumer's attitude can be influenced by death-related thoughts and by social presence as well. In contrast to earlier studies, this study combined the two concepts and revealed differences in the relationships with regard to the luxury of the brand. It has been assessed that an interaction effect for a luxury brand and main effects of mortality salience

17

and social presence for a control brand are caused by the luxury of the brand. This study has suggested further variables that need to be considered when determining the influence of reminders of death on consumer behaviour.

Concluding one can say that marketers need to consider that most in-store purchases occur under some sort of social presence. As shown by this study the influence of mortality salience in combination with social presence differs according to the luxury of the brand. Moreover, social presence adds to the effect of mortality salience on consumer-related behaviour. This implies that individuals ascribe extra desirability to material value when others evaluate their behaviour. Therefore, the luxury of the brand needs to be regarded when using reminders of death to promote a positive attitude which benefits purchase intentions.

References

- Argo, J.J., Dahl, D.W., & Manchanda, R.V. (2005). The influence of a mere social presence in a retail context. *Journal of Consumer Research*, *32*(2), 207-212.
- Ariely, D., & Levav, J. (2000). Sequential choice in group settings: Taking the road less travelled and less enjoyed. *Journal of Consumer Research*, 27, 279-290.
- Arndt, J., Solomon, S., Kasser, T., & Sheldon, K.M. (2004a). 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 revisited: Further reflections on applying terror management theory to materialism and consumer behavior. *Journal of Consumer Psychology*, 14(3), 225-229.
- Batra, R., Ramaswamy, V., Alden, D.L., Steenkamp, J.E.M., & Ramachander, S. (2000). Brand of local and nonlocal origin on consumer attitudes in developing countries. *Journal of Consumer Psychology*, 9(2), 83-95.
- Berens, G., Van Riel, C.B.M., Van Bruggen, G.H. (2005). Corporate associations and consumer product responses: The moderating role of corporate brand dominance. *Journal of Marketing*, 69(3), 36-48.
- Blackwell, R.D., Miniard, P.W., & Engel, J.F. (2006). *Consumer Behavior*. Mason, OH: Thomson South-Western.
- Choi, J., Kwon, K., & Lee, M. (2007). Understanding materialistic consumption: A terror management perspective. *Journal of Research for Consumers*, *13*, 2007.
- Cohen, F., Grodkiewicz, J.P., Glushakow, J.M., Aiello, J. R., & Solomon, S. (2005). Split Decisions: The effects of mortality salience on consumption, savings, and charity. Unpublished Manuscript.

- Fransen, M.L., Fennis, B.M., & Pruyn, A.Th.H. (2008). You are what you (don't) eat and like in public: The role of cultural norms and social presence in mortality salience effects. Manuscript submitted for publication.
- Fransen, M.L., Fennis, B.M., Pruyn, A.Th.H., & Das, E. (2008). Rest in peace? Brandinduced mortality salience and consumer behavior. *Journal of Business Research* (2007), doi:10.1016/j.jbusres.2007.09.020
- Greenberg, J., Pyszczynski, T., & Solomon, S. (1986). The causes and consequences of a need for self-esteem: A terror management theory, in public self and private self, Ed. Roy F. Baumeister, New York/Berlin: Springer-Verlag, 189-192.
- 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, 229-251.
- Greenberg, J., Pyszczynski, T., Solomon, S., Simon, L., & Breus, M. (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., Simon, L., Pyszczynski, T., Solomon, S., & Chatel, D. (1992). Terror management and tolerance: Does mortality salience always intensify negative reactions to others who threaten one's worldview? *Journal of Personality and Social Psychology*, 63(2), 212-220.
- Greenberg, J., Solomon, S., & Pyszczynski, T. (1997). Terror management theory of selfesteem and cultural worldviews: Empirical assessments and conceptual refinements. In Mark P. Zanna (Ed.), Advances in experimental social psychology, 29, Academic Press, 61-139.

- Greenberg, J., Solomon, S., Pyszczynski, T., Rosenblatt, A., Burling, J., Lyon, D., et al. (1992). Why do people need self-esteem? Converging evidence that self-esteem serves an anxiety-buffer function. *Journal of Personality and Social Psychology*, 63(6), 913-922.
- Heine, S.J., Harihara, M., & Nijya, Y. (2002). Terror management in Japan. Asian Journal of Social Psychology, 5(3), 187-196.
- Homer, P.M., & Kahle, L.R. (1988). A structural equation test of the value-attitude-behavior hierarchy. *Journal of Personality and Social Personality*, *54*(4), 638-646.
- Johar, J.S., & Sirgy, M.J. (1991). Value-expressive versus utilitarian advertising appeals: When and why to use which appeal. *Journal of Advertising*, *20*(3), 23-33.
- Kasser, T., & Sheldon, K.M., (2000). Of wealth and death: Materialism, mortality salience, and consumption behavior. *Psychological Science*, *11*(4), 348-351.
- Latané, B. (1981). The psychology of social impact. American Psychologist, 36(4), 343-356.
- Levy, S.J. (1959). Symbols for sale. Harvard Business Review, 37, 117-124.
- 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.
- Maheswaran, D., & Agrawal, N. (2004). Motivational and cultural variations in mortality salience effects: Contemplations on terror management theory and consumer behaviour. *Journal of Consumer Psychology*, 14(3), 213-218.

Maslow, A.H. (1943). A theory of human motivation. Psychological Review, 50, 370-96.

McGregor, H., Leiberman, J., Greenberg, J., Solomon, S., Arndt, J., Simon, L., et al. 1999. Terror management and aggression: evidence that mortality salience motivates aggression against worldview-threatening others. *Journal of Personality and Social Psychology*, 74(3), 590-605.

- Park, C.W., Jaworski, B.J., & MacInnis, D.J. (1986). Strategic brand concept-image management. *Journal of Marketing*, 50, 135-145.
- 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), 1-20.
- Pyszczynski, T., Greenberg, J., & Solomon, S. (2000). Proximal and distal defense: A new perspective on unconscious motivation. *Current Directions in Psychological Science* 9(5), 156-160.
- Pyszczynski, T., Greenberg, J., Solomon, S., Arndt, J., & Schimel, J. (2004). Why do people need self-esteem? A theoretical and empirical review. *Psychological Bulletin*, 130(3), 435-468.
- Pyszczynski, T., Solomon, S., & Greenberg, J (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.
- Ratner, R.K., & Kahn, B.E. (2002). The impact of private versus public consumption on variety-seeking behavior. *Journal of Consumer Research*, 29(2), 246-257.
- 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.
- Rosenblatt, A., Greenberg, J., Solomon, S., Pyszczynski, T., & Lyon, D. (1989) Evidence for terror management theory: I. 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.
- 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.

- Solomon, M.R. (1983). The role of products as social stimuli: A symbolic interactionism perspective. *Journal of Consumer Research*, *10*(3), 319-329.
- Van Rompay, T.J.L., Vonk, D.J., & Fransen, M.L. (2008). The eye of the camera: Effects of security cameras on helping behaviour. *Environment and Behavior*, in press.

Appendix A



EVEN CARS NEED A HERO.





Appendix B



Appendix C

Product Attitude Items

Quality.

- How favourable is your judgement of this product?
- What do you think about the quality of this product?
- What do you think about the quality of this product in comparison with similar products?

Appeal.

- Do you find this product sympathetic?
- Do you find this product attractive?
- Does this product give you a pleasant feeling?

Reliability.

- Do you find this product reliable?
- Does this product give you a save feeling?