I Die Therefore I Buy

Applications of Terror Management Theory to Consumer Behavior

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To my mom and grandpa

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If my doctor told me I had only six minutes to live, I wouldn't brood. I'd type a little faster.

—Isaac Asimov (1920 – 1992)

CHAPTER 1
General Overview

Terror Management Theory (e.g., Greenberg, Pyszczynski, & Solomon, 1986), which deals with the consequences of human mortality concerns, has in recent years become a very promising area of research in social psychology. Essentially, the theory suggests that mortality salience motivates people to (1) uphold and protect their cultural worldview and (2) strive for self-esteem. It is only recently, however, that these implications have been acknowledged in the disciplines of consumer research and consumer psychology. After introducing the reader to the theoretical framework of existential theory, Chapter 2 will thus provide and discuss first empirical evidence and adaptations of Terror Management Theory in the domain of consumer research.

This dissertation aims to further apply Terror Management Theory to consumer behavior and to extend the current standard of knowledge. To this end, Chapter 3 attempts to expand previous research by linking Terror Management Theory to the field of nostalgia. It has been argued that nostalgia serves the function of buffering the fear of one's own death, with nostalgic reflections helping people to overcome feelings of personal meaninglessness under mortality salience (e.g., Sedikides, Wildschut, & Baden, 2004). Hence, a series of five studies are presented, investigating participants' reactions towards either nostalgic or contemporary cars under mortality salience or control conditions. In Study 1, students were asked to evaluate a classic VW Beetle under mortality salience versus control conditions. A significant effect of condi-

tion was found, indicating a stronger preference towards the classic car under mortality salience. Study 2 then investigated participants' evaluation of a contemporary VW New Beetle, again under mortality salience versus control conditions. In this experiment a marginal but *opposite* priming effect was found. The contemporary beetle was evaluated less positively under mortality salience conditions. Studies 3-5 replicated these results employing a different priming procedure and a more complex study design and extended these to different brands (i.e., VW Golf and Mercedes SL) and a more heterogeneous study population (i.e., consumers). These studies were further able to demonstrate that the influence of mortality salience on preferences for nostalgic objects and antipathy towards contemporary objects was influenced neither by initial car preferences nor by their status appeal. As the results in Chapter 3 show, mortality salient individuals tend to prefer (nostalgic) products or brands that are culturally meaningful to them and to refrain from those (contemporary) products or brands that are not, on account of one crucial attribute (i.e., product age).

Chapter 4 aims to investigate whether consumers also gain cultural meaningfulness via a further important product attribute, namely local origin, and whether this is used as a source for their worldview protection efforts. In this context, previous research has revealed that mortality salience increases national consumer ethnocentrism (e.g., Jonas, Fritsche, & Greenberg, 2005). However, this chapter was designed to investigate whether a corresponding reaction is also evident at a local level. The investigations presented therefore aimed to determine whether this ethnocentrism effect was also to be found in preferences for products with a strong regional significance. In three studies, participants were asked to evaluate, categorize, and taste varieties of beer that came either from their hometown or from a rival city. Study 1 provided the very first evidence that only local beer – as compared to a for-

eign regional beer – acts as a cultural symbol that may support our local worldview. Study 2 tested whether people are actually able to identify "their" local beer, in order to establish whether this home-region-bias is due to taste differences or taste stereotypes. Results indicated that the preference for a local beer does not seem to have a gustatory basis, but is rather predominantly due to cultural stereotypes. Finally, Study 3 – in which participants were actually able to taste and rate one of the two beers - built upon the results of Study 1, expanded the findings to actual tastes and to people from both of the respective cities, and provided evidence that mortality salience does indeed influence preferences towards regional and foreign-regional marketing stimuli.

By summarizing the results of Chapters 3 and 4, Chapter 5 attempts to draw general conclusions concerning the applicability of Terror Management Theory to the field of consumer behavior, research, and marketing. Finally, recommendations for further conceptual as well as applied research are provided.

While Chapter 2 provides an overview of Terror Management Theory by summarizing previous research findings, it further aims to introduce the reader to the subsequent empirical Chapters 3 and 4. The goal of Chapter 5 is to summarize the findings of the entire dissertation by integrating these empirical results into the theoretical framework. However, as Chapters 3 and 4 are intended for submission to future publications, these chapters can be read separately. A certain amount of overlap is therefore to be found.

CHAPTER 2
Terror Management Theory and its Application to Consumer Behavior

2.1 Introduction

> *The idea of death, the fear of it, haunts the human animal like nothing else; it is a mainspring of human activity – activity designed largely to avoid the fatality of death, to overcome it by denying in some way that it is the final destiny for man.*
>
> —Ernest Becker (1973, p. xvii), *The Denial of Death*

For the majority of us, one of the most fundamental and frightening events in life is its coming to an end. The mere thought of our lethal fate is usually enough to scare us and even if we try not to think about it, our mortality comes to mind more or less frequently and conflicts with our instinct for self-preservation and self-determination. It is not the event of death itself that seems to constitute the basic conflict, but rather not knowing death's consequences and not having any control over it that can leave us with feelings of grief, sadness, and melancholy. In response to this, humans have developed several cognitive and behavioral strategies for the management of this existential problem. These strategies are described in "Terror Management Theory" (Greenberg et al., 1986; Solomon, Greenberg, & Pyszczynski, 1991).

The present dissertation addresses this human dilemma and its consequences, and further looks to examine how existential fears

influence our day-to-day consumer behavior. According to Terror Management Theory, people may overcome their fundamental fears by establishing a shared cultural protection system that provides their world with meaning, order, and stability. Since consumer products and brands may be seen as significant parts of our (consumer) culture (and, thus, parts of our cultural worldview), it will be investigated whether and under what circumstances certain (i.e., nostalgic and regional) commodities act as symbols that provide meaning by signifying our culture, worldviews, and identity and whether and why they are used by us as a means of ameliorating our existential fears. Before dwelling more on this applied consumer behavioral context, a deeper insight into the existential psychological basic framework of Terror Management Theory will be provided.

2.2 Terror Management Theory

> *All our knowledge merely helps us to die a more painful death than animals that know nothing.*
>
> —Maurice P. M. B. Maeterlinck (1862 – 1949)

Terror Management Theory is primarily based on the work of cultural anthropologist Ernest Becker and psychoanalyst Otto Rank, who in turn were inspired by the works of Freud, Nietzsche, and Darwin, regarding the protection from mortality concerns as a driving motivating force in human behavior (Becker, 1973; Rank, 1941; for an overview see Solomon, Greenberg, & Pyszczynski, 2004). Terror Management Theory posits that humans and animals share an instinctive drive for continued existence. Although we share this instinct with other species, only humans are aware of the inevitability of death. Our self-awareness enables us to recapitulate our past and anticipate our future up to our final day of life. Upon realizing that we will someday die, the combination of our instinctive

drive for self-preservation with the awareness of the inevitability of our own mortality can potentially engender a "paralyzing terror", a problem that, according to Terror Management Theory, can be resolved by creating, maintaining and protecting a cultural worldview (Greenberg, Solomon, & Pyszczynski, 1997; Solomon et al., 2004).

2.2.1 Cultural Worldview and Self-Esteem – the Two Components of the Anxiety Buffer

In contrast to animals, humans are able to build causal connections about reality, to conceive future events, and to be self-conscious. While on the one hand these cognitive skills help us to survive by enabling us to foresee the consequences of our behaviors, they also make us aware of aspects of existence that we simply cannot predict or control. We thus face an existential dilemma: we follow the instinct for self-preservation, and simultaneously know not only that death is inevitable but also that it can come suddenly (Becker, 1973). This clash engenders the potential for a paralyzing terror which can be controlled by means of a cultural anxiety buffer consisting of two components (Greenberg et al., 1997; Solomon et al., 1991): (a) a cultural worldview (i.e., a set of meaningful and stable value standards) through which individuals can gain a feeling of faith, death transcendence, and significance, that leads to (b) self-esteem, created by the belief that one is meeting the standards required by that cultural worldview.

In order to make this general mortality salience hypothesis applicable for experimental research, Greenberg and colleagues developed a paradigm according to which mortality salience is not regarded as an external constant, but rather as a condition which can be directly induced using different procedures. In their classic setting (Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989, Experiments 1-5), individuals in the mortality salience condition were required to complete the "Mortality Attitudes Personal-

ity Survey" in which they were asked two open-ended questions concerning "(a) what will happen to them as they physically die, and (b) the emotions that the thought of their own death arouses in them" (Rosenblatt et al., 1989, p. 682). In the control condition, there was either no parallel questionnaire or the same two questions pertaining to a neutral topic (i.e., eating salience). Alternative priming procedures were developed in several subsequent studies. Mortality salience was also successfully induced using fear-of-death-scales (Florian & Mikulincer, 1997; Rosenblatt et al., 1989, Experiment 6), when interviews took place in front of a funeral home (Jonas, Schimel, Greenberg, & Pyszczynski, 2002; Pyszczynski et al., 1996) or cemetery (Jonas et al., 2005, Experiment 2), by showing participants a severe automobile accident (Nelson, Moore, Olivetti, & Scott, 1997), by allowing them to ponder the events of September 11 (Ferraro, Shiv, & Bettman, 2005, Experiments 1 and 2), or by employing a subliminal priming procedure (Arndt, Greenberg, & Cook, 2002, Experiments 4-6; Arndt, Greenberg, Pyszczynski, & Solomon, 1997; Dechesne, Janssen, & Van Knippenberg, 2000; Landau, Goldenberg et al., 2006, Experiment 1).

Interestingly, people seemed to be motivated to actively avoid conscious death-related thoughts (e.g., by suppression or denying vulnerability; Arndt, Greenberg, Solomon, Pyszczynski, & Simon, 1997; Greenberg, Arndt, Simon, Pyszczynski, & Solomon, 2000) or to engage in behavior that may lead to longevity (e.g., adopting healthier lifestyles) directly after the priming procedure had taken place. These *proximal defense mechanisms* lead to an expeditious decrease in conscious death awareness. However, as terror management research has shown, such proximal reactions are successful in suppressing but not extinguishing these thoughts about death. Mortality remains unconsciously present and is of continued high salience. Humans are thus lead to employ equally unconscious *distal defense mechanisms*. Interestingly, these distal reac-

tions (i.e., belief in a cultural worldview and striving for self-esteem) often have no direct or logical connection to the problem of death itself and rather provide a *symbolic* defense against death by embedding us in a superordinate cultural system that is invulnerable to time and decay (contrary to this argumentation, but in accordance with Terror Management Theory, the cultural concept of religion also represents a *literal* defense mechanism). For a better understanding of the different experimental priming procedures, it should further be emphasized that these distal effects of mortality salience prove especially large under cognitive load (Arndt, Greenberg, Solomon et al., 1997) or when death-related thoughts are highly accessible but not in focal attention (e.g., after a delay or by distracting participants after the priming; Arndt, Greenberg, & Cook, 2002, Experiment 3; Greenberg, Pyszczynski, Solomon, Simon, & Breus, 1994). An extensive review of the cognitive architecture of Terror Management Theory – in particular the proximal defense mechanism – would distract this paper away from its original goal and is provided elsewhere (Arndt, Cook, & Routledge, 2004). This paper will mainly dwell on the more contra-intuitive distal processes mitigating mortality concerns – i.e., the need to validate and foster cultural worldviews and enhance self-esteem.

2.2.1.1 Implications of Mortality Salience 1: Belief in a Cultural Worldview

> *Don't (...) pay too much respect to such a simple fact as death – but without that simple fact, there would never have been either architecture nor painting, sculpture nor music, poetry nor any other art.*
>
> —Thomas Mann (1953, p. 458), *The Magic Mountain*

The first anxiety-buffering component, i.e., a cultural worldview, which can be regarded as constituting subjects' "beliefs about the

nature of reality" (Arndt, Solomon, Kasser, & Sheldon, 2004b, p. 199), provides our life with meaning, a sense of permanence, stability and order, and instills the hope of death transcendence within us. According to Terror Management Theory, the realization that we are a part of an enduring cultural system causes us to believe that we are a valuable part of a meaningful universe (Solomon et al., 2004). Modes of death transcendence differ strongly between cultures and might be categorized as literal (e.g., religious beliefs in an immortal soul or eternal happiness following death) or symbolic (e.g., through possessions, works of art, architecture, and science; or the "identification with entities longer-lasting than the self, such as the nation or the corporation", Greenberg et al., 1997, p. 65; Arndt, Solomon et al., 2004b; Greenberg, Schimel, Martens, Solomon, & Pyszczynski, 2001; Kasser & Sheldon, 2000; Lerner, 1997; Solomon et al., 2004; Wisman & Goldenberg, 2005; see also Chapter 4).

The most obvious cultural product that *literally* helps people to overcome the burden of their own fate is religion. Immortality of the soul, either in a sacred place such as "heaven" or "paradise" or back on earth as a reincarnated creature, is one of the basic promises of almost every church to those believers that act in accordance with its religious norms (Solomon et al., 2004). However, religion is not the only cultural artifact that helps people to bolster against mortality concerns. It would appear most plausible that artists, authors, academics, politicians, athletes, songwriters and interpreters, or other representatives of our (popular) culture are motivated by more than simply social or monetary benefits. To become famous and "make history" or to simply produce a work that outlives its creator's life is an alternative way of becoming *symbolically* immortal – at least for a certain period of time. Yet even without any manifest contribution to the cultural system, people themselves are part of their culture and their culture is a part of them.

Thus, since culture acts as a repository for people's selves, this part of their identity at the very least will continue to exist as an immortal "part" of their being. While literal and symbolic immortality beliefs may, however, conceptually seem to exclude one other, they do not always represent two separate and independent reaction schemes.

Strivings for literal and symbolical immortality unite, for example, in people's desire for offspring. On the one hand, 50% of our genes are literally passed on to our children and – albeit in a lower proportion – their offspring. Therefore, through our children and their descendents our genotype will partially survive our own demise. On the other hand, symbolical immortality can be achieved through our children either by their memory of us as loving parents or by the simple handing down of our possessions. Furthermore, the influence on our children during socialization directly turns them into inheritors of our cultural worldviews (Wisman & Goldenberg, 2005). From this perspective, it would appear logical that we are faced with a serious problem when we realize that our children do not act according to our worldviews.

In integrating them into a meaningful universe, a cultural worldview causes people to believe that they are a valuable being on earth, and thus reduces potential terror that may result from an awareness of one's own mortality. In order to verify whether they hold the "correct" worldview, people have to consensually validate their views by comparing them to those of others and check for dissenters who represent a potential threat to their view. Consequently, under conditions of high mortality salience people are strongly motivated to protect their worldview from anyone who holds different beliefs. How do people usually maintain their cultural worldview? When exposed to thoughts of death, people are inclined to reject those who support a different worldview by mak-

ing use of methods that can be categorized as behavioral or cognitive.

A severe *behavioral* response to worldview threat is aggression towards and even annihilation of people with dissimilar beliefs (McGregor et al., 1998; Florian, Mikulincer, & Hirschberger, 2001; Florian & Mikulincer, 1997; Rosenblatt et al., 1989). History reveals how people – more or less violently through missionary or bellicose activities – try to "convince" those of a different faith to adopt the "correct" worldview. An alarming effect of mortality salience on Iranian students' support of suicide attacks, for example, was examined by Pyszczynski et al. (2006, Study 1). Under mortality salience, participants preferred a bogus student who supported such attacks to one who opposed this view, whereas the opposite preference pattern was observed in control conditions. Additionally, those students exposed to a death prime also indicated that they were more likely to consider engaging in martyrdom actions themselves. Analogous results were found in a subsequent study of politically conservative American students and their support for extreme military interventions (Pyszczynski et al., 2006, Study 2).

As a measure of concrete aggressive behavior, McGregor et al. (1998) allowed participants to determine the amount of hot sauce given to an alleged target person who ostensibly did not like spicy food. Worldview consistency was manipulated by the provision of essays which the target person was said to have written and which either threatened (violation condition) or were consistent with participants' worldviews (consistence condition). Results provided evidence that people do indeed act more aggressively towards worldview violators when faced with their own mortality. In contrast to control conditions, mortality salience led participants to allocate more hot sauce to the target person that had ostensibly violated their worldview (but not to the target that had ostensibly written a

consistent essay), unless an alternative cognitive reaction was available (i.e., participants had the possibility to derogate the violator before allocating the hot sauce).

Penalization was investigated as a further behavioral response to targets who threaten our cultural worldview. Rosenblatt et al. (1989, Study 1), for example, allowed American judges to set bonds for an alleged prostitute. In this context, it is worth mentioning that prostitution is an infringement in most states of the USA and can thus be regarded as a behavior proving contradictive to judges' worldviews. It is therefore not surprising that under mortality salience, the mean bond set by the judges was $455 compared to $50 in a control condition.

Mortality salience influences our behavior towards people that do not share our cultural worldview and, correspondingly mediates our general adherence to cultural norms. Greenberg, Porteus, Simon, Pyszczynski, and Solomon (1995), for example, had participants use cultural symbols (i.e., a crucifix and an American flag) in an inappropriate way. In their experiment, participants were required to accomplish two tasks: (1) hang a crucifix on the wall and (2) separate a mixture of sand and black dyed liquid. Although participants were permitted to use a number of items presented on a table, only two items were provided with which they could accomplish these tasks efficiently. A successful task performance required using the crucifix to hammer the nail into the wall and the American flag as a "filter" to separate the sand from the black dye. While all participants completed the tasks, participants in the mortality salience condition required more time, found the tasks more difficult, and felt tenser while working on them, indicating that the violation of a cultural norm contradicts our existential need to act in accordance with our cultural worldviews.

Not only behavior towards cherished cultural symbols but also related attitudes may be influenced by mortality concerns. Jonas et al. (2005), for example, discovered that in comparison to control participants, Germans in a mortality salience condition decreased their support for the introduction of the Euro. In explaining this *cognitive* response, the researchers postulated that the former German Mark was a national symbol of Germany's economic power and central to German's national identity. Since the introduction of the new European currency represented a threat to this symbol of the participants' worldview (one consequence of the Euro introduction was the abolition of national currencies), the Euro was devaluated under mortality salience.

Other cognitive responses to worldview threat include prejudice and discrimination towards worldview violators, increased stereotypic thinking, derogation of individuals and beliefs inconsistent with one's own worldview, and increased ethnocentrism (e.g., Castano, Yzerbyt, & Paladino, 2004; Dechesne, Janssen et al., 2000; Greenberg et al., 1990; McGregor et al., 1998; Schimel et al., 1999; see also Chapter 3). In a study by Greenberg et al. (1990, Study 1), for example, Christian participants were asked to evaluate both a Christian and Jewish target person. Under mortality salience as compared with control conditions, the Christian target was evaluated more positively and the Jewish target more negatively. This result suggests that the Jewish person was perceived as a threat to participants' (Christian) worldviews solely on the basis of his or her different set of beliefs. Study 3 found similar results for non-religious targets who either praised or criticized participants' worldview. Again, it was shown that mortality salience induces negative cognitive reactions towards opponents of one's own worldviews.

However, devaluation and increased stereotyping are only two possible cognitive strategies, which help to provide our worldview with meaning and stability in the face of mortality concerns. Depending on our socialization and evolutionary background, other reaction mechanisms are conceivable. Arndt, Greenberg, and Cook (2002), for example, discovered that under mortality salience conditions, the accessibility of nationalistic words in a word fragment completion task was enhanced only for men. Women were observed to react less nationalistically as long as their home country America was not explicitly primed – and thus became a salient part of their worldviews – prior to mortality salience induction. This study provided evidence for dispositional and situational differences in the relevance of worldview components. For women, words related to romantic relationships proved more accessible, indicating gender specific differences in worldview-relevance – i.e., nationalistic worldview constructs for men and romantic relationship constructs for women. In this context, striving for romantic relationships can be seen as an alternative reaction to existential threat, in helping to secure our worldview (e.g., through the concept of 'eternal love' or the prospect of offspring) as well as boosting our self-esteem (e.g., gain in personal value through being loved by another person). Mikulincer, Florian, and Hirschberger (2003) even extend the dichotomic view of cultural worldviews and self-esteem as sole distal terror management strategies to include close relationships as an alternative third defense mechanism. They posit that relationships reduce death-related anxieties (e.g., through emotional relief provided by proximity to self-important others) and provide an alternative source of symbolic immortality (e.g., through children or a persistent social identity beyond death). They argue that from an evolutionary perspective, a person's striving for close relationships constitutes the basic inborn biological reaction to external threats and that it can thus be seen as more or less independent of world-

view defense and self-esteem strivings, both of which are socialized reactions. This third distal defense mechanism indeed appears to represent a promising area for future conceptual research. However, for the context of this paper, it seems sufficient to rely on a dual existential protection system consisting on the one hand of the need to engage in cultural worldview validation and in self-esteem enhancement on the other. The latter of these is to be introduced in the following.

2.2.1.2 Implications of Mortality Salience 2: Striving for Self-Esteem

> *What we have done for ourselves alone dies with us; what we have done for others and the world remains and is immortal.*
>
> —Albert Pike (1809 – 1891)

According to Terror Management Theory, the second anxiety-buffering component – self-esteem – functions as a personal characteristic that develops when people discover that they are a valuable part of and significant contributor to a meaningful cultural universe (Greenberg et al., 1997). Individuals are able to enhance their self-esteem by gaining the assurance that they are meeting the standards and values – or their subjective interpretation – of the culture they belong to; i.e., when they perceive that they are acting in accordance with their cultural worldview. Nevertheless, there are also self-esteem deficient humans who choose wrong compensatory behaviors, which end in destruction for the individual or community. As most cultural standards are not fixed as laws, rules, or in the form of the Ten Commandments, they are frequently constructed and (re-)interpreted by the individual. Misconceptions may be a painful and often socially unacceptable consequence. An example can be found in the anorexic woman who starves herself to death, despite being hungry, in order to meet –

and exceed – a culturally prescribed standard of thinness. Being addicted to drugs, committing crimes, and seeking domination over others may also be seen as maladaptive efforts to increase self-esteem and, thus, manage existential terror (Salzman, 2001).

Two lines of research can be specified in the context of self-esteem and terror management, one using self-esteem as an independent the other as a dependent variable. On the one hand, a large body of empirical work has shown that increased self-esteem, when regarded as an *independent* variable, serves to buffer individuals against death-related fears. In a number of studies, participants with experimentally boosted or dispositionally high self-esteem were seen to be less anxious following mortality salience induction and to react less defensively than those with lower self-esteem (Arndt & Greenberg, 1999; Greenberg et al., 1992; Harmon-Jones et al., 1997).

On the other hand, studies that regard self-esteem as a *dependent* variable have demonstrated that individuals try to regain, maintain, or even boost their self-esteem after being reminded of their own mortality. For example, in a number of studies in which body esteem was employed as an indicator of self-esteem (Goldenberg, McCoy, Pyszczynski, Greenberg, & Solomon, 2000, Experiment 1; Ferraro et al., 2005, Experiments 1 and 2), mortality salience led those participants for whom body esteem constituted a central dimension of their self-definition to identify more with their bodies, as compared to participants for whom body esteem was no central part of their self-definition. However, as the body itself can be a reminder of our creatureliness and transience (Goldenberg, Pyszczynski, Greenberg, & Solomon, 2000; Goldenberg et al., 2001), it is interesting to note that Landau, Goldenberg et al. (2006) discussed that the physical seductiveness of a female stimulus person may also reduce men's (but not women's) attraction to-

wards that stimulus under mortality salience conditions. They argued that men, but not women, are more likely to think about the physical aspects of sex when asked to evaluate a picture of a sexually seductive woman and that these reflections provoke men to consider their own corporeality and thus mortality. Corresponding results showed that people devaluated the physical, but not romantic (indeed, as explained above, romantic relationships seem to buffer against mortality concerns; Mikulincer et al., 2003) aspects of sex, when reminded of their animal nature and after mortality salience induction (Goldenberg, Cox, Pyszczynski, Greenberg, & Solomon, 2002).

Besides body esteem, other possible sources of self-esteem have also been examined. Jonas, Schimel, Greenberg, and Pyszczynski (2002, Study 1), for example, found that participants reported more favorable attitudes towards a charity after being reminded of their own death. However, this effect could be explained in two ways: participants could have cherished the charity because being pro-social directly adds to their self-esteem or because generosity is simply perceived as an obligation within their cultural worldview.

Even though Terror Management Theory and most of the empirical studies that are presented here usually assume a positive relationship between an individual's effort to strive for self-esteem and worldview protection, Taubman - Ben-Ari, Florian, and Mikulincer (1999) were able to show that under certain circumstances, these distal reaction mechanisms may even contradict each other. In their study, participants responded to statements concerning their car driving behavior and its relevance to their self-esteem. Following mortality salience or control priming, Taubman - Ben-Ari et al. (1999) measured either participants' behavioral intentions toward risky driving or their concrete driving behaviors (i.e., driving speed in a car simulator). Interestingly, those individuals who indicated

driving to be relevant to their self-esteem tended to report more risk taking while driving and also drove more recklessly under mortality salience conditions. This result illustrates that the need to ameliorate self-esteem can, to a certain degree, even challenge the attachment to a cultural worldview in which reckless driving is usually an unaccepted behavior.

Another interesting question pertains to how people react when their adherence to a cultural worldview could potentially reduce their self-esteem. In this context, Dechesne, Greenberg, Arndt, and Schimel (2000, Experiment 2) investigated sport fans affiliation with their favorite team. They found that a team's success – i.e., its ability to boost fans' self-esteem – is a prerequisite for the fans' identification with the team. However, if the team was not successful and therefore not able to ameliorate fans' self-esteem, participants distanced themselves from this entity when faced with existential concerns. Not surprisingly, the degree of attachment to such a self-relevant group seems to be influenced by the member's personality structure. In Dechesne, Janssen et al.'s (2000, Study 1) study, students read a critical statement about their own university. Given the assumed highly self-relevant nature of university membership, this statement was intended to threaten students' self-esteem. In connection with an additional mortality salience manipulation, participants were able to use one of two cognitive reactions in order to regain self-esteem: they could either derogate the author of the statement or de-identify with their university (i.e., their in-group). Interestingly, this decision was moderated by the participant's need for cognitive closure, i.e., "individuals' desire for a firm answer to a question and an aversion toward ambiguity" (Kruglanski & Webster, 1996, p. 264). In line with the tendency to "switch rather than fight" (Dechesne, Janssen et al., 2000, p. 925), which would appear to be more ambiguous – especially when this results in a detachment from the in-group –, students scoring low

in the need for closure were more likely to distance themselves from their university under mortality salience whereas students scoring high in the need for closure simply derogated the author of the critical statement. These results corresponded to previous research demonstrating that people with high scores in need for closure tend to show more in-group bias and less acceptance of worldview-threatening information (Schimel et al., 1999; Shah, Kruglanski, & Thompson, 1998; Tetlock, 1998).

While individuals embark on several alternative strategies that are also known to be influenced by their personality, it can generally be concluded that people strongly increase their efforts to retrieve self-esteem when faced with mortality concerns. Altogether, two basic implications can be derived from Terror Management Theory (Greenberg et al., 1997). The first indicates that self-esteem is a buffer against death-related anxieties and the second states that in this context, the adherence to and protection of cultural worldviews is a central means of bolstering or regaining self-esteem under mortality salience. Nonetheless, it can of course not be overlooked that this simple framework also provides a target for a number of critical considerations and potentially more intuitive explanations.

2.2.1.3 Critiques of Terror Management Theory: Perceived Control and Uncertainty as Alternative Explanations for Mortality Salience Effects

Despite the overwhelming empirical support for Terror Management Theory (over 400 studies were successfully conducted on the basis of this theoretical framework), a few words should be addressed to potential alternative explanations for mortality salience effects. Two promising conceptual developments attempt to disentangle the psychological roots of Terror Management Theory and suggest that the effects of mortality salience are to be understood

simply as either a consequence of loss of perceived control or an outcome of subjective uncertainty (e.g., Fritsche, Jonas, & Fankhänel, 2006; Van den Bos, Poortvliet, Maas, Miedema, & Van den Ham, 2005).

Loss of perceived control. Fritsche et al.'s (2006) research is based on the assumption that a psychological conflict inexorably arises when individuals assumed to be strongly motivated to gain control or at least to perceive being in control of their environment (e.g., Bandura, 1977; Langer, 1975), are forced to realize that death must be regarded as the ultimate loss of control. Referring to this dilemma, the researchers emphasize that the "awareness of one's own mortality probably represents one of the most basic forms of perceived general control deprivation" (Fritsche et al., 2006, p. 8). They speculate that it is the *low perceived control* over death and its consequences rather than *the event of death itself* that may motivate individuals to regain general control in different domains under mortality salience conditions. It is their view that the distal terror management mechanisms (i.e., the defense of cultural worldviews and need for self-esteem) must be regarded as two exemplary strategies designed to augment the level of perceived control. They argue that the tendency to cling to an in-group (that is an immortal repository of one's cultural worldview) under mortality salience, for example, may also be re-interpreted as a strategy for the facilitation and strengthening of external agents (i.e., other in-group members) of individual control. From this perspective, the increase in self-esteem can be regarded as either a direct consequence or an indicator of elevated levels of perceived control, or more simply the need for self-esteem and control under mortality salience can be regarded as two alternative indicators of the same higher order concept (Fritsche et al., 2006; Judge, Erez, Bono, & Thoresen, 2002).

In a series of five studies, Fritsche et al. (2006) developed a procedure for the manipulation of "controlled mortality salience", which induces the assumption of partial control over death. This is a modification of the classic mortality salience priming procedure, which usually results in participants believing that they have *no* control over their own death. As an illustration of the difference between the two approaches: participants in the "controlled mortality salience" condition were asked to capture and describe feelings and thoughts with respect to an event such as personal suicide or the drawing up of a living will, whereas participants in the classic mortality salience condition were asked to capture and describe feelings and thoughts about their death in general. Fritsche et al. (2006) tested the effects of controlled mortality salience on worldview defense (e.g., social consensus, in-group bias, in-group homogeneity), and compared these effects with a classic mortality salience (i.e., Study 1-4: dying from a disease), a high/low control salience (i.e., Study 4: long-term unemployment, Study 5: loss of romantic relationship), and a classic control (i.e., Study 1-3, 5: dental pain) condition. Studies 1 and 2 compared the influence of mortality salience (classic versus controlled) and the control condition (dental pain) on dependent worldview defense measures and showed that participants increased their worldview defense *only* in the classic mortality salience and not in the controlled mortality salience condition as compared with the control condition. According to Fritsche et al. (2006), these results indicate that the perceived uncontrollability of the event of death and not the increased salience of mortality itself produces worldview defense reactions.

In order to further solidify their argumentation, Study 3 was designed to asses whether both priming procedures, i.e. not just the classic treatment, resulted in increased mortality salience. Results revealed that, in comparison to a control condition, both the mortality salience and the controlled mortality salience condition in-

creased the accessibility of death-related words in a lexical decision task. Finally, Studies 4 and 5 partially confirmed that the effects on worldview defense were mainly due to subjective perceptions of low individual control and not (only) to mortality salience.

Although future research must replicate and expand these results to different areas of people's worldviews, to self-esteem, and to concrete behaviors (e.g., the use of cherished symbols, the setting of bonds for a prostitute), Fritsche et al.'s (2006) work appears to be a first fruitful step towards a control-based reformulation of Terror Management Theory.

Terror versus uncertainty management. Closely related to the considerations in the previous section, uncertainty can be regarded as the emotional counterpart of the cognitive perception of control diminishments (e.g., Van den Bos, 2001, Study 2). Since subjective uncertainty may plausibly result from both lack of control perceptions and mortality salience, it should – at least to a certain degree – account for the observed effects. More generally speaking, uncertainty management can be seen as a superordinate motivation that potentially helps us to overcome threats and uncertainties in our lives. As in terror management, beliefs in secure and durable cultural worldviews might represent a means of managing uncertainty. In order to investigate the influence of uncertainty and mortality salience on worldview protection efforts, van den Bos et al. (2005) conducted a series of studies in which participants' reactions to worldview violators under mortality and uncertainty salience were examined. It was found that subjective uncertainty had an even greater impact on subjects' reactions than mortality concerns.

In Study 1, van den Bos et al. (2005) investigated participants' emotional reactions (i.e., anger) when rating fair or unfair job application processes under conditions of either mortality or uncer-

tainty salience. In the underlying scenario, participants were asked to imagine applying for a job and were presented with two alternative job recruitment procedures that were either more or less fair (i.e., the priming story informed them that either all or only one of nine parts of this application assessment process were graded). Given that the belief in fair treatments is not only an important part of our cultural worldview, but also a means of overcoming feelings of uncertainty, both mortality and uncertainty salience would be expected to result in negative reactions toward unfair treatment. This was indeed the case. A significant main effect of treatment procedure (fair versus unfair treatment) on participants' reports of anger (i.e., less anger was reported concerning the fair compared to the unfair procedure) was found. More interestingly, van den Bos et al. (2005) also discovered a main effect of priming, indicating that participants reported less anger in the mortality salience than in the uncertainty salience condition. However, these main effects were also qualified by a two-way interaction revealing that the unfair (but not fair) treatment led to stronger negative feelings in the uncertainty than in the mortality salience condition.

Study 2 aimed to replicate these results applying a more direct procedural fairness treatment and an additional control group (i.e., television salience). In this study, participants were informed that they could win a certain number of lottery tickets after the experiment. Following mortality salience, uncertainty salience, or control treatment, procedural fairness was manipulated by giving participants the opportunity to either voice (high procedural fairness) or not voice (low procedural fairness) their opinion concerning the number of lottery tickets they should receive relative to a bogus participant. Once again, a main effect of procedure though not of priming was found. This effect was again qualified by an interaction effect, with an effect of procedure on experienced anger found in the mortality salience and the uncertainty salience, but not in

the control condition. The difference between reports of anger towards unfair (i.e., no voice) versus fair (i.e., voice) treatment was greater in the conditions of mortality salience and uncertainty salience as compared to the control condition. However, this effect was much stronger in the uncertainty salience than in the mortality salience condition. Studies 1 and 2 were able to show that, at least in the case of procedural fairness, uncertainty appears to be a stronger predictor of feelings of anger towards unfair treatments than existential threat.

Expanding these results to different (i.e., not related to fairness perceptions and judgments) aspects of people's worldviews, Studies 3 and 4 investigated students' reactions towards a newspaper article that either praised or deprecated their university and further replicated the important role of uncertainty in explaining terror management effects. Finally, Study 5 used the experimental procedure of Study 1 and added a television control group and two additional dependent variables (i.e., sadness and worldview defense). Previous results were again replicated and the centrality of feelings of uncertainty in the development of worldview defense patterns accentuated.

However, whether uncertainty salience always leads to stronger worldview protection efforts remains a critical point, which seems to strongly depend on the context of investigation. For example, in their studies on the relationship between mortality salience and sexual attractiveness perceptions, Landau, Goldenberg et al. (2006) hypothesized that mortality salience reduces men's sexual attraction toward women (see above). In one study (Study 4), Landau, Goldenberg et al. (2006) used the uncertainty salience condition as a second control condition. In this study, only mortality salience had an effect (i.e., negative) on men's attractiveness ratings of a seductive female target, whereas uncertainty salience had no influ-

ence on attractiveness ratings (for other diverging results see Landau et al., 2004, Studies 3 and 5; Routledge, Arndt, & Goldenberg, 2004, Study 2).

Similar to Fritsche et al. (2006) with their concept of loss of perceived control, van den Bos et al. (2005) have thus uncovered an interesting new domain for further conceptual mortality salience research. Nevertheless, it is highly questionable whether feelings of uncertainty or loss of perceived control can be regarded as single driving forces behind Terror Management Theory and further whether these are able to entirely explain its findings. In this context Solomon et al. (2004) reacted to van den Bos' research with the question: "Would death be any less frightening if you knew for sure that it would come next Tuesday at 5:15 P.M., and that your hopes for an afterlife are illusory?" (p. 27). Hopefully, future research will help to further clarify the interrelation between Terror Management, Uncertainty Management, and Control Theory.

2.2.1.4 Preliminary Conclusions

The preceding section aimed to introduce the reader to the conceptual framework of Terror Management Theory. Two basic strategies – i.e., adherence to a cultural worldview and striving for self-esteem – were presented that enable humans to manage existential threat. Furthermore, a short overview of potential alternative explanations for observed mortality salience effects was provided.

However, as the main aim of this research is to transfer the theoretical assumptions of terror management to consumer behavior, attention shall now be directed to this more applied perspective.

2.2.2 Terror Management Theory and Consumer Behavior

Consumer goods are a crucial means of cultural transmission and a major draft of the self. McCracken (1986) described culture as (1)

a "lens" which affects the way we see the world, filling it with meaning and (2) as a "blueprint" that determines how the world is designed by humans. In his conception, cultural meaning initially flows from the culturally generated world to consumer goods and then to each single consumer. Therefore, consumer goods can transfer cultural meaning and assist individuals in the expression of their self. In the terms of Terror Management Theory, consumption is an instrument that has the potential to reduce death-related anxieties by (1) providing faith in the cultural worldview and (2) augmenting self-esteem (Arndt, Solomon et al., 2004b). Corresponding to the theoretical introduction above, these two distal terror management mechanisms (i.e., belief in a cultural worldview and striving for self-esteem) will now be described in the applied context of consumer behavior.

2.2.2.1 Mortality Salience and Consumer Behavior 1: Belief in a Cultural Worldview

As explained above, a basic human reaction to existential threat is to more strongly cling to cultural worldviews. But is this really a relevant topic in the field of consumer behavior? Is it reasonable to assume that consumers ever come face to face with their own mortality? The answer to this question is unfortunately 'yes'. Mortality salience may quite clearly be activated not only in the context of self-reflection or through experimental induction, but also through personal experiences and media coverage. When we, for example, watch a police show, or open the newspaper and read the news about murders, natural disasters, or severe accidents, the unpredictability of our fate and the inescapability of our own mortality very easily come to mind and may motivate us to act according to our worldview. As a concrete example, people were inclined, following the terrorist attacks of September 11, 2001, to purchase products and services that meaningfully symbolized their cultural

worldview. After this tragic event, American consumers purchased a greater number of goods that were associated with positive emotions towards their home country such as, for example, flags or US bumper stickers (Arndt, Solomon et al., 2004b). Even in countries other than the USA, consumers demonstrated their compassion by buying and displaying these symbols and, in doing so, communicated to others that they share the American worldview.

This example shows that the upholding of cultural worldviews under mortality salience may be accompanied by ethnocentric consumption preferences. Just as worldview-threatening subjects are derogated under mortality salience, it would seem obvious that the derogation of products of foreign origins can represent a simple method for protecting one's own cultural worldview. Research has, for example, shown that under mortality salience induction, German participants showed an increased preference for German and decreased preferences for foreign cultural items (Jonas et al., 2005, Experiment 2). In their study, Jonas et al. (2005) asked pedestrians questions referring to cultural symbols (i.e., preference for "Deutsche Mark" [ex German currency]/Euro, buying German/foreign cars, traveling in Germany/foreign countries, having German/international food in a restaurant, handsomeness of German/foreign talk or game show hosts, likelihood that Germany/Brazil wins the soccer World Cup 2002, representativeness of Berlin/Paris as European capital) either in front of a cemetery (mortality salience condition) or in a shopping street (control condition) and analyzed participants' answers by forming a composite index that included all but one symbol (the questions regarding the currencies were analyzed separately; see above). Under mortality salience conditions, the composite index indicated that participants preferred the German items to a greater extent and devaluated the foreign items more, as compared to control conditions. Even when difference scores between the foreign and German

items were analyzed separately, all but one (traveling in/outside of Germany) of the six item pairs yielded at least a marginally significant greater preference for the German cultural items when participants were faced with mortality concerns.

Nelson et al. (1997) also found a nationalistic bias towards business organizations in examining participants' attributions of causality when assigning blame to either the driver or the manufacturer of a crashed car. After watching either a videotape of a severe car accident (mortality salience condition) or a mundane driver's education video without any form of reference to accidents or lethal consequences (control condition), American participants were requested to evaluate a scenario in which a hypothetical car driver (whose nationality was ostensibly American) was involved in an accident when his/her windshield wipers failed to work in the middle of a storm. In this context, the second independent variable was the national origin of the car brand (American versus Japanese). The scenario contained further information pertaining to the fact that the driver now intended to sue the car manufacturer. Participants were asked to indicate the degree to which the driver, the car manufacturer, and "uncontrollable chance events" were responsible for the accident. Again, results revealed a nationalistic bias for those participants subjected to mortality salience priming. When participants were informed that the car manufacturer was American, they assigned more blame to the driver and less to the manufacturer. When the manufacturer was, however, ostensibly Japanese, they attributed less blame to the driver and more to the manufacturer under mortality salience. Interestingly, further analyses showed that this nationalistic bias occurred only when participants had thought about their own death while viewing the priming videotape, but not when they had only considered the topic of death in general. This provides further evidence that exis-

tential fears are only provoked when contemplations centre on one's own mortality.

Nonetheless, an increase in consumer ethnocentrism is only one possible consequence of consumers' worldview protection efforts. While ethnocentric biases seem to be of special interest in marketing research on account of their far-reaching economic consequences, other aspects of people's worldview also appear highly relevant for specific consumer behaviors. Smokers, for example, may be committed to worldviews of smoking behavior that completely depart from those of non-smokers (and possibly even more from those of ex-smokers) and may react differently to stimuli that refer to the life-threatening consequences of their behavior. According to Terror Management Theory, when mortality is made salient for smokers, they might be expected to engage in behaviors that protect their smoking-supporting worldview (e.g., devaluation of the information or its source, denying vulnerability, or even increasing smoking intentions) after being exposed to fear appeals focusing on the harmful ramifications of smoking. A corresponding hypothesis was examined by Shehryar and Hunt (2005), who investigated the moderating effect of participants' worldview of drinking alcohol on the persuasion of fear appeals deprecating "drinking and driving" behavior. In their first study, mortality was made salient by a fear-appeal advertisement that communicated the lethal consequences of driving behavior. In addition to mortality salience, a second factor – participants' worldview towards drinking alcohol – was examined. It was hypothesized that the "do not drink and drive" message would only be accepted under mortality salience conditions by those participants for whom alcohol drinking did not constitute an important part of their worldview. Those participants for whom alcohol consumption was self-important and who thus held a worldview favorable towards drinking alcohol were on the other hand expected to reject the message. This difference in mes-

sage acceptance was confirmed. In contrast to two other experimental conditions (i.e., threat of physical harm and social embarrassment) and the control condition (no threat at all), only mortality salience led those with a high precommitment to drinking alcohol to strongly reject the message after a delay. In other words, if the strategic communication goal of fear-appeal advertisements is to change behavior, the advertisements should *not* communicate death as a consequence of people's maladaptive behaviors when it comes to motivating both individuals with a high as well as those with low precommitment to alter their behavior intentions (also see Martin & Kamins, 2006). However, until now, neither social advertising nor public policy makers seem to consistently follow these recommendations.

Compared to these worldview protection efforts, a more direct way of supporting one's cultural worldview might be to engage in meaningful culture itself and to reject those cultural artifacts that are not meaningful. Landau and colleagues (Landau, Greenberg, Solomon, Pyszczynski, & Martens, 2006, Study 1) investigated this hypothesis by measuring individuals' reactions to meaningless modern art. In confirmation of the assumptions, participants in the mortality salience condition rated modern artworks as less attractive than participants in the control condition. Further studies (Landau, Greenberg et al., 2006, Studies 2-4) validated that this devaluation occurred only for modern art and not for non-modern art, that it was moderated by the personal need for structure, and that it was mainly due to the perceived meaninglessness of the respective piece of art.

Of course, artworks are not the only consumption objects that transfer cultural meaning to the individual consumer. On the contrary, according to McCracken (1986) every consumption good has the potential to become a means of transferring meaning. In any

case, it would seem more than reasonable to assume that the perceived meaningfulness of a certain product or brand does not solely depend on the advertising strategy applied or current fashion trends as could be concluded from McCracken's remarks, but also on the specific product's significance in the individual's own history. As Belk (1990) states, "photographs, souvenirs, trophies, and more humble everyday objects act (...) as repositories for memories and meanings in our lives" (p. 669). He further explicates that historical objects help us to bolster our identities and that this seems to become even more important during discontinuity in our lives, e.g., in unstable or chaotic periods when our identity is challenged and stability and security become more important to us (see also Brown, Kozinets, & Sherry, 2003; Davis, 1979; Holbrook & Schindler, 2003; Sedikides et al., 2004). Although only weak empirical support was found for this discontinuity hypothesis, death can be regarded as ultimate discontinuity in a person's identity and self (cf. Sedikides et al., 2004) and to assume no relationship between mortality salience, nostalgia, and subsequent preference for nostalgic objects would appear most questionable. More generally, Sedikides et al. (2004) dedicated a whole chapter in the "Handbook of Experimental Existential Psychology" (Greenberg, Koole, & Pyszczynski, 2004) to the existential functions of nostalgic sentiments and concluded that nostalgia, defined as a "yearning for aspects of one's past" (p. 202), could be seen as a predominantly positive emotion that serves an existential function by, inter alia, providing lives with meaning (e.g., through reminiscence about rituals and traditions one participated in, which increases the identification with one's cultural worldview) and protecting the individual's identity by fostering self-esteem (e.g., through reflections on a splendid individual past). This example perfectly shows the relevance of our cultural worldview for the development of self-esteem (the influence of mortality salience on consumers' prefer-

ences towards nostalgic objects will be further investigated in Chapter 3).

2.2.2.2 Mortality Salience and Consumer Behavior 2: Striving for Self-Esteem

As shown above, the need to bolster one's self-esteem is the second process within the dual defense model of Terror Management Theory. According to this theory, self-esteem can be indirectly augmented when subjects perceive that they are acting in accordance with their cultural worldview and some researchers even propose that existential concerns may also directly influence our efforts in striving for self-esteem, independently of any superordinate worldviews. However, from a consumer psychological perspective, material objects such as consumer goods can be regarded as a means of communicating success, prosperity, taste, or even individuality, and are thus able to increase personal self-esteem. All over the world (or at least in cultures where materialism is highly self-relevant, Maheswaran & Agrawal, 2004) the accumulation of money and luxury items is a symbol of material wealth, which therefore may represent a means of increasing attenuated self-esteem following existential threat (Arndt, Solomon et al., 2004b). In this context, Mandel and Heine (1999) were able to show that existential threat increased subjects' interest in purchasing high status goods (i.e., prestigious cars, luxury watches). In their study, participants rated luxury items (i.e., Lexus automobile, Rolex watch) more highly under mortality salience than under control conditions. Interestingly, low status items were not significantly influenced by the manipulation (in fact, both the low status Chevrolet Geo-Metro and Pringles potato chips were rated nominally – but not significantly – lower under mortality salience as compared to control conditions). However, these results were limited by a number of conceptual insufficiencies. Besides the incomplete hy-

potheses development (there was no hypothesis for the low status items) and missing manipulation checks (i.e., could the Lexus [Chevrolet Metro] really be regarded as a high [low] status item in the context of a student sample?), the central deficiency of the study was the absence of a true control condition. While mortality salience participants completed Boyar's (1964) Fear of Death Scale, "control" participants filled out a depression scale, which could be regarded as an experimental condition in itself and which in turn resulted in findings that are difficult to interpret (cf. Fischer, 2002).

In addition to Mandel and Heine's (1999) proposition that mortality salience leads people to purchase luxury items in order to increase self-esteem, Kasser and Sheldon (2000, Study 1) revealed that participants under mortality salience generally show more materialistic behavior by augmenting their future financial worth and the amount of money they will spend on future hedonic consumption activities. Interestingly, subjects' materialistic dispositions did not influence these results. However, there was no priming effect on the predicted value of possessions, which slightly challenges the validity of their results. For further investigation of the influence of mortality salience on related attitudes, Kasser and Sheldon (2000, Study 2) had participants take part in a forest-management game in which they were to imagine being a company owner who had to bid against competing companies in order to collectively harvest 100 acres of national forest. Dependent variables measured participant's greed (how much participants wanted to profit more than competitors did), fear (how much participants expected other companies to cut large amounts), and lavishness (how much forest participants wanted to harvest in one year). Corresponding to their hypotheses, results disclosed that participants under mortality salience became more greedy and lavish but did not experience more fear than control participants. Since attitudes such as greed and lavishness are usually subject to social disapproval, participants'

cultural worldview in this study appears to have had only a minor influence and efforts to increase personal self-esteem a major influence on participants' reactions. Analogously, materialistic values, which can be regarded as a manifestation of a materialistic worldview, did not influence the results. However, as will be shown in the following, the interrelation of cultural worldviews and self-esteem cannot always be neglected or conceptually ruled out.

Material possessions and social status are two potential though not exclusive sources which can be drawn upon to (re)gain self-esteem. For many consumers, a further important source of self-worth is, for example, bodily beauty (see above). Interestingly, it is especially in this context that the influence of cultural worldviews on self-esteem becomes particularly evident. Goldenberg, Arndt, Hart, and Brown (2005) examined the influence of the cultural ideal of thinness on eating behaviors. During their experiments, participants were given the opportunity to eat a self-determined amount of a snack food labeled "healthy but fattening". They hypothesized that women, but not men, would consume a smaller amount of this snack under mortality salience as compared to control conditions. Because being thin is thought to be more self-relevant for the female gender, women were hypothesized, having been reminded of their mortality, to restrict the amount of food consumed in order to attain their culturally "prescribed" beauty standard and, thus, regain their self-esteem. Indeed, Study 1 (Goldenberg et al., 2005) was able to show that women ate less under mortality salience than under control conditions whereas men showed no differences in their eating response (curiously, male participants actually showed a non-significant trend towards eating more). These results were not affected by participants' self-objectification (i.e., importance of body appearance), body self-esteem (i.e., feelings toward bodily aspects), or body mass index (it is noteworthy that women were marginally affected by their self-objectification). Study 2 fur-

ther investigated the moderating role of female participants' body mass indices within a social context. In contrast to Study 1, the second experiment was conducted in a *group setting* in which participants were able to compare their eating patterns with other participants. Not so surprisingly, under control conditions, those women with a high body mass index consumed significantly more snacks during the session than those with a low body mass index. More interestingly, under mortality salience, overweight participants showed a trend towards higher group homogeneity, resulting in a restriction of the amount of snack food consumed to the same level as those participants with a low body mass index. Study 3 replicated these results and discovered that the influence of participants' body mass index on eating patterns under mortality salience was further mediated by participants' subjective perceptions of failing to reach cultural standards of thinness.

Ferraro et al. (2005, Studies 1 and 2) investigated the relationship between body-esteem and food choice. In their first study, participants were provided with the opportunity to choose between fruit salad (less indulgent) and chocolate cake (more indulgent) following either mortality salience or control treatment. Those female – but not male – participants who rated their body as a central part of their self-esteem were expected to choose less indulgent food under mortality salience than participants for whom body-esteem was no central component of their self-esteem. Ferraro et al. (2005) reasoned that such a gender effect would be found on the basis on an overall lower attractiveness of chocolate cake for men than for women. They further assumed that in refusing chocolate cake, women require more self-regulatory resources than men. Accordingly, under mortality salience conditions, those female participants for whom body-esteem was highly relevant chose less cake than under control conditions. More interestingly, however, female participants with low body-esteem chose even more cake under

mortality salience than under control treatment. The need for self-regulatory resources to regain self-esteem following depletion through mortality salience treatment was the explanation offered for these results. For those participants who rated high in body-esteem, food control represented a self-serving reaction mechanism, whereas other defense mechanisms that were more central to their self-esteem were employed by those low in body-esteem. These alternative mechanisms required some of the scarce self-regulatory resources, which in turn lead to depletion in resources for food control and therefore resulted in more cake choice in the low body-esteem group. Study 2 (Ferraro et al., 2005) replicated these results and provided evidence that these effects only occurred when no other mortality coping mechanism was provided – i.e., if participants were permitted to write down how they coped with the tragedy of September 11 before choosing either cake or fruit salad, any effect of mortality salience disappeared. Additionally, allocation of cognitive self-regulatory resources was measured by asking participants how much they thought about their body-esteem while choosing the food. In accordance with the hypothesized positive connection between a person's body self-esteem relevance and self-regulation ability, low body-esteem participants thought less and high body-esteem participants more about their body-esteem under mortality salience than under control conditions, but only when no alternative coping strategy other than food choice was available. Study 3 (Ferraro et al., 2005) finally expanded these results to charity donation and virtuous (socially conscious) consumer behaviors, providing further evidence that the self-relevance of a certain behavior strongly influences participants' behavioral reactions under mortality salience.

The results of the studies by Ferraro et al. (2005, Studies 1 and 2) seem to partially contradict those of Goldenberg et al. (2005, Studies 2 and 3). In Goldenberg et al.'s studies, women with a high

body mass index tended to eat less under mortality salience as compared to control conditions, whereas in Ferraro et al.'s studies low body-esteem women ate more. Although both papers used different variables (i.e., body self-esteem versus body mass index, respectively) as a second experimental factor (the first being in both cases mortality salience), previous research has shown that the body-esteem scale correlates with self-esteem (Franzoi & Herzog, 1986) which in turn correlates negatively with body mass index (for a meta-analysis see Miller & Downey, 1999). It is therefore reasonable to expect that body-esteem is also negatively correlated with body mass index. If a correlation between the body-esteem scale and body mass index is assumed, both indices should distinguish between the same subjects when used as an experimental factor and should also lead to corresponding results. What other explanation can be found for the observed divergent effects? An obvious difference between the studies is that Goldenberg et al. (2005, Studies 2 and 3) used a group setting while Ferraro et al. (2005) interviewed participants individually. The lack of social context in Ferraro et al.'s studies might have inhibited peer pressure for those with a higher body mass index and lessened their need to behave according to the social standard of restricted eating. This could have given alternative self-regulation mechanisms an unlimited chance to occur in these studies, resulting in resource depletion for food control for those participants with low body-esteem. Contrarily, in the group setting of Goldenberg et al.'s studies, mortality salience might have motivated participants to cling more strongly to the supposed worldview (i.e., the cultural ideal of thinness) of the other group members (which were the salient in-group in this case; Castano, Yzerbyt, Paladino, & Sacchi, 2002). Thus, the presence of the other peers might have overruled self-regulation in alternative areas to food and might have induced stronger conformity with the

behaviors of other in-group members (i.e., equally low snack intake for those with high and those with low body mass index).

It is a well-established fact that many people diet, work out, use cosmetics, go to tanning booths, and even use cosmetic surgery to approach their body ideal. Therefore, under the assumption that existential threat reduces self-esteem, mortality salience should motivate those individuals for whom body esteem is self-relevant to occupy themselves more with their physical appearance (for the influence of the body on identity formation for people high in body-esteem see Goldenberg, McCoy et al., 2000). This hypothesis was investigated by Arndt, Schimel, and Goldenberg (2003). In their studies, the influence of the self-relevance of body esteem on fitness intentions under (subliminally induced) mortality salience was examined. Further, this research aimed to determine whether fitness intentions not only serve as a distal but also as a proximal defense against mortality concerns. Terror Management Theory posits that when one's own mortality becomes the focus of attention, an appropriate proximal reaction is any behavior or cognition that removes these thoughts from consciousness and/or denies subjects' perceived vulnerability to disease and death. In this context, working out can be regarded as one way of improving health – a precondition of longevity – which increases the probability of a gentle death in the distant future. According to this line of argumentation, fitness intentions could provide people with both a proximal (health as a "protection mechanism") and distal (fitness level and body shape as mediators of participants' self-esteem) buffer against mortality concerns. This was exactly what Arndt et al. (2003) found. Immediately after mortality salience induction, subjects increased their fitness intentions regardless of the self-relevance of body esteem (proximal defense reaction). However, following mortality salience and a subsequent delay, only those participants for whom the body was highly self-relevant, and not those

for whom the body did not serve as a source of self-esteem, reported higher intentions of working out (distal defense reaction) as compared to those in the control condition. These results indicate that the development of this distal terror management process depended on its ability to augment participants' self-esteem.

Under certain conditions, consumers' striving for self-esteem leads to distal behavior intentions that may even contradict the drive for self-preservation – which would constitute an appropriate proximal defense against mortality concerns (for corresponding results also see Taubman - Ben-Ari et al., 1999). For instance, Routledge, Arndt, and Goldenberg (2004, Study 1) investigated the influence of the predominant (i.e., proximal or distal) defense mode on participants' sun protection intentions. On the one hand, sun protection may act as a proximal protection mechanism against existential threat, reducing the risk of skin cancer and a premature death. On the other hand, tanning may also function as a distal defense mechanism, since tanned skin is commonly perceived as attractive (Leary & Jones, 1993) and may thus bolster self-esteem. Depending on current defense mode (distal versus proximal, respectively), it can be hypothesized that people are either less or more inclined to protect their skin against sun exposure following mortality salience induction. In order to investigate this hypothesis, Routledge et al. (2004) allocated female participants who previously indicated that being tanned is at least somewhat important to their self-esteem to either the distal or proximal defense mode condition by either delaying (distal process) or not delaying (proximal process) measurement of the dependent variable (sun-protection intentions) following experimental priming. In confirmation of the hypotheses, women were less interested in sun protection following mortality salience treatment and a short delay, as compared to control subjects. However, if participants were asked to indicate their sun-protection intentions immediately after the priming took place, a

proximal defense pattern (i.e., increased interest in sun protection) was observed, thus substantiating the bipartite terror management system. For a deeper understanding of the influence of self-esteem on these distal processes, Study 2 (Routledge et al., 2004) further aimed to directly manipulate the importance of tanned skin for self-esteem (compared to Study 1, in which this variable was dispositionally high in the sample). To achieve this, a two-factorial design (self-esteem-relevance x mortality salience) was used. Participants were primed with the advertisement of a fictional store showing either an attractive tanned woman, designed to make tanning situationally self-esteem-relevant, or a beach ball and with either mortality or uncertainty salience (this control group was selected to test whether uncertainty is an alternative or, maybe, the main driver for the terror management processes, cf. Van den Bos, 2001, see also above). After priming and a distraction task (in order to ensure distal processing) had taken place, participants answered a few questions pertaining to their evaluation of and their interest in the products and services of the advertised shop. These items acted as dependent measures and were collapsed into a composite index for the purpose of analysis. In line with the formulated hypotheses, the two experimental factors interacted and, when further deconstructed, only disclosed more positive evaluations of the tanning products and services in the mortality salience–self-esteem salience condition. More explicitly, those participants who were experimentally manipulated to perceive a contingency between tanning and self-esteem counterintuitively showed more interest in potentially harmful tanning products and services under mortality salience than any other comparison group.

As these studies clearly show, there are certain conditions under which subjects' proximal and distal reaction mechanisms strongly (and sometimes counterintuitively) diverge. However, it is not only the proximal terror management processes, which sometimes con-

tradict the distal processes. Even the distal processes themselves bear a risk for potential conflict. This conflict will be addressed in the following section.

2.2.3 Integrating Self-Esteem and Cultural Worldviews

As explained above, distal terror management processes – i.e., upholding shared cultural worldviews and striving for self-esteem – cannot strictly be seen as two independent processes. While it might seem comfortable for didactic purposes to present the processes separately in an overview of Terror Management Theory, the risk is run of oversimplifying the complex interconnection of the two constructs. In fact, terror management research assumes that people mainly gain self-esteem from their perception of meeting cultural standards (e.g., Greenberg et al., 1997), though it also holds true that mortality salience leads people to more strongly identify with those entities (and related cultural worldviews) that are able to bolster their self-esteem (Arndt, Greenberg, Schimel, Pyszczynski, & Solomon, 2002).

Conceptual difficulties occur when trying to predict subjective reactions to stimuli that are in line with one of the distal processes but contradict the other. This was recently pointed out by Maheswaran and Agrawal (2004), who basically view the terror management mechanisms – striving for self-esteem and upholding cultural worldviews – as two different, but interrelated motivations. From their point of view, a defense motive (i.e., holding existing attitudes) and an impression motive (i.e., striving for social acceptance) provide the psychological basis for distal terror management processes (i.e., worldview defense and self-esteem strivings, respectively). They argue that most previous research has assumed that these distal processes complement one another. But what happens when this is not the case? For example, consider a foreign luxury brand. Here, the products' high status image may support owners'/users'

self-esteem. At the same time, its consumption or usage may, on account of its foreign origin, also contradict the cultural worldview of his or her peer group. According to these researchers, more independently accentuating the two motivations could help marketers to formulate convincing advertising messages in different contexts. Especially in contexts where both motives potentially conflict (e.g., consider the foreign luxury car that assuages the impression motive but contradicts the cultural worldview), marketing communication should opt to emphasize those product attributes that converge with the motive promoting approach (e.g., accentuation of the Mercedes' status and not the German engineering in the American sales market when mortality is salient).

For public policy makers, product avoidance can be the predominant communication goal. In this context, those product attributes or consequences of product use should be pronounced that promote avoidance. For example, anti-smoking campaigns for young smokers should more strongly communicate social exclusion (impression motive) rather than health themes (defense motive) because, as Martin and Kamins (2006) illustrated, particularly young addicts are convinced that they will quit smoking before getting ill and potential future health consequences may not contradict their worldviews.

As explicated above, Mandel and Heine (1999) provided us with a first promising attempt to connect Terror Management Theory to status consumption. In order to overcome some of its limitations, Fischer (2002) replicated this study by introducing a new dependent variable (affect) and adding new products (high status: Jaguar versus Mercedes automobiles; low status: English versus German chicken). More importantly in this context, two new experimental factors – i.e., participants' national origin (English versus German) and products' nationality (English versus German) – were intro-

duced for the purpose of examining the interdependency of subjects' national identity, products' national origin (worldview hypothesis), and status (self-esteem hypothesis). Mortality salience was primed by two open questions on thoughts and feelings regarding personal death and the control condition consisted of the same two questions based on a neutral topic (see Rosenblatt et al., 1989). Despite this pioneering research design with both mortality salience processes (striving for self-esteem and bolstering cultural worldviews) tested simultaneously, results proved disappointing. Presumably due to small sample sizes and critical product selection, the only significant effects were a devaluation of both German products under mortality salience within the British sample. This was indicative of an ethnocentrism effect against foreign products in Britain, but not in Germany where descriptive results rather support a status effect and no ethnocentrism effect (after controlling for subject's interest in cars, the Jaguar was significantly better evaluated in the German sample under mortality salience compared to control conditions). It is also noteworthy in this context that neither Fischer (2002) nor Mandel and Heine (1999) discussed that subjects' materialistic/post-materialistic and nationalistic worldviews may have exerted an interacting influence on their study results. As Rindfleisch and Borroughs (2004) have hypothesized, self-esteem strivings through materialism may contradict post-materialistic cultural worldviews. Especially in the case of Fischer's (2002) study, German students might have differed from the English participants in their materialistic as well as patriotic worldview, and this in itself may explain the missing effects (see also Chapter 5). One could therefore agree with the claim of Maheswaran and Agrawal (2004) that further research on the interaction between cultural worldviews and self-esteem is urgently needed. Preliminary evidence for a possible predominance of the worldview construct is presented in Chapter 3.

2.3 Overview of the Present Research Project

The motivations underlying the two series of studies that will be presented in the following two chapters are manifold. However, both chapters will predominantly focus on the cultural worldview construct which, according to the classical terror management framework, has a crucial impact on the development of self-esteem (e.g., Greenberg et al., 1997).

Chapter 3 provides initial empirical evidence for a connection between terror management and nostalgia-related consumer behavior. Accordingly, the chapter aims to investigate whether nostalgic consumption objects (i.e., cars) can act as representatives of our culture (and thus our cultural worldviews) by studying how consumers' preference patterns towards classic or contemporary objects change under mortality salience as compared to control conditions. Additionally, preliminary evidence will be presented, showing that at least in this context, the nostalgic meaningfulness of objects seems to be more important for appropriate terror management than their status relevance when the two product attributes are tested against each other.

Chapter 4 is dedicated to connecting the assumptions of Social Identity Theory with those of Terror Management Theory. Concretely, the potential of a (compared to a nation) less inclusive social entity (i.e., a city) to also act as a repository of participants' worldviews is examined, as well as the question pertaining to whether a region-specific product (i.e., a beer sort) can function as a symbol of consumers' worldviews – in the same way that a nation-specific product can. To this end, the influence of mortality salience on consumers' attitudinal preferences for a regional beer sort will be investigated and compared to preferences for a sort of beer originating from a rival city. In addition, the influence of mortality concerns on products' attributes (i.e., taste) will be analyzed.

Both the application of Terror Management Theory to regional identities, as well as the influence of mortality salience on product attributes, appear to constitute novel theoretical advancements with particular relevance when it comes to gaining a deeper understanding of regional consumer preferences and behaviors.

CHAPTER 3
The Influence of Mortality Salience on the Evaluation of Nostalgic Cars

3.1 Introduction

> *A long, long time ago... I can still remember how that music used to make me smile. And I knew if I had my chance that I could make those people dance and, maybe, they'd be happy for a while. But February made me shiver with every paper I'd deliver. Bad news on the doorstep, I couldn't take one more step. I can't remember if I cried when I read about his widowed bride, but something touched me deep inside the day the music died.*
>
> —Don McLean (1971) *and* Madonna (2000), *American Pie*

No, this is not a story about Don McLean's autobiographic memories when he, as a paperboy in his youth, was forced to acknowledge the premature death of his idol Buddy Holly (cf. Fann, 2002). Neither is this Chapter intended as a criticism of Madonna's endeavor to cover this enrapturing pop song. Rather, these lyrics serve the purpose of giving a first impression of the significance of a cultural product for the development of a nostalgic memory. McLean's memento of rock 'n' roll music describes his reflections on the tragic days of his childhood when – for him – "music dies". Listening to the song itself may, however, evoke some nostalgic sentiments in all of us, provided that we are familiar with it.

The past has always been a significant component of our culture and identity. Consider campaigns protesting against the destruction of old buildings, to be knocked down due to urban renewal. Or, observe the trend towards reconstructing historical sections of city quarters. These examples both demonstrate that the past is often regarded as a symbol of that which is familiar and known and that nostalgic thoughts generally provide people with a feeling of continuity and security (Holbrook & Schindler, 2003). This quest for meaning and personal security is especially heightened during politically or economically unstable times or when our identity is challenged through personal events (Landau, Greenberg et al., 2006). Within such contexts, people usually become uncertain about their own future or existence and nostalgic objects or sentiments may help them to overcome these uncertainties by providing a retrospective view of the "better" times in their lives (Belk, 1990; Sedikides et al., 2004).

The main goal of the present studies was to investigate whether and under what circumstances a nostalgic product can become a valuable part of our cultural worldview. For this purpose, participants were required to evaluate classic or contemporary products, under either control or mortality salience conditions. In line with Sedikides et al. (2004), who were the first to hypothesize – though unfortunately without empirical evidence – a connection between nostalgia and Terror Management Theory, it is argued that existential concerns cause people to feel insecure and motivate them to occupy themselves with nostalgic objects that provide their lives with meaning and stability, and in doing so, protect their identity.

The findings of these studies will provide a deeper insight into the cognitive processes that cause people to prefer nostalgic products. It will be argued that existential concerns (e.g., after tragic events, terrorist attacks, induced through media coverage, or own reflec-

tions) may motivate people to purchase nostalgic and to refrain from purchasing contemporary objects. First, however, the theoretical framework of Terror Management Theory and its connection to nostalgia research shall be explored in more depth.

3.2 Terror Management via Nostalgia?

Terror Management Theory (for an overview see Greenberg et al., 1997) provides a framework that explains individuals' strategies for coping with the awareness of their own mortality (mortality salience) and primarily describes two reaction mechanisms: (1) the attempt to symbolically transcend life by upholding a shared cultural worldview that buffers death-related anxieties and (2) the attempt to strengthen cognitions confirming that one acts in accordance with these views (self-esteem). According to this, culture serves as an anxiety buffer, comprising the cultural worldview and self-esteem.

As a significant part of human culture, consumer goods are also able to transfer meaning and assist individuals in expressing the self (McCracken, 1986). Explained in terms of Terror Management Theory, consumption is an instrument that reduces death-related anxieties as long as it accords with and fosters the human's cultural worldview. According to the theory, when people perceive that their actions or consumption patterns conform to their worldview, this also augments their self-esteem (Arndt, Solomon et al., 2004b).

Recently, Sedikides et al. (2004) theoretically introduced nostalgia as an alternative terror management process. They argued that nostalgia helps people to bolster their self (e.g., by reminding them of their idealized individual history) and to strengthen their cultural worldviews (e.g., by triggering references to cultural traditions, past events, and rituals). Unfortunately, Sedikides et al. (2004) failed to empirically test this hypothesis. According to

Sedikides et al. (2004), mortality salience should trigger our nostalgic sentiments and if this holds true, individuals receiving mortality salience treatment should also increase their preference for all nostalgic stimuli that symbolize their own cultural history. Under the assumption that classic products or brands can induce nostalgic emotions because they are both a manifestation and a carrier of our culture, they should also help people to manage existential threat. Consequently, it is hypothesized that individuals increase (decrease) their preference for nostalgic (contemporary) objects under mortality salience as compared to control conditions. However, an empirical investigation of this hypothesis is yet to be carried out.

In a series of five studies (two laboratory and three field experiments), empirical evidence will be provided that nostalgic – but not contemporary – products serve a terror management function. The studies will further address whether initial preference patterns or products' status images influence these results.

3.3 Study 1

The first experiment aims to investigate whether mortality salience leads people to strengthen their preference for a classic object. It is argued that such a product is a valuable part of an individual's culture, due to the contribution of its authentic history to the creation of the cultural anxiety buffer, and that it thus reduces the human fear of death. On account of its high self-relevance, an automobile is selected as the nostalgic stimulus. It is hypothesized that, because a classic vehicle is a manifestation of consumer culture, people should rate it more positively under mortality salience than under control conditions. In sum, the goal of this Study is therefore to investigate whether a classic 1971 Volkswagen (VW)

Beetle receives higher preference ratings under mortality salience than under control conditions.

3.3.1 Method

3.3.1.1 Participants and Design

The preference for nostalgic cars appears to be a male specific phenomenon (Schindler & Holbrook, 2003). Hence, it was decided that only male students should be investigated. Sixty students, enrolled at the University of Cologne, voluntarily participated in the experiment. Participants' mean age was 26.7 years and ranged from 22 to 36 years (*SD* = 3.2). Participants were provided with the incentive of (voluntarily) entering a sweepstake. In order to avoid the confounding influence of ethnocentrism as an alternative terror management process, it was important to hold the *German* cultural worldview constant during the experiment. For this reason, only students who were born and grew up in Germany were included in the sample. Any influence of differing cultural backgrounds on the preference measurement for the German car brand should thus have been prevented. The stimulus object (classic VW Beetle) used in the study was – for the same reason – of German engineering.

Participants were randomly assigned to either the mortality salience or control condition in a between-subjects design. Thirty students thus took part in each of the two conditions.

3.3.1.2 Experimental Procedure

Participants were questioned in individual cubicles in order to ensure their privacy. The experiment was ostensibly constructed as two separate short studies. The first bogus study was labeled "a study concerning the handling of emotions in modern society" and the second "an enquiry concerning the evaluation of automobiles".

A pretest confirmed that participants did not establish any connection between the two parts.

Students completed the "first study" alone while the experimenter waited outside the cubicle. After completing 15 filler items, participants were subjected to mortality salience or control treatment. Mortality salience participants were asked to answer two open-ended questions concerning their mortality: (1) "Please briefly describe the emotions evoked within you, when thinking about your own death" and (2) "Please describe as specifically as you can, what in your opinion will physically happen to you when you die and after your death." In the control treatment, participants were asked similar questions with respect to watching television (see Rosenblatt et al., 1989).

Following the priming procedure, participants' mood was measured using the German version of the "positive and negative affect schedule" (PANAS; for the original version see Watson, Clark, & Tellegen, 1988). This scale was employed in order to check whether the salience manipulation had influenced participants' affective reactions and also served as a necessary distraction task in order to remove death-related thoughts from the centre of attention (for the importance of distraction in this priming procedure see Greenberg et al., 1997).

At the start of the second part of the experiment, a colored laminated picture of the stimulus object (classic VW Beetle; photographed from a side perspective with a white background) was presented to participants. They were further informed about the brand and the year of construction (i.e., 1971) and were then asked to rate the car in comparison to an ideal car on a scale ranging from 0 (*worst*) to 100 (*perfect*) (dependent variable). As opposed to the simple 5-point scale, this more finely tuned measure was employed in order to maximize the chances of finding differences in product

preferences and to minimize potential ceiling effects (Friedman & Friedman, 1997). Following this evaluation, participants were administered questions concerning their own car ownership, general attitudes toward automobiles, car driving, and a short personality questionnaire. Again, these items served as filler items designed to ensure that participants believed in the purpose of the study. Two questions then asked whether participants currently own or have ever owned or driven the stimulus car (ten participants indicated having driven the VW Beetle but none had ever owned the car; nevertheless, after controlling for these variables, results remained stable). The questionnaire closed with a section covering socio-demographic information. Participants were debriefed by mail after completion of the experiment.

3.3.2 Results and Discussion

3.3.2.1 Manipulation Check

Inspection of the short essays written by participants revealed that no one in the control but everyone in the mortality salience condition wrote about their own death and its consequences.

3.3.2.2 PANAS Findings

The PANAS scale was adopted to determine whether the priming condition had influenced participants' mood. In line with previous studies, no such effects were either expected or identified: two analyses of variance (ANOVA) on participants' overall positive (PA; $\alpha = .85$) and negative (PN; $\alpha = .81$) scale values revealed no significant results, $F_{PA}(1, 58) = 0.07$, p = n.s. and $F_{NA}(1, 58) = 1.82$, p = n.s., indicating that the mortality salience priming did not influence participants mood and mood could thus not be made responsible for any priming effects.

3.3.2.3 Car Evaluation

The main interest of the present study was to investigate whether people increased their preference for a classic car under mortality salience as compared to control conditions. This was indeed the case. The dependent variable described above assessed the degree to which participants endorsed the classic VW Beetle. In order to test the main hypothesis of the study, a t-test was conducted comparing evaluations of the car (dependent variable) across the two priming conditions (mortality salience condition versus control condition). Confirming the hypothesis, the VW Beetle was rated substantially better in the mortality salience condition than in the control condition: M = 55.03 (SD = 19.75) versus M = 37.43 (SD = 23.14), respectively; $t(58) = 3.17$, $p < .01$, one-tailed, $d = 0.82$. This indicates that the classic VW Beetle indeed functioned as a symbol in participants' cultural worldview. The nostalgic product thus seems to have been regarded as a significant cultural artifact. But how do consumers view the corresponding contemporary model?

3.4 Study 2

The results of Study 1 demonstrated that preferences for a classic VW Beetle increase under mortality salience. A second study will now look to examine whether the opposite holds true for the contemporary model. Given that people indeed change their preferences towards classic objects under mortality salience, it follows that they should contrarily devalue contemporary products. Again, the terror management paradigm is used to test whether mortality salience leads to lower preferences for a new car.

3.4.1 Method

3.4.1.1 Participants and Design

As in Study 1, sixty male students, enrolled at the University of Cologne, participated in the experiment. Participants mean age was 26.4 years and ranged from 21 to 40 years (*SD* = 4.0). The two 40-years old students with ages lying more than three standard deviations from the mean were excluded from the sample for homogeneity purposes. The incentive (sweepstake) and participants' national origin (Germany) were identical to those of the first experiment. Again, participants were randomly assigned to one of the two conditions of a one factorial (mortality versus control condition) between-subjects design.

3.4.1.2 Experimental Procedure

The procedure of this study corresponded to that of Study 1 with the exception of the stimulus material presented in the second part of the experiment. Instead of the VW Beetle, the experimenter now presented a picture of a VW New Beetle and again informed participants about the brand and the year of construction (i.e., 1999). For the purpose of increasing internal validity, the location and experimenter of Study 1 were also used in Study 2. Again, the two variables pertaining to car ownership of or driving experience with the stimulus vehicle were answered positively by some of the participants (one participant indicated having owned the New Beetle and a further seven participants indicated having driven but not owned the car). This did not, however, have any influence on study results.

3.4.2 Results and Discussion

3.4.2.1 Manipulation Check

Inspection of participants' short essays revealed that everybody in the mortality salience condition and nobody in the control condition wrote about and thus contemplated their death.

3.4.2.2 PANAS Findings

The PANAS scales revealed satisfactory internal consistency (PA: α = .84; NA: α = .82) and could therefore both be used to measure the influence of the priming condition on participants' mood. As in Study 1, priming effects were neither expected nor found: $F_{PA}(1, 56) = 0.60$, p = n.s. and $F_{NA}(1, 56) = 1.13$, p = n.s.

3.4.2.3 Car Evaluation

Of interest was whether the priming procedure negatively influenced the evaluation of the contemporary VW New Beetle. Indeed, participants in the mortality salience condition rated the New Beetle lower than participants in the control condition: $M = 43.70$ ($SD = 26.60$) versus $M = 54.36$ ($SD = 20.50$), respectively; $t(56) = -1.70$, $p < .05$, one-tailed, $d = 0.45$. According to Terror Management Theory, this result can be explained by the lack of ability of the New Beetle to bolster participants' cultural worldview and to thus serve a terror management function.

As Study 1 and 2 were able to show, the classic VW Beetle was more positively and the contemporary VW New Beetle more negatively evaluated under mortality salience as compared to control conditions. Study 3 now aims to test whether the same effects can be translated to a more heterogeneous sample.

3.5 Study 3

In order to replicate and expand the results of Studies 1 and 2, Study 3 employed a consumer sample (female and male consumers) and a different priming procedure. Furthermore, the experiment was conducted using a two factorial between-subjects design, with one of the two cars alternately presented. It was also decided to change from the laboratory to a more realistic field experimental setting. Participants in this study were therefore asked to evaluate the old VW Beetle or the VW New Beetle – either in front of a funeral home (mortality salience condition) or 150 yards before/after it (control condition). This priming procedure has been successfully used in previous research (Jonas et al., 2002; Pyszczynski et al., 1996).

3.5.1 Method

3.5.1.1 Participants and Design

Two hundred subjects voluntarily participated in the experiment. These were passers-by on a shopping street in Cologne, Germany. Participants mean age was 39.8 years (*SD* = 15.61) ranging from 18 to 86 years. Gender was equally distributed (50 % female and 50 % male).

A 2 (priming: mortality salience versus control) x 2 (model: VW Beetle versus VW New Beetle) between-subjects design with product evaluation (100-point scale) as dependent variable was applied in this study.

3.5.1.2 Experimental Procedure

The experimenter stood in front of a funeral home in the mortality salience condition, and approximately 150 yards before or after the building in the control condition. Participants were randomly asked

to participate in "an enquiry concerning the evaluation of automobiles". For ethical reasons, the experimenter was explicitly instructed not to address those subjects directly heading for or leaving the entrance of the funeral parlor. After subjects had agreed to take part, the experimenter positioned himself so that participants were forced to face the shop window (a coffin and the sign "Bestattungsinstitut" [funeral parlor] were clearly visible). He then presented a laminated picture of either the VW Beetle or the VW New Beetle. These pictures were the same as those in Studies 1 and 2, with the exception that monochromes were used in order to eliminate any potential effect of stimulus color. Participants were informed about the brand of the car, but not its year of construction. After stimulus presentation, the procedure continued in a similar manner to Studies 1 and 2. Participants were required to rate the respective car on the 100-point "compared-to-ideal"-scale, which once again constituted the dependent variable. Following filler items about car ownership and general attitudes toward car driving, participants then estimated the year of construction of the stimulus car. This measure was included for the purpose of establishing whether age perceptions had been successfully manipulated. Further, this variable was intended to control for the possibility that the priming influenced the perceived age of the products. The questionnaire closed with the socio-demographic section. Participants were subsequently debriefed and thanked for their participation.

3.5.2 Results and Discussion

3.5.2.1 Controlling for Age and Gender as Potential Covariates

Interestingly, when controlling for participants' age and gender by including the former as a covariate and the latter as an additional factor in an analysis of covariance (ANCOVA), both variables had a

significant effect on car evaluations (age: $F(1, 191) = 4.44$, $p < .04$ and gender: $F(1, 191) = 5.86$, $p < .02$). Female participants ($M = 66.79$, $SD = 25.65$) rated both cars more highly than male participants ($M = 60.60$, $SD = 24.36$), which is not so surprising considering the comparatively female design of the VW (New) Beetle brand. However, no further interaction effects with the other independent variables were found and including gender in the ANCOVA did not change the results of the study.

It was investigated whether participants' age moderated the effects of the priming factors. To this end, a multiple regression analysis was computed with contrast-coded values for the mortality salience and the model factor and centered values for participants' age as well as all interaction terms as predictors of car evaluation. In addition, participants' gender (contrast-coded) was controlled for. A main effect of gender, $\beta = .17$; $p < .05$, and of participants' age, $\beta = -.14$; $p < .05$, indicated that older and male participants liked both cars less than younger and female participants. Despite this fact, participants' age had no further influence (neither as an interacting variable nor through elimination of other main effects of or interactions between the experimental factors) on the dependent variable. All other main and interaction effects were stable in multiple regression analysis and will thus be presented in the results section. On account of their lack of moderating influence, gender and age were not included in further analyses.

3.5.2.2 Manipulation Check

This analysis was intended to check whether perceptions of the products' age had been successfully manipulated. A 2 x 2 ANOVA with the estimated year of construction as dependent variable was conducted. A total of 192 subjects provided an answer to this question; the other 8 subjects answered "I do not know". These 8 individuals were not included in the analysis. Results demonstrated

that products' age was successfully manipulated. The old VW Beetle (M = 1964.4, SD = 9.30) was perceived as being significantly older than the VW New Beetle (M = 1999.1, SD = 8.00), $F(1, 188)$ = 759.65, $p < .001$. No other main or interaction effects were found.

3.5.2.3 Car Evaluation

The main purpose of this study was to investigate the influence of study location on evaluation of the stimulus cars and more specifically, whether people under mortality salience increase (decrease) their preference for a nostalgic (contemporary) automobile. In order to test this hypothesis, the preference measurement (100-points scale) was included as dependent variable in a 2 x 2 ANOVA (all participants were included). Results confirmed the hypothesis. Main effects of location, $F(1, 196)$ = 3.80, p = .05, and model, $F(1, 196)$ = 9.60, $p < .01$, indicated on the one hand that participants in front of the funeral home (mortality salience condition), M = 67.02 (SD =24.49), generally rated cars more positively than those questioned at a distance of 150 yards from the funeral home (control condition), M = 60.37 (SD =25.48). As will further be shown, this main effect is explained solely by increased preferences for the VW Beetle (see also Figure 1). On the other hand, independent of the study location, the old VW Beetle, M = 68.98 (SD = 24.66) was preferred over the VW New Beetle, M = 58.41 (SD = 24.63).

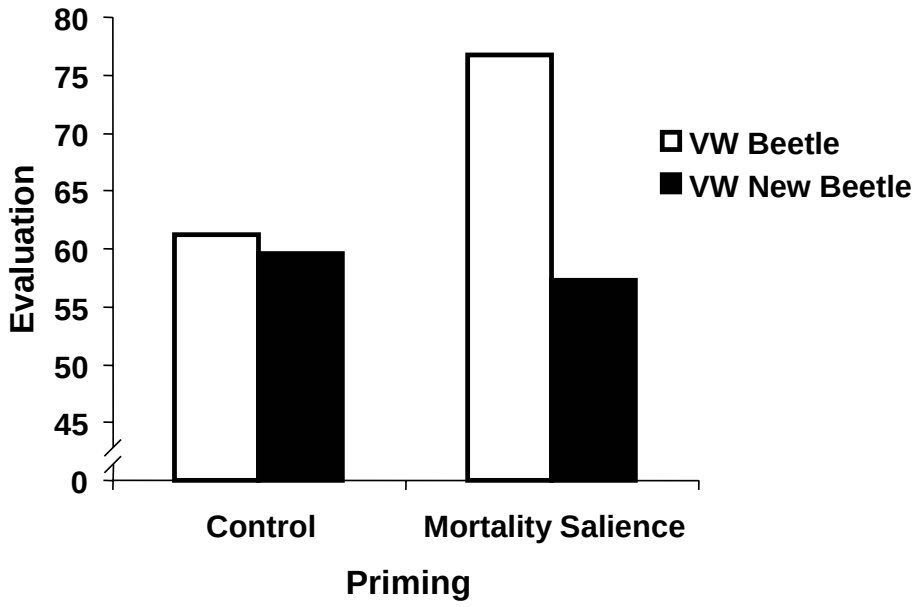

Figure 1 **Influence of mortality salience and car model (VW Beetle versus VW New Beetle) on preference measures (Study 3). Evaluation scales ranged from 0 to 100.**

More interestingly, these main effects were qualified by a significant two-way interaction, $F(1, 196) = 6.88$, $p < .01$. As hypothesized, the study location had a different effect on participants' preferences for each of the two cars (cf. Figure 1). Planned post-hoc tests revealed that this interaction was mainly due to different evaluations of the old VW Beetle. Under mortality salience (i.e., in front of the funeral home), $M = 76.78$ ($SD = 18.36$), the old VW Beetle was rated significantly higher than under the control condition (i.e., not in front of the funeral home), $M = 61.18$ ($SD = 27.70$), $t(196) = 3.23$, $p < .001$, one-tailed, $d = 0.66$, whereas the evaluation of the VW New Beetle was not influenced by study location ($M = 57.26$, $SD = 26.08$ versus $M = 59.56$, $SD = 23.29$, respectively), $t(196) = -0.48$, p = n.s., one-tailed, $d = 0.09$. It is noteworthy that under control conditions, participants did not prefer one car over the other, $t(196) = 0.34$, p = n.s., two-tailed, $d = 0.06$, whereas un-

der mortality salience a greater preference for the old VW Beetle over the VW New Beetle, $t(196) = 4.05$, $p < .001$, two-tailed, $d = 0.87$, was observed.

In support of Study 1, this study was able to show that participants under mortality salience increase their preference for a classic VW Beetle. However, in contrast to the results of Study 2, preferences for a VW New Beetle were not influenced by the manipulation. A possible reason for the missing mortality salience effects on preferences for the newer car could be seen to lie in its unique retro image. Indeed, the VW New Beetle was specifically designed as a retro car, based on the image and brand history of the VW Beetle. It is therefore plausible that this car may also have stimulated nostalgic reflections in at least some individuals and from this perspective may not have been the perfect representation of a modern car (as a matter of fact, the VW New Beetle was launched back in 1998). Study 4 will thus look to investigate the influence of mortality salience on car preferences with alternative product stimuli.

A second interesting point in this study was that both cars were rated equally highly under control conditions. Although the old VW Beetle would objectively seem to be technically inferior to the VW New Beetle, participants in the control condition did not prefer the latter over the former. It does not seem implausible to assume that many participants sensed a deep emotional connection to the classic Beetle that might have guided their evaluations even in the control condition. Nonetheless, it would be of interest to determine whether the same preference patterns are found when the nostalgic car is *less* preferred under control conditions than the contemporary car. Hence, the second aim of the following study is to investigate whether evaluation patterns also change correspondingly

when the initial preference for the classic car is lower than that for the contemporary car.

3.6 Study 4

The results of Study 3 revealed that people who were reminded of their own mortality by being interviewed in front of a funeral home showed higher preferences for a nostalgic car (i.e., VW Beetle). However, the opposite trend towards lower preferences for a contemporary car (i.e., VW New Beetle) was not significant. It was postulated that this could have been due to the unique retro image of the VW New Beetle. Indeed, New Beetles' marketing strategy strongly focused on the old VW Beetles' brand history and image. At least for some participants, this stimulus car could thus have also induced nostalgic emotions. In order to further clarify the influence of mortality salience on the evaluations of classic and contemporary cars, stimulus cars were changed in this study. Preferences for a VW Golf ("Rabbit") Mark 1 (classic model from 1974) were tested against those for a VW Golf Mark 5 (contemporary model from 2003). This study also aimed to investigate whether previously established results remained stable when cars were used where initial preferences proved higher for the new than for the old car. In line with Maheswaran and Agrawal (2004), it is also conceivable that mortality salience only motivates people to stick more strongly to already preferred brands (or products) and to show stronger defense against non-preferred brands (or products). In this context, a selection of two car models which ensures lower preference for the classic and greater preference for the contemporary model should reveal whether mortality salience mainly increases preference consistency or nostalgia.

3.6.1 Method

3.6.1.1 Participants and Design

Analogously to Study 3, 200 passers-by voluntarily participated in the experiment and were interviewed either in front of or 150 yards before/after the funeral home. The mean age was 39.3 years (*SD* = 15.52) ranging from 18 to 83 years. Gender was almost equally distributed with 45.5 % (*n* = 91) male and 54.5 % (*n* = 109) female participants.

Again, a two factorial between-subjects design with priming (mortality salience versus control condition) and model (VW Golf Mark 1 versus VW Golf Mark 5) as independent variables, and product evaluation (100-point scale) as dependent variable was used. Neither participants' gender nor age influenced the results.

3.6.1.2 Experimental Procedure

The procedure was similar to that applied in Study 3, with the exception of different car stimuli. A laminated monochrome of either the VW Golf Mark 1 (year of construction: 1974) or Mark 5 (year of construction: 2003) was now to be evaluated by participants.

3.6.2 Results and Discussion

3.6.2.1 Manipulation Check

A test was once again carried out in order to establish whether the nostalgic stimulus (i.e., VW Golf Mark 1) was perceived as being older than the contemporary stimulus (i.e., VW Golf Mark 5). A 2 x 2 ANOVA with the estimated year of construction as dependent variable was conducted. Fifteen subjects indicated that they were unable to provide an estimation and were thus excluded from this analysis. As results showed, the age of the products was successfully manipulated, with participants rating the VW Golf Mark 1 (*M*

= 1979.8, *SD* = 8.26) as significantly older than the VW Golf Mark 5 (*M* = 2001.5, *SD* = 6.33), $F(1, 181) = 406.88$, $p < .001$.

Surprisingly, this main effect of model was qualified by an unexpected interaction effect between model and priming, $F(1, 181) = 7.45$, $p < .01$. Post-hoc analysis revealed that the VW Golf Mark 5 – but not the VW Golf Mark 1 – was estimated to be older in the mortality salience condition (*M* = 1999.6, *SD* = 7.68) than in the control condition (*M* = 2003.2, *SD* = 4.18), $F(1, 181) = 5.33$, $p < .05$. While this might be regarded as an interesting side-result, it does not seem to challenge the line of argumentation or question the success of age manipulation, since the VW Golf Mark 5 was estimated to be significantly younger than the VW Golf Mark 1 in both control, $F(1, 181) = 266.97$, $p < .001$, and mortality salience conditions, $F(1, 181) = 149.45$, $p < .001$.

3.6.2.2 Car Evaluation

Again, a 2 x 2 ANOVA tested the influence of location and car model on preference measurements (100-points scale). All subjects were included in the analysis. In line with Study 3, a main effect of model, $F(1, 196) = 14.85$, $p < .001$, was found. In contrast to Study 3, however, no main effect of location, $F(1, 196) = .73$, p = n.s., was observed and participants' average (i.e., independent of location) preference was now higher for the new (i.e., VW Golf Mark 5), *M* = 64.36 (*SD* = 18.15), than for the old car (i.e., Golf Mark 1), *M* = 52.87 (*SD* = 24.10).

Corresponding to the hypothesis and the results of Study 3, this main effect was qualified by a significant two-way interaction, $F(1, 196) = 6.11$, $p < .05$. Again, mortality salience (induced by study location) had a different effect on evaluations of the two car models (cf. Figure 2).

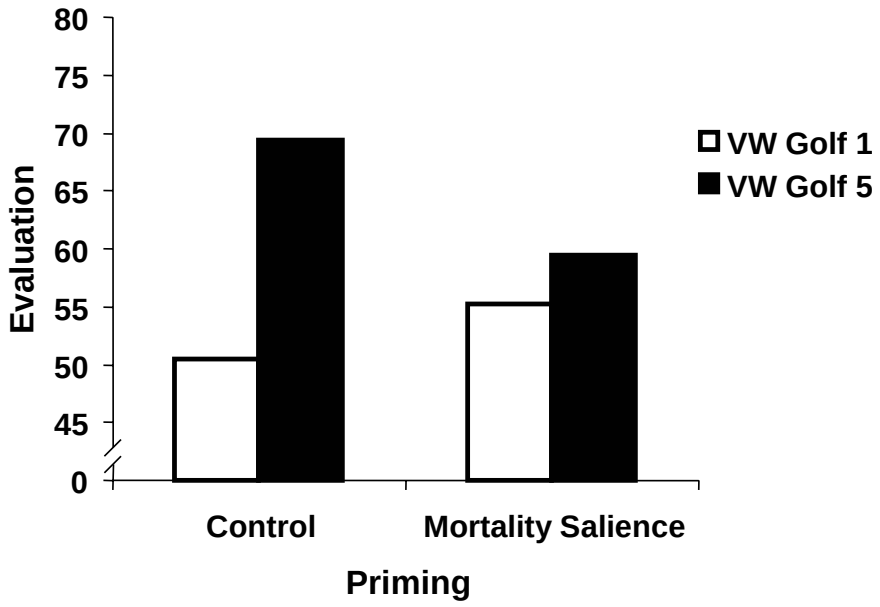

Figure 2 **Influence of mortality salience and car model (VW Golf Mark 1 versus VW Golf Mark 5) on preference measures (Study 4). Evaluation scales ranged from 0 to 100.**

Since a further aim of this study was to investigate whether a higher preference for the contemporary car alters the pattern of results, a planned contrast test was computed within the control condition. The test revealed that, in this condition, the contemporary VW Golf Mark 5 (M = 69.32, SD = 15.04) was indeed evaluated more highly than the classic VW Golf Mark 1 (M = 50.46, SD = 23.22), $t(196) = -4.47$, $p < .001$, two-tailed, $d = 0.96$. Despite the fact that the contemporary car received better ratings than the classic car under control conditions, this gap declined to a non-significant difference in the mortality salience condition (VW Golf Mark 5: M = 59.40, SD = 19.11 versus VW Golf Mark 1: M = 55.28, SD = 24.96), $t(196) = -0.98$, p = n.s, two-tailed, $d = 0.19$. This suggests that mortality salience priming does not simply increase existing preference patterns but, rather decreases them when the more preferred stimulus car is perceived to be younger than the

less preferred stimulus, as was the case here. Accordingly, the younger VW Golf Mark 5 was preferred less under mortality salience than under control conditions, $t(196) = -2.35$, $p < .01$, one-tailed, $d = 0.58$, but, in contrast to the results of Studies 1 and 3, the positive priming effect on preference ratings for the older car (i.e., VW Golf Mark 1) was only small and non-significant, $t(196) = 1.14$, $p = .13$, one-tailed, $d = 0.20$. The model-by-priming interaction in this study was thus driven by the devaluation of the contemporary model (i.e., VW Golf Mark 5).

Again, this study showed that the influence of mortality salience on subjects' car preferences was moderated by the age of the products, but not by participants' initial preference patterns. Of particular interest is the finding that the contemporary model was devaluated under mortality salience as compared to control conditions, whereas the influence of the priming procedure on participants' evaluation of the classic car was too small to reach the level of significance. A reasonable explanation for the small priming effect on the evaluation of the VW Golf Mark 1 is that this car was not considered to be a "true" classic car by all participants and could therefore not – or only partially – induce nostalgic emotions. In fact, the VW Beetle, with an estimated year of construction of 1964, was perceived as being much older than the VW Golf Mark 1, with an estimated year of construction of 1980, making the latter much more mundane than the former. However, as the priming effect on the evaluation of the classic car was descriptively existent and in the predicted direction, it would appear obvious that this small effect does not contradict the theoretical development but may rather be explained by certain other characteristics of the product stimulus.

The effects observed thus far have proved relatively stable across two extensions of the Volkswagen brand. It would, however, be of

interest to determine whether the same effects can be transferred to a different German car brand. Moreover, it was implicitly assumed that participants perceived the stimulus cars used so far to have equally low or at most medium status-relevance. A replication of the observed effects when two high status stimuli are used could aid the conceptual extension of Terror Management Theory. On this basis, Study 5 was designed to test the established hypotheses using a luxury car brand (i.e., Mercedes SL).

3.7 Study 5

The previous studies in the present chapter focused on the importance of a product's nostalgic impression when it comes to perceived cultural relevance. It was hypothesized that, in comparison to contemporary products, only classic products serve as a repository of subjects' cultural history and manifestation of their worldviews. In order to test these assumptions, the terror management paradigm was used, which predicts that subjects tend, under mortality salience conditions, to protect their cultural worldviews. Accordingly, strong evidence was found that the age of a stimulus car moderated the influence of mortality salience on car preferences.

However, the influence of mortality salience on worldview protection efforts is only one side of the coin. According to Terror Management Theory, mortality salience may also motivate people to validate their self-worth. As Maheswaran and Agrawal (2004) point out, the coping behaviors adopted by individuals in the face of mortality salience tend not only to be defense motivated, whereby individuals more strongly adhere to their cultural worldviews, but also impression motivated. The latter includes attempts to regain self-esteem by displaying prosperity and wealth to others. In line with this argumentation Kasser and Sheldon (2000) were able to show that people become greedier and more lavish under mortality

salience conditions. Mandel and Heine (1999) further demonstrated that people also appear to increase their preferences for luxury items. However, these hypotheses were only successfully tested using US-American participants and it is therefore of interest to establish whether the same effects can be translated to other cultural contexts.

Thus far, the present paper has exclusively investigated consumers' evaluations of a brand (i.e., Volkswagen) with a rather low or at most moderate status image. Challenging Mandel and Heine's (1999) conclusions, the fifth study examined whether mortality salience effects on nostalgic product preferences can be generalized to also include luxury car brands, or whether mortality salience rather distorts participants' evaluations in a positive direction for both contemporary and classic luxury cars. Two models of the Mercedes SL roadster (Mercedes SL R230 launched in 2001 versus Mercedes SL W198 launched in 1958) were employed as stimulus luxury cars.

3.7.1 Method

3.7.1.1 Participants and Design

200 passers-by (87 male [43.5 %] and 113 female [56.5 %]) voluntarily participated in the experiment. Participants' age ranged from 18 to 81 years, with a mean age of 37.9 years (*SD* = 15.54).

As in Studies 3 and 4, a two factorial between-subjects design was applied, with priming (mortality salience versus control) and model (classic Mercedes SL versus contemporary Mercedes SL) as independent variables and product evaluation (100-point scale) as dependent variable.

3.7.1.2 Experimental Procedure

Except that participants now had to evaluate monochromes of either an old or a new Mercedes SL, the procedure closely resembled that described in Studies 3 and 4.

3.7.2 Results and Discussion

3.7.2.1 Controlling for Age and Gender as Potential Covariates

Controlling for participants' age (one participant was excluded from this analysis because she did not report her age) and gender (age was included as covariate and gender as additional factor in an ANCOVA) once again resulted in two significant effects on car evaluations (age: $F[1, 190] = 10.89$, $p \leq .001$; gender: $F[1, 190] = 3.98$, $p < .05$). Contrary to Study 3, female participants ($M = 70.93$, $SD = 24.70$) rated both cars *lower* than male participants ($M = 79.45$, $SD = 19.15$). This mean difference indicated that male participants were more impressed by the Mercedes SLs than female participants, suggesting that the Mercedes SL has a stronger masculine image than the VW Beetle brand. Nonetheless, gender did not interact with the other independent variables and including gender in the ANCOVA did not change the results of the study.

Analogous to Study 3, analyses were also performed to test whether participants' age moderated the effects of the priming factors by including age (centered), mortality priming, and model (both contrast-coded) as well as all interaction terms as predictors of car evaluation. Gender was once again controlled for (contrast-coded). Similar to the ANCOVA described above, multiple regression analysis revealed main effects of gender and age, $\beta = -.14$; $p < .05$ and $\beta = .21$; $p < .01$, respectively. Not only male but also older participants rated both Mercedes more highly. However, participants' age had no further influence on the dependent variable. Age

neither interacted with the experimental factors nor did it eliminate other main or interaction effects. All other main and interaction effects were stable in multiple regression analysis and will thus be presented in the results section. Because of their lack of moderating influence, gender and age were not regarded in further analyses.

3.7.2.2 Manipulation Check

A 2 x 2 ANOVA with the estimated year of construction as dependent variable (a total of six participants reported being unable to make this estimation and were excluded from the analysis) revealed that products' age was successfully manipulated, $F(1, 190) = 623.71$, $p < .001$. Interestingly, the mean estimated year of construction (old Mercedes SL: $M = 1957.8$, $SD = 10.36$; new Mercedes SL: $M = 2000.5$, $SD = 13.23$) exactly corresponded to the years in which both cars had actually been launched onto the market. No other main or interaction effects were found.

3.7.2.3 Car Evaluation

As in Studies 3 and 4, a 2 x 2 ANOVA was conducted with car evaluation scores as dependent variable (all subjects were included). Corresponding to previous results, a main effect of car model was found, $F(1, 196) = 10.45$, $p \leq .001$. Participants rated the old Mercedes SL ($M = 79.68$, $SD = 20.95$) more highly than the new Mercedes SL ($M = 69.68$, $SD = 23.44$) independent of study location. Corresponding to the results of Study 4 but not of Study 3, no main effect of location was found.

The main effect of model was again qualified by a two-way interaction between model and priming location, $F(1, 196) = 7.88$, $p < .01$ (cf. Figure 3). In confirmation of the hypotheses, planned contrasts showed that the new Mercedes SL was evaluated lower in the mor-

tality salience condition (M = 64.08, SD = 25.13) than in the control condition (M = 75.28, SD = 20.35), $t(196) = -2.56$, $p < .01$, one-tailed, d = 0.49. In contrast, the old Mercedes SL was evaluated marginally better when participants were asked in front of (M = 82.76, SD = 20.86) as opposed to 150 yards before or after the funeral home (M = 76.60, SD = 20.79), $t(196) = 1.41$, p = .08, one-tailed, d = 0.30. In line with Study 3, both cars were evaluated equally well in the control condition, $t(196) = 0.30$, p = n.s., two-tailed, d = 0.06, whereas a large difference in preference ratings – i.e., the old car was preferred over the new car – was observed in the mortality salience condition, $t(196) = 4.27$, $p < .001$, two-tailed, d = 0.81.

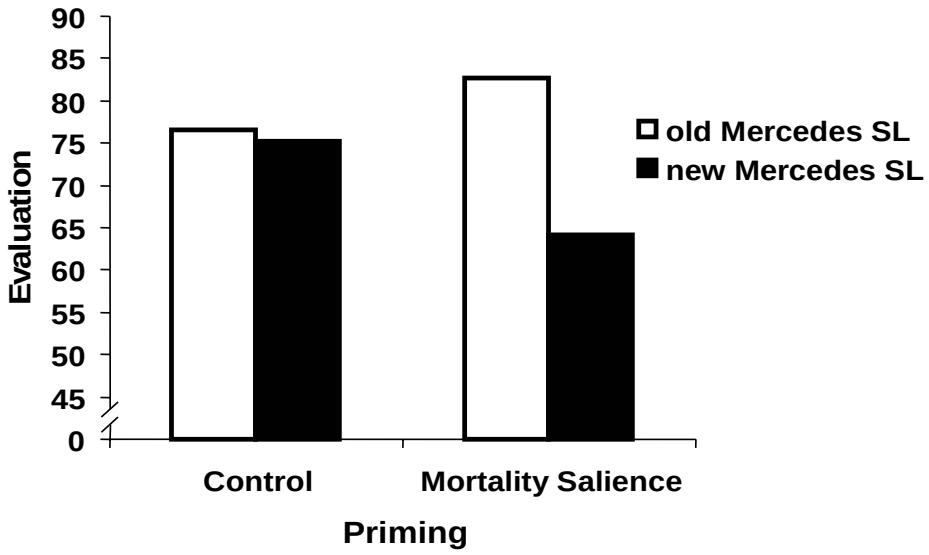

Figure 3 **Influence of mortality salience and car model (old Mercedes SL versus new Mercedes SL) on preference measures (Study 5). Evaluation scales ranged from 0 to 100.**

These results strongly support the argumentation that nostalgic products serve as repositories of humans' cultural worldviews. However, they partially contradict the hypothesis pertaining to status. Presumably, Mandel and Heine (1999) would have hypothe-

sized a priming main effect, i.e., increased preferences for both luxury cars, but neither an interaction effect between products' age and mortality salience nor a negative priming effect on the new Mercedes SL. The general discussion will further focus on this possible contradiction.

3.8 General Discussion

3.8.1 Materialism as a Terror Management Strategy?

As mentioned above, Study 5 again replicated the hypothesized priming-by-product-age interaction using two luxury cars (i.e., old versus new Mercedes SL). However, as previously explicated, the devaluation of the new Mercedes SL contradicts the status hypothesis first investigated by Mandel and Heine (1999). In their study, American students increased their preferences for advertisements for a luxury car (i.e., Lexus) and a watch (i.e., Rolex) under mortality salience. Mandel and Heine (1999) argued that this preference modulation occurred because people use luxury items to validate their self-worth within the culture in which they live, and in doing so, augment self-esteem. How can then these diverging results be explained?

In their original theoretical framework, Greenberg et al. (1997) describe the two (distal) terror management mechanisms, i.e., fostering cultural worldviews and striving for self-esteem, as consecutive processes. From their perspective, self-esteem is strongly dependent on (or even defined as) subjects' perceptions of meeting the standards of their cultural worldview. In this regard, self-esteem is seen as a consequence of subjects' ability to act in accordance with cultural ideals but not as an independent goal in itself. Mandel and Heine (1999) decomposed this relationship and implicitly assumed two independent motivational roots of terror management processes, i.e., cultural worldview defense and impression motivation

(cf. Maheswaran & Agrawal, 2004). It is, however, arguable whether the consumption of luxury items provides a sufficient source of self-esteem for all individuals in dealing with existential concerns, or whether it is more strongly dependent on the relevance of materialism within subjects' worldviews.

In societies where materialism is an important cultural value, the relationship of mortality salience and materialistic consumption behavior may, therefore, not directly be driven by self-esteem but mainly (or solely?) by the importance of materialism within people's cultural worldview. From this perspective, the consumption of luxury products or brands may serve to manage existential threat only when materialism is perceived as an important cultural value. As Arndt, Solomon et al. (2004b) note, "one of the guiding hypotheses of this research is the proposition that to the extent that *consumerism and materialism are a pervasive feature of dominant cultural worldview*s, and identification with cultural worldviews is increased by the activation of death-related thoughts, then we should see general increases in materialism after MS [mortality salience]" (p. 204, italics added by the author).

As is the case with Mandel and Heine's (1999) research, most terror management studies have been conducted in the USA. Especially in this country, materialism seems to be an important cultural value, which – as explicated above – may produce a positive bias when researchers aim to investigate a connection between mortality salience and materialistic consumer behaviors. This seems even more problematic when considering that Mandel and Heine (1999) used students as a study population; in contrast to the trend towards a more post-materialistic value orientation that can be observed using a non-student sample (e.g., Inglehart, 2000; Inglehart & Abramson, 1994), American college students have shown an *increase* in materialism over the last 30 years (Astin,

1998). This certainly challenges the generalizability of Mandel and Heine's (1999) results to subjects showing a more post-materialistic orientation and who might value consumerism (as an expression of a materialistic cultural worldview) as less important within their cultural worldview and for the definition of their personal self-esteem (cf. Rindfleisch & Burroughs, 2004). From this perspective, stronger post-materialistic values in the – non-American and non-student – consumer sample used in the present study could represent one possible explanation for the decrease in preferences found for the contemporary luxury car under mortality salience. In this context, it is interesting to note that Fischer (2002) was not able to replicate results supporting Mandel and Heine's (1999) status hypothesis, neither for a British nor for a German student sample. Furthermore, Marchlewski (2006) recently conducted a study in which German consumers' preferences for a red wine that was labeled as either high (i.e., 20 €) or low (i.e., 3 €) priced was examined under mortality salience and control conditions. As revealed by data analysis, participants' wine ratings were only influenced by price, and not by priming or – of particular relevance for the present line of argumentation – by a priming-by-price interaction. Presumably, cultural differences in the relevance of materialism within subjects' cultural worldviews explain these contrasting results. Since it deviates from the aim of the present paper, however, it is recommended that future research should look to more thoroughly investigate intercultural differences in the worldview importance of materialism and luxury consumption.

3.8.2 Nostalgia as a Terror Management Strategy

Five studies were conducted with the aim of investigating the influence of mortality salience on the evaluation of either classic or contemporary cars. It was assumed that mortality salience leads people to develop nostalgic sentiments and thus to increase their pref-

erences for nostalgic objects. This corresponds to Sedikides et al.'s (2004) argumentation that nostalgia serves an existential function in providing people's challenged identity with meaning and stability. Sedikides et al. (2004) postulate that nostalgic memories help people to overcome existential threat by bolstering their self-esteem as well as their cultural worldviews and one may certainly agree that nostalgic objects seem to lend themselves perfectly to the evocation of such retrospections.

The present paper aimed to test whether and under what circumstances nostalgic products form a valuable part of people's worldview and are thus able to serve a terror management function. The first two studies used a laboratory setting and a traditional mortality salience priming approach (i.e., two open questions on participants' thoughts and feelings concerning their own death [mortality salience condition] or with respect to watching television [control condition]). In Study 1, German male students were required to evaluate a classic (1971 VW Beetle) and in Study 2 a contemporary model (1999 VW New Beetle) of the VW Beetle brand under mortality salience or control conditions. As expected, the classic VW Beetle was evaluated more highly and the contemporary VW Beetle lower under mortality salience as compared to control conditions.

Studies 3-5 aimed to both replicate and generalize these results to a more heterogeneous sample and – in the case of Studies 4 and 5 – to different brand extensions and brands (i.e., VW Golf and Mercedes SL, respectively). Since Studies 1 and 2 only investigated male students, these studies now drew upon non-student samples and included both genders. Additionally, the respective classic and contemporary models of all stimulus cars were now included in two-factorial between-subjects designs. The third difference between these and Studies 1-2 lay in the change in setting from a laboratory to a field experiment, in which mortality salience was

manipulated by interviewing participants either in front of (mortality salience condition) or 150 yards before or after a funeral home (control condition). Two-way interactions between priming and car model revealed that the influences of mortality salience on subjects' car preferences across all brands were indeed moderated by the age of the car model. In confirmation of the main hypothesis, these studies also demonstrated this effect to be stable over various brand-extensions, brands, and to be independent of initial preference patterns or brands' status appeal.

However, further inspections of mean preference ratings across the five studies underscored the difficulty of predicting whether a classic (contemporary) car will receive higher (lower) ratings under mortality salience than under control conditions. In the case of Study 3, the model-by-priming interaction was driven solely by a higher evaluation of the classic but no (or at least no statistically) lower evaluation of the contemporary Beetle under mortality salience as compared to control conditions. Contrarily, in Study 4, this interaction was caused by a lower evaluation of the contemporary Golf under mortality salience, whereas a higher evaluation of the classic Golf failed to reach the level of significance. Finally, in Study 5, the contemporary Mercedes SL model was devaluated whereas the classic model was evaluated (marginally) better. Further research must clarify whether there are moderating variables (e.g., relative model age: i.e., [perceived] product age minus consumers' age) that are able to predict these effects more accurately.

Nevertheless, in these studies no patterns were found that contradicted the line of argumentation (i.e., higher evaluation of a contemporary car or lower evaluation of a classic car under mortality salience as compared to control conditions). Therefore, in order to investigate whether participants' preference patterns were similar across Studies 3-5, data from these experiments were pooled into a

2 (location: mortality salience versus control condition) x 2 (model age) x 3 (brand: VW Beetle versus VW Golf versus Mercedes SL) factorial between-subjects design for exploratory purposes (data pooling seems reasonable on account of equal cell sizes, study locations, and experimenter). A significant main effect of brand, $F(2, 588) = 26.89$, $p < .001$, and a marginally significant main effect of model age, $F(1, 588) = 2.74$, $p < .10$, was found, indicating on the one hand that across variants in models' age and location, the Mercedes SLs ($M = 74.68$, $SD = 22.73$) were evaluated more positively than both the VW Golfs ($M = 58.62$, $SD = 22.05$) and the VW Beetles ($M = 63.70$, $SD = 25.15$), $p < .001$ (Scheffé), whereby the difference between the VW Golfs and the VW Beetles was only marginally significant, $p < .08$ (Scheffé). On the other hand, the marginal main effect of model age indicated a trend toward higher ratings for the classic ($M = 67.18$, $SD = 25.71$) compared to the contemporary cars ($M = 64.15$, $SD = 22.65$).

However, these main effects were accompanied by a significant brand-by-model-age ($F[2, 588] = 15.77$, $p < .001$), a marginally significant location-by-brand ($F[2, 588] = 2.80$, $p = .06$), and, more interestingly, a significant location-by-model-age interaction ($F[1, 588] = 20.77$, $p < .001$) but no three-way interaction. As the brand-by-model-age interaction merely reflects the inverted (i.e., higher preference for the Golf Mark 5 compared to the Golf Mark 1 across conditions) preference patterns of Study 4 and the location-by-brand interaction was mainly driven by the positive location effect on the evaluation of both Beetles (see Study 3) these interactions will not be further discussed.

In order to strengthen the line of argumentation, the location-by-model-age interaction was further decomposed (see Figure 4). Strongly in line with the hypotheses, location had a significant – but opposite – effect on both classic and contemporary cars across

all brands. The classic cars were evaluated more highly directly in front of (mortality salience), M = 71.61 (SD = 24.48), as opposed to at a distance of 150 yards from the funeral home (control condition), M = 62.75 (SD = 26.22), $t(588) = 3.43$, $p < .001$, one-tailed, d = 0.35. In contrast, mortality salience had a negative effect on the evaluation of the contemporary cars, $M_{\text{mortality salience}}$ = 60.25 (SD = 23.83) versus $M_{control}$ = 68.05 (SD = 20.77), $t(588) = -3.02$, $p = .001$, one-tailed, d = 0.35.

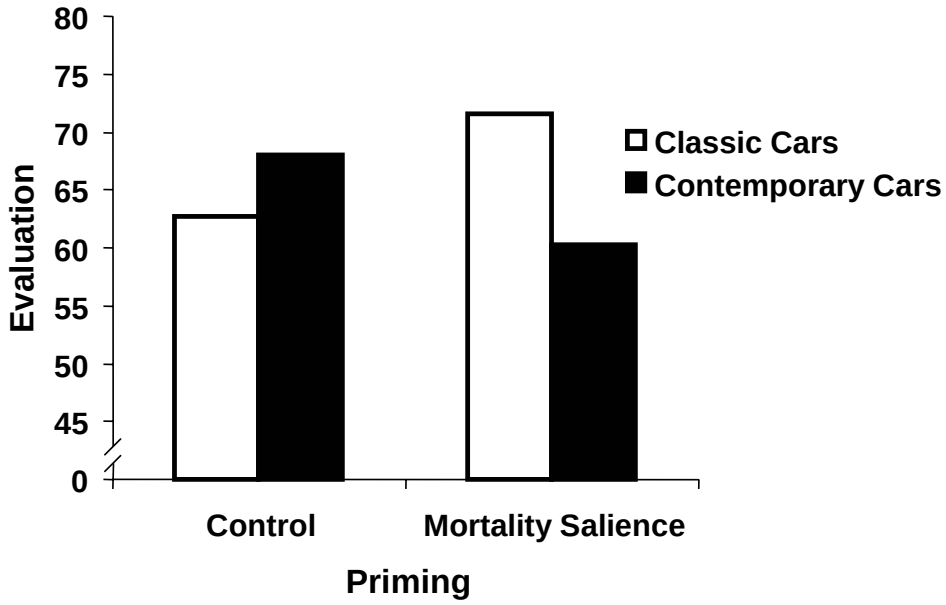

Figure 4 **Influence of mortality salience and model age on preference measures (pooled data of Studies 3-5). Evaluation scales ranged from 0 to 100.**

Across all car models, it can therefore be concluded, that mortality salience led participants to increase their preferences for a classic car and to decrease their preference for a contemporary car. Thus, if it is assumed that mortality salience motivates people to undertake a quest for meaningfulness and that nostalgic objects are repositories for cultural meaning, the fact that mortality salience leads people to increase preferences for nostalgic and decrease

preferences for contemporary objects must be interpreted as the subjective expression of this quest. This strongly supports the hypothesis that nostalgia constitutes a terror management mechanism.

3.8.3 Conclusions

Each and every day, people are confronted with a myriad of information that reminds them of their vulnerability, fragility, and essentially the lethality of their existence. Mortality may become salient simply by opening the newspaper, switching on the TV, listening to the radio, or even walking down the road. Usually, these death-related thoughts are rapidly suppressed and banished into unconsciousness. Nevertheless, they still reside in the mind and challenge the stability and meaningfulness of existence. One could agree with Sedikides et al. (2004) who argues that existential concerns cause people to feel insecure and thus motivate them to engage in purchasing nostalgic objects that may help them to regain meaning and stabilize their cultural worldview and identity. In times of possible insecurity, sadness, or potential depression, people may hark back to photo albums, commemorate their childhood, turn on the record player, and listen to the music of their past.

Maybe it is not pure coincidence that after the terrifying attacks of September 11, 2001, movies such as Harry Potter, Lord of the Rings, and King Arthur – all of which play in ancient settings and tell myth-like stories resembling the fairy-tales of people's youth – attained records in attendance. Movies such as Spider Man or the X-Men trilogy may also serve to remind people of their youth; the days when they delved into such comic worlds, holed up under the blanket and armed with a flashlight.

It was possible to demonstrate in the present paper that a loss of personal meaning and stability induced by existential threat, can

increase preferences for nostalgic objects (i.e., automobiles) that have become symbols of people's cultural history and repositories of their past. Furthermore, mortality salience can also decrease preferences for contemporary objects. Presumably, these tendencies can also be transferred to various product categories (e.g., beverages, watches, clothes, art, music, or sights) and marketing stimuli (e.g., advertising, store design). However, further research must confirm these assumptions. It would be of interest to further investigate whether these mortality salience effects are generalizable to brands of foreign national origin or whether, in this case, ethnocentrism becomes the predominant terror management strategy. As was reasoned in the context of the high status cars in Study 5, the role of differing cultural backgrounds and values within this process scheme should also be addressed in future research. Without a doubt, these analyses constitute, at most, a first step towards understanding the influence of nostalgia on consumers' perception of a product's cultural significance, and finally, towards addressing the sophisticated marketing challenge to turn "golden memories" into gold!

CHAPTER 4

Effects of Mortality Salience on Ethnocentric Consumer Behavior at a Regional Level

4.1 Introduction

The negative side to globalization is that it wipes out entire economic systems and in doing so wipes out the accompanying culture.

—Peter L. Berger (*1929)

We all live in a globalizing world in which consumer goods are increasingly produced in one place and purchased and consumed in many others. For example, many running shoes are manufactured in Southeast Asia and subsequently purchased all around the globe. Still other goods are produced, sold, and consumed within the very same region. One such product is beer. While a certain number of "global players" are also to be found in the beer market (e.g., Heineken and Budweiser), beers from smaller breweries are often consumed solely within their specific regional area – the only area in which they find demand. To withdraw a certain regional brand from consumers and to substitute it with another brand that is not part of consumers' regular consumption pattern can prove quite problematic. Take, for instance, the case of Budweiser's "FIFA World Cup 2006" sponsorship in Germany. Although Anheuser-Bush has traditionally been an official sponsor since 1986, the sponsoring of this specific World Cup created a marketing challenge for the manufacturer – at least in Germany. The exclusive

right to sell its Budweiser brand throughout the 12 World Cup stadiums and the exclusion of any German beer brand that was regularly sold there stirred up strong public protest (Ojo, 2006). Of course, in this specific case, it is possible that the only reason for the dislike of Budweiser could have been its differing taste compared to that of local beer brands. But, as will further be explicated in this chapter, beer brands are not only favored because of their tastes. They can, moreover, act as symbols of consumers' (regional) identity and it is therefore reasonable that at least some part of this indignation against Budweiser beer was due to consumers' subjective perception that a beer brand of a foreign culture threatens not only its local competitors, but also consumers' cultural worldview.

In this chapter, the circumstances under which consumers' regional identity represents a driving force in preference formation will be examined. The following studies aim to investigate local consumers' reactions towards two regional beer sorts from two German cities. Since each beer sort can be regarded as the archetypical sort of one of the two cities, these products should only be considered as one possible representative example of a regiocultural symbol. The terror management approach (cf., Greenberg et al., 1997) will be used to manipulate regional identification and to measure the cultural relevance of both beer sorts for subjects' regional worldviews.

It is argued that (a) the consumption of regional products (such as regional beers) often serves the function of bolstering consumers' social identities and (b) thus leads to stereotypic preferences for these kind of products ("regional ethnocentrism"); (c) furthermore such reinforcement of regional identity, i.e., ethnocentric preference, can be enlarged by manipulating consumers' salience of their own death. The following section will focus on this line of argumen-

tation, beginning with a short introduction to Terror Management Theory.

4.2 Conceptual Background

4.2.1 Terror Management Theory

How do people react when they are reminded of the inevitability and unpredictability of their own death (e.g., when confronted with news of terrorist attacks, natural disasters, wars, murders, or accidents), and do such thoughts have any relevant consequences for consumer behavior? Terror Management Theory (Greenberg et al., 1986; Solomon et al., 1991; for an overview see Greenberg et al., 1997) provides a framework that explains individuals' strategies for coping with awareness of their own mortality. After participants have been made mortality salient (e.g., through writing short essays on the topic, completing a fear-of-death-scale, being interviewed in front of a graveyard, watching videotaped car accidents, being subconsciously presented with the word death), two subsequent reactions (i.e., proximal and distal) are found. Primarily, people actively try to remove these death-related thoughts from their minds using several *proximal* defense mechanisms (e.g., distraction, rationalism, denying vulnerability, or suppression). Consequently, the consciousness of these thoughts decreases over time while unconscious death-thought accessibility arises. This leads to two *distal* reactions at a second level of defense: (1) the attempt to symbolically transcend life by upholding a shared cultural worldview that buffers death-related anxieties and (2) the attempt to strengthen cognitions that one acts in accordance with these views (self-esteem).

Although Terror Management Theory has gained a prominent place within social psychological research, its implications for consumer behavior have only recently been acknowledged (e.g., by Arndt,

Solomon et al., 2004b; Arndt, Solomon, Kasser, & Sheldon, 2004a; Maheswaran & Agrawal, 2004; Rindfleisch & Burroughs, 2004). This is remarkable since Terror Management Theory is able to predict several effects of mortality salience (for example, as a consequence of the events of September 11, 2001) on consumers' reactions to marketing stimuli such as products/brands, advertisements, endorsers, or cultural symbols (for an overview see Arndt, Solomon et al., 2004b; for public reactions to the 9/11 terrorist attacks see Ochsmann, 2002). First applications of Terror Management Theory to consumer behavior have included the topics of harmful but self-esteem-enhancing consumption (Routledge et al., 2004), self-regulation (Ferraro et al., 2005), status items (Mandel & Heine, 1999), materialism (Arndt, Solomon et al., 2004b), and persuasion (Shehryar & Hunt, 2005).

4.2.2 Social Identity as a Terror Management Mechanism

Tell me what you eat, and I will tell you what you are.

—Jean A. Brillat-Savarin (1755 – 1826)

According to Social Identity Theory (Tajfel & Turner, 1979) and its successor, Self-Categorization Theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), humans have a desire to define themselves as members of certain social groups. This desire can be satisfied in many ways. In-groups are distinguished from out-groups on the basis of gender, nationality, hobbies, occupation etc. and an individual holds not only one but many social identities simultaneously that are more or less self-important depending on their salience within an individual's self-concept (Forehand, Deshpandé, & Reed II, 2002; Halloran & Kashima, 2004; Reed II, 2002). Identifying oneself with a certain in-group usually leads people to favor in-group (i.e., reference group) and devaluate out-group members (as long as the out-group is not seen as an entity to which people as-

pire to belong; i.e., an aspiration group) and to adopt in-group norms and behaviors. According to Rosenberg (1979), social identity is part of our self-concept which is known to influence our consumer behavior (for a critical review of self-concept research in consumer behavior see Sirgy, 1982). Social-identity should thus be a highly relevant variable in consumer's preference formation and choice behavior (Reed II, 2002).

Recently, Escalas and Bettman were able to show that the implications of Social Identity Theory can be translated into the consumer context, and further argue that brands used by reference groups can be a means of creating, maintaining, and communicating a desired social identity (Escalas & Bettman, 2003, 2005; see also Ball & Tasaki, 1992; Belk, 1988; Grubb & Grathwohl, 1967; James, 1985/1892; Reed II, 2002; Richins, 1994; Wicklund & Gollwitzer, 1982). For example, possessing a real *Picasso* painting can be highly relevant for an individual's self-image in signaling to others that the possessor wants to belong to the group of art-lovers. In contrast, a fake Picasso painting (even one that cannot be distinguished from the original) would not serve this (social) identity providing function. Not surprisingly, people thus feel more (less) connected to brands bearing associations that (do not) correspond to their in-group, whereas the opposite holds true for brands associated with the respective out-group. Interestingly, this effect is amplified when the brand is perceived to be symbolic – i.e. it is perceived to communicate something about the user (Escalas & Bettman, 2005). The present paper looks to extend these arguments to the *consumption* of self-symbolic goods. Just as the possession of certain goods can help people to create a sense of self and a desired social identity, consumers are also expected to create, maintain, and signal desired social identities by consuming certain goods.

In reference to Terror Management Theory, a large body of research has shown that in-group biases are increased when people are made aware of their own mortality (Castano, 2004; Castano et al., 2002; Greenberg et al., 1990; Halloran & Kashima, 2004). In their attempts to close the gap between Social Identity Theory and Terror Management Theory, Castano and colleagues (Castano, 2004; Castano et al., 2002; for an overview see Castano et al., 2004) showed that nationality is an important criterion when it comes to defining identity and distinguishing between in- and out-groups. Interestingly, these researchers were also able to show that existential concerns further promote these identification processes. In one study (Castano et al., 2002), Italian students were asked to rate their identification with Italy and their judgements of Italians and, for example, Germans. As expected, both identification and in-group bias increased under mortality salience. These findings were interpreted twofold: first, people seem to seek consensus within their in-group, in order to validate their cultural worldviews. From this point of view, the motive behind in-group identification is the social verification of the "right" worldview. Second, the in-group may also serve as a direct mechanism for buffering death anxieties, because it provides a social identity that will continue to exist after the person's death, so that identity transcends life in a symbolic manner.

Nevertheless, this nationalistic bias under mortality salience does not only occur with respect to the general evaluation of nations and their inhabitants. Applied to the field of consumer research, Nelson et al. (1997), for example, provided evidence that an ethnocentric bias, which often surfaces in in-group favoritism and out-group devaluation, can also be found for attributions of blame to commercial organizations. In their study, participants who had previously thought about their own death tended to attribute more

blame for a car accident to a foreign car manufacturer and less to the car driver than did participants in a control condition.

A further nationally biased consumer reaction to mortality salience might be the tendency to buy products, brands, or other objects that support the person's national cultural worldview and to avoid objects that threaten that view. Indeed, preliminary evidence has been found that preferences for national cultural items (e.g., cars, food, talk/game-show hosts, sports) are increased under mortality salience (Jonas et al., 2005; Jonas & Fritsche, 2005).

To date, researchers that have examined the effects of mortality salience on preferences for symbols and material goods from consumers' in-groups in relation to those from consumers' out-groups have mainly focused on consumers' *national* social identity. However, nationality is only one possible category that people can use to distinguish between "us" and "them". As previously mentioned, Social Identity Theory has emphasized that people employ various categories to build positive social identities, including for example gender, race, age, hobbies, or profession. A further dimension that people potentially draw upon in defining their social identity is the *geographical region* in which they live, e.g., the city or the state (Bell & Valentine, 1997; Simon, Kulla, & Zobel, 1995). Take, for example, license plates in the U.S. that very often signal the distinctiveness of one state in comparison to others (e.g., New York: "The Empire State" or Florida: "The Sunshine State"). It is not uncommon that car owners exhibit their lack of trust in their license plates to sufficiently signalize the desired message by adding certain stickers to their trunk (e.g., "Don't mess up with Texans", cf. Stern & Solomon, 1992). In this context, food would especially seem to provide a reservoir of possibilities for regional identification (Lupton, 1996) and a marketing strategic antidote against the

pressures of globalization (e.g., Bordeaux wine, Champagne, Gouda cheese; cf. Bell & Valentine, 1997).

Interestingly, opposing regional identities often imply a common social identity at a higher level of abstraction: Texans and New Yorkers might feel very different at times, yet both will feel like Americans (and thus feel very similar to each other) when their national identity is made salient. Why should then people develop a regional identity in addition to their national identity? Social Identity Theory argues that people define their social identities in such a way that members of the in-group perceive themselves to be very similar to each other and members of the out-group appear to be very different. Thus, under certain circumstances, it is sufficient to define oneself as the inhabitant of one's country (e.g., Americans when comparing themselves to "the Chinese"). However, there are other circumstances in which being American might be a category that is too broad to serve the function of distinguishing oneself from members of the out-group. In these cases, people will define themselves by categories that are less inclusive than that of their national identity. This might be their profession or their gender, or – as is the focus of the present chapter – their regional identity.

People's need to distance themselves from a particular out-group is often especially high when the other group is objectively relatively similar or close to the in-group. Take, for example, the relationship between psychologists and sociologists. These two disciplines might not be distinguishable from the perspective of scholars from very different disciplines (e.g., physics), yet sociologists and psychologists often emphasize that their respective disciplines completely differ. This can be explained by the fact that the objective similarity of an out-group threatens the distinctiveness of the in-group. Such effects can also be observed at the level of national identities (Van Oudenhoven, Askevis-Leherpeux, Hannover,

Jaarsma, & Dardenne, 2002). Take, for example, Canadians' tendency to regard themselves as being totally different from the U.S. population. It can be assumed that such effects are also prevalent at a regional level: inhabitants of two neighboring states or cities might feel a special need to perceive themselves as being very different from each other, in order to defend their perception of identity (i.e., their perception of being unique).

The obvious fact that people do not only gain their worldview from an in-group at a national level thus led to the idea of breaking down the assumptions of Terror Management Theory to a regional level and comparing the influence of mortality salience on consumer behavior within two regional samples. Since many consumer brands and products (e.g., foods and beverages) are mainly marketed and consumed within a specific region, this new focus should contribute to a relevant extension of Terror Management Theory to the marketing of regional goods.

4.2.3 Overview of the Present Studies

Following the line of reasoning presented above, the focus of the investigations in this chapter lies on examining the evaluations of two different kinds of beer from two closely situated German cities (one beer sort from each city) in the Rhineland in the Western part of Germany: Cologne and Düsseldorf. These two cities were chosen on account of the fact that they are only 25 miles apart and, viewed objectively, have an almost identical cultural background. Despite these geographical and cultural similarities, cultural competition can be observed among the cities' inhabitants. This becomes manifest in varying traditions, lifestyles, and consumption patterns (Job, 2002). Not surprisingly, the inhabitants hardly acknowledge any similarity between the cities, and in each city innumerous jokes are made about the inhabitants of the other city. Both cities have their own specific beer sort ("Kölsch" in Cologne

and “Altbier” in Düsseldorf) and for the majority of the inhabitants, it would be quite uncommon to buy, order, or drink beer from the other city. In fact, in a representative survey, 32.1 % of beer drinkers from Cologne stated that they mainly drank “Kölsch” and only 2.9 % “Altbier”, whereas the opposite held true for Düsseldorf, where only 3.5 % of the beer drinkers stated mainly drinking “Kölsch” and 25.0 % “Altbier” (TdWI, 2005).

It is further supposed that local beer preferences – like food preferences – are at least in some part explained by an inherent symbolism that connects a product with consumers’ (regional) collective identity (cf., Bell & Valentine, 1997; Fischler, 1988; Lupton, 1996). Or, as Fischler (1988) states: “the absorption of a food incorporates the eater into a culinary system and therefore into the group which practises (sic) it” (pp. 280 f.). Therefore, it seems reasonable to assume that the beer sorts are more than simply a drink for the inhabitants of the two cities, instead representing some kind of cultural symbol of a consumer’s city or region and a means of assuring local patriotism. In order to investigate this assumption, the terror management approach will be used. This posits that people bolster their cultural worldview under mortality salience. It is expected that this defense mechanism should also emerge with respect to a representative of that worldview, i.e., a symbol such as a beer sort that represents people’s cultural identity.

In expanding previous findings on national ethnocentrism under mortality salience (e.g., Jonas & Fritsche, 2005; Jonas et al., 2005; Nelson et al., 1997), this paper aims to discover whether mortality salience also has an influence on regional consumption patterns. Two different beer sorts will be used as representative symbols of regional consumption. The first of the following three studies was designed to investigate whether mortality salience alters attitudes towards regional beer sorts. Study 2 looks to empirically investi-

gate whether people are actually able to identify each beer sort by its taste or whether preferences are simply due to a cultural stereotype, in a blind test of both beer sorts. Finally, Study 3 again measures the influence of mortality salience on participants' beer preferences, focusing this time on (1) actual taste preferences (not only attitudes), (2) participants from both cities, and (3) a broader sample consisting of male and female consumers.

4.3 Study 1

This study aimed to determine whether a beer sort may indeed act as a regional symbol. To this end, it was investigated whether consumer preferences for two regional beer sorts were influenced by the degree to which they were aware of their own mortality. As far as mortality salience leads people to protect their cultural system, it was hypothesized that they should enhance their preferences for a cultural symbol of their region (i.e., a local beer sort) under these conditions.

This experiment was therefore designed to establish how people generally rate both beer sorts and how these ratings change across conditions of high versus low mortality salience. It was hypothesized that if a beer sort indeed acts as a cultural symbol, it can be expected that an interaction effect between priming and beer sort should occur, i.e., preferences for the beer sort of the own city should increase under mortality salience, whereas preferences for the beer sort of the other city should decrease.

4.3.1 Method

Because of an assumed gender specificity of beer preferences, this study exclusively investigated male students from Cologne, who were asked to indicate their preference for either a beer sort from their own city ("Kölsch") or a beer sort from the rival city ("Altbier")

under mortality salience and control conditions. In line with previous mortality salience studies, it was also checked whether mood states potentially accounted for the effects of mortality salience on the dependent variables and thus served as an alternative explanation of the results.

4.3.1.1 Participants and Design

Fifty nine male students voluntarily participated in the experiment. As an incentive, they were given the opportunity to (voluntarily) enter a sweepstake. Participants' mean age was 25.7 years (*SD* = 4.18) ranging from 20 to 39 years. Age did not influence the study results.

Subjects were randomly assigned to conditions in a 2 (mortality salience versus control condition) x 2 (own beer versus foreign beer) between-subjects design. The dependent variable was participants' preference for the given beer sort compared to that of an ideal beer (100-point scale).

4.3.1.2 Experimental Procedure

In order to prevent participants from becoming suspicious about the connection between the priming procedure and beer evaluation, the first part of the study was separated from the second and labeled "a study about handling emotions in modern society". This first part was conducting as a paper and pencil questionnaire that participants completed on their own, without the experimenter being present, whereas the second part was labeled "a study about beer preferences" and was conducted as an oral interview. Additionally, the first part was a study ostensibly conducted by another university department, and the experimenter told participants that the study was completely independent of the beer study. Having completed the first part of the study, participants were asked to

insert the questionnaire into an envelope and to place the envelope into a sealed cardboard box. This procedure was adopted to ensure that participants believed that they were participating in two different experiments.

The first questionnaire began with 15 filler items followed by the standard mortality salience/control induction in which participants in the mortality salience condition were asked to write two short essays about their (1) thoughts and (2) feelings concerning their own death. In the control condition participants were asked to write two short essays about their (1) thoughts and (2) feelings with respect to watching television (see Rosenblatt et al., 1989). Following the priming procedure, participants' moods were measured by means of a German version of the PANAS scale (Krohne, Egloff, Kohlmann, & Tausch, 1996; for the original version see Watson et al., 1988). This scale was used for necessary distraction as well as to measure the influence of mortality salience on mood and concluded the first questionnaire.

The experimenter then entered the room and initiated the second part of the study. He asked participants to rate a beer from either Cologne or Düsseldorf on an evaluation scale which compared the beer to an ideal beer (i.e., the "best beer conceivable") and ranged from 0 (*worst*) to 100 (*perfect*). As shown by Friedman and Friedman (1997), such a compared-to-ideal scale reduces possible ceiling effects that otherwise might have occurred when participants rated the kind of beer that they regularly drink. After having evaluated the beer, participants filled out a number of items pertaining to their beer-drinking behavior. These served as filler items. The questionnaire closed with a socio-demographic section. Participants were debriefed by mail after completion of the experiment.

4.3.2 Results and Discussion

4.3.2.1 Exclusion of Subjects

Two participants had never drunk the beer sort from Düsseldorf. Their responses were excluded from the main analysis.

4.3.2.2 PANAS Findings

The PANAS scale was used to determine whether the priming conditions had influenced participants' moods. As expected, there was no significant effect on the positive affect (PA) scale, $F_{PA}(1, 57) = 0.46$, $p = .50$. However, in contrast with previous terror management research, a main effect of priming on the negative affect (NA) scale was found. Participants in the mortality salience condition ($M = 16.24$, $SD = 5.25$) showed more negative affect than participants in the control condition ($M = 13.00$, $SD = 6.07$), $F_{NA}(1, 55) = 4.66$, $p = .04$ (the difference in degrees of freedoms occurred due to the fact that two participants failed to respond to the NA-Scale). Nevertheless, after controlling for negative mood (by including the scale value as a control variable in an analysis of covariance) in order to examine whether this variable might provide an alternative explanation for influences of priming on dependent measures, the results of the study remained stable. Therefore, the influence of participants' mood on beer preferences will not be regarded further.

4.3.2.3 Evaluation of Beer

A 2 x 2 ANOVA was conducted with priming and beer sort as independent factors and beer preference ratings as dependent variable. In line with the presumption that the beer from participants' hometown, Cologne, is generally preferred over the beer from the rival city, Düsseldorf, a main-effect of beer sort was found. Inhabitants of Cologne preferred "Kölsch" over "Altbier" independent of the

mortality salience factor (M = 66.2, SD = 28.7 versus M = 30.1, SD = 19.8, respectively; F[1, 53] = 31.28, p < .001).

As hypothesized, this effect was qualified by an interaction between mortality salience and beer sort, F(1, 53) = 4.46, p = .04 (see Figure 5). In the control condition, participants rated the local beer from Cologne (M = 59.57, SD = 31.11) as tasting better than that from Düsseldorf (M = 37.29, SD = 17.67; t(53) = 2.44, p < .05, two-tailed, d = 0.88). However, under mortality salience, this taste difference was additionally augmented, with participants rating the local beer from Cologne as tasting even better (M = 72.33, SD = 25.70) and the beer from Düsseldorf as tasting even worse (M = 23.00, SD = 19.71; t[53] = 5.49, p < .001, two-tailed, d = 2.15) than in the control condition.

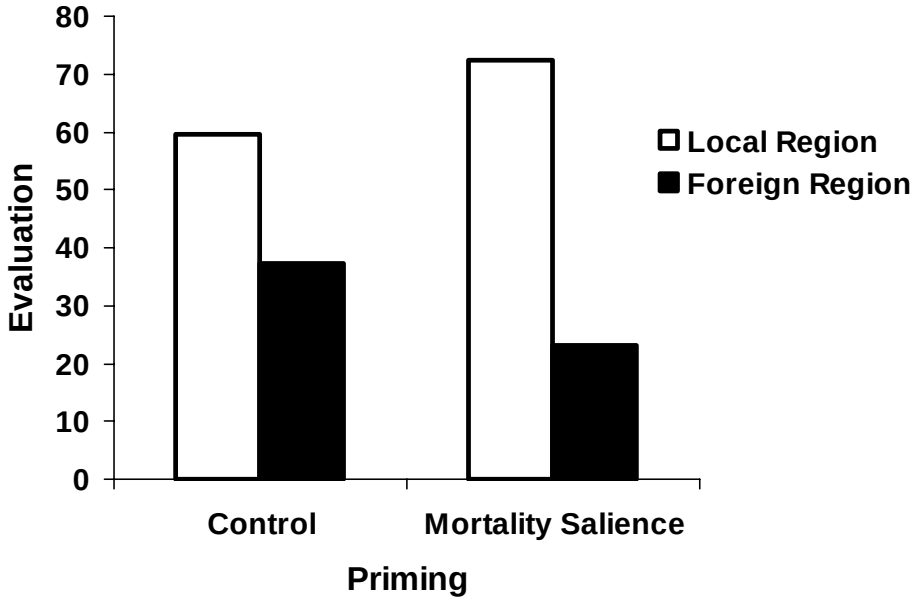

Figure 5 **Influence of experimental condition on the *cognitive* evaluation of a foreign- and local-regional beer sort (Study 1). Evaluation scales ranged from 0 to 100.**

Planned contrasts revealed that the interaction was caused by both a marginally increased taste-rating of the local beer from Cologne and a marginally decreased taste-rating of the beer from Düsseldorf (t[53] = 1.42, p < .08, d = 0.45, and t[53] = -1.56, p < .06, d = 0.76, one-tailed; respectively). However, in terms of Cohen (1988), these effects must be considered as "medium" and "large", respectively, which further strengthens this line of reasoning.

It was not surprising that participants generally preferred "their" beer to that from the foreign city (Possible reasons for this effect will be investigated and discussed in Study 2). But, supporting the main hypothesis, this preference gap increased under conditions of high mortality salience. This increase was explained by both an increase in participants' preferences for the beer from their hometown and a decrease in their preferences for the beer from the rival city. From a terror management perspective, the regional beer brand may thus indeed act as a cultural symbol, at least in Cologne, Germany.

4.4 Study 2

It is supposed that drinking habits are - like food habits - acquired consumption patterns that are adopted early in life and that remain relatively stable in the long run (cf., Fieldhouse, 1995). Besides biological (genetical) and individual (psychological) factors, culture has an important influence on food-likes and preference-enhancements (for an overview see Rozin & Vollmecke, 1986). For instance, preferences for sweet tastes and dislikes of bitter tastes are innate. The adaptive function of these dispositions lies in the fact that sweet tastes are an indicator of calorie rich food whereas bitter tastes indicate toxins. Nevertheless, people are capable of altering their preferences during socialization and developing preferences that are in opposition to their inborn likes. For example,

many people demonstrate strong preferences for bitter foods (e.g., certain salads and vegetables) and drinks (e.g., bitters, vermouths, or beer). Besides the motivation to seek gustatory variety that seems to be an efficient adaptation for all omnivores, the psychosocial background of friends, family, and peer groups on the less and (sub)cultures on the more aggregated level seem to also have an important influence on these exceptional food preferences (Rozin & Vollmecke, 1986).

It is plausible that culture is not only important for the adoption of food but also beverage preferences; e.g., preferences for certain kinds of drink that have cultural significance (such as a beer sort). In light of the results of Study 1, showing that people from Cologne generally prefer their beer to a beer from Düsseldorf, it is possible that participants preferred the taste of their hometown beer because they have acquired a taste for this particular beverage and subsequently devalue the "new" taste of the foreign beer. Nevertheless, this explanation suggests that people are at least able to gustatorily distinguish between the two beer sorts. But, is it not also conceivable that it is not a beer's taste but rather its label that guides subjects' attitudes towards a particular beer sort? Is it possible that the participants of Study 1 were subject to a labeling effect caused by beer sort? This would entail that beer taste preferences are determined not by the taste of the beer, but rather by the social environment. Extremely stated, the two beer sorts could potentially, when tasted blindfolded, taste similar, or even be undistinguishable, as previous beer tasting experiments might suggest (Allison & Uhl, 1964). In the case of cola, research has further shown that participants' ratings are influenced exclusively by the trademark and not by the actual soda pop tested (Pierce, 1987; Pierce & Belke, 1988). It is therefore not implausible that participants in Study 1 preferred the local beer because of its label and not because of its specific taste.

The second experiment thus aims to address this question in greater detail and establish whether people are able to correctly identify the taste of one of the two beer sorts in a blind test. It is not inconceivable that preferences for a local beer sort are simply justified at a cognitive level with absolutely no gustatory basis. In this case, beer preferences would be accounted for by a cultural stereotype and not an objective taste criterion.

4.4.1 Method

4.4.1.1 Participants and Design

A simple between-subjects design with the two beer sorts as factor was used in this experiment. A beer from either Cologne or Düsseldorf was blind tested by 32 inhabitants of Cologne who voluntarily participated in the experiment. These were randomly assigned to experimental conditions. Participants were aged between 24 and 77 years (M = 37.2, SD = 11.07). Fifty percent were male and 50 % female.

4.4.1.2 Experimental Procedure

After participants had agreed to take part in the study, they were guided into the lab where they were informed about the purpose of the experiment. The experimenter told participants that he wanted to examine whether they were able to identify a beer from either Cologne or Düsseldorf by its taste alone. At the beginning of the experiment, participants were asked to indicate on a 5-point scale ranging from 1 (*not at all certain*) to 5 (*very certain*) how certain they were that they would succeed in the task. They were then requested to put on a pair of blackened ski goggles to prevent them from using their visual sense. The blind test procedure was considered necessary given that the beer sorts “Kölsch” and “Altbier” are differently colored and would otherwise easily be visually recog-

nized. A cup of beer was then given to participants, who were asked to taste it, classify it to the respective city, and rate its taste on the 100-point scale comparing it to an ideal beer. After completion of the experiment, participants were debriefed and thanked for their participation.

4.4.2 Results and Discussion

4.4.2.1 Task Achievement Ability

On the 5-point scale measuring participants' subjective ratings of their ability to correctly classify a beer from their hometown, only 18.8 % of the subjects answered on scale points 1 (*not at all certain*) and 2. Approximately one fourth (28.1 %) of the participants answered on scale point 3, and 37.5 % and 15.6 % on scale points 4 and 5 (*very certain*), respectively. With a mean rating of 3.44 (*SD* = 1.11), most participants were at least moderately certain that they would be able to identify the beer sorts.

4.4.2.2 Classification of Beer

The main purpose of the study was to investigate whether participants' perceived ability to correctly classify both beer sorts corresponded to their actual ability. Interestingly, this correspondence was not supported by study results. Only 16 participants (50%) correctly identified the tasted beer. Given that participants only had two alternatives, it can be assumed that the probability of a correct identification is not better than chance (binomial test: p = 1.00). It is also noteworthy that people who identified the beer correctly had not felt significantly more able to succeed than those who were not successful (M = 3.50; SD = 0.97 versus M = 3.38; SD = 1.26, respectively), $t(30) = 0.32$, p = .38 (one-tailed). Across both beer sorts, participants proved unable to correctly classify the

tasted beer. But do people at least have a taste preference for the beer from their own region as Study 1 might suggest?

4.4.2.3 Evaluation of Beer

An ANOVA with beer sort as factor and taste evaluation as dependent variable was conducted in order to analyze whether participants preferred the beer sort of their own city to that of the foreign city during the blind test. In line with their factual inability to correctly identify the respective sorts, however, the ratings for the beer from their hometown (M = 61.1, SD = 18.5) were only slightly above the ratings for the beer from the foreign city (M = 56.3, SD = 26.8). This difference was far from statistical significance, $F(1, 30) = 0.35$, $p = .56$.

In line with previous studies that contradict subjects' ability to gustatorily distinguish between beer sorts (Allison & Uhl, 1964), evidence can now be provided that people from Cologne are – despite their assumed ability – *not* able to identify the beer sort from either their hometown or Düsseldorf. They are not only incapable of discriminating between the two beer sorts, but also do not even gustatorily prefer the beer sort from their hometown to that from Düsseldorf, as would be assumed from Study 1. Any preference towards a beer sort from participants' hometown seems to be solely based on and caused by a cultural stereotype. As in the Coke versus Pepsi challenge (Woolfolk, Castellan, & Brooks, 1983, Experiment 2), this study showed that regional beer preferences seem to be predominantly influenced by the beer sorts' regional label, and thus its perceived region of origin, and not by its actual taste.

Given this, results of Study 1 should be interpreted with caution. It would seem that the cognitive evaluation of both beer sorts departs from an evaluation of taste. In order to clarify and expand the results of Study 1 and 2, Study 3 aims to investigate participants'

beer preferences, under mortality salience or control conditions, in the context of a real taste test.

4.5 Study 3

In Study 1, it was demonstrated that mortality salient students from Cologne increase their preference for a beer from their city. Since this could be explained either by acquired taste preferences or an ethnocentric bias, Study 2 was conducted where it was shown that people are not actually capable of correctly identifying their hometown beer and do not actually prefer its taste to that of the foreign sort. Thus, only the label and its cultural background appear to have formed participants' preference patterns.

It is further interesting to know what might happen when participants are not required to cognitively evaluate but rather to taste the two beer sorts included in Study 1. On the one hand, the same ethnocentric bias could be expected – this time not on a cognitive but on a taste level. On the other hand, it is conceivable that preferences towards the beer from participants' hometown will decline when subjects are asked to evaluate the beer's taste (and not to merely indicate their preference without tasting the drink) and realize that the foreign beer actually tastes as good as the local one.

For the purpose of overcoming some of the limitations of the first study (the sample consisted of only male students that came from only one of the two respective cities), the study sample was extended to encompass a more heterogeneous population. It will therefore now be examined whether male *and* female *inhabitants* (not only students) of *both* cities (i.e., Cologne and Düsseldorf) prefer the *taste* of a beer from either their hometown or from the rival city and whether these preferences become stronger under conditions of high mortality salience (compared to a control condition).

4.5.1 Method

Participants from the two cities Cologne and Düsseldorf tasted and evaluated a beer that was either from their hometown or from the other city. In contrast to Study 1, beer preferences in this study were not measured as a cognitive but rather a taste evaluation. For half of the participants in each city, beer tasting took place under conditions of high mortality salience, and for the other half in a control condition. Additionally, the moderating roles of region and – as in Study 1 – mood were examined. Hypotheses were identical to those in Study 1: i.e., (1) a main effect of beer sort and (2) an interaction effect between priming and beer sort were expected.

4.5.1.1 Participants and Design

A total of 192 inhabitants of the cities of Cologne and Düsseldorf (96 from each city) voluntarily participated in the study. As an incentive for their participation, they were informed that they would have the opportunity to enter a sweepstake in which they could win up to three crates of beer. Seventy-two participants were female and 120 were male. The unbalanced number of men and women approximately reflects the proportion of beer-drinking men and women in the German population (TdWI, 2005). The mean age of participants was 43.8 years (*SD* = 15.98) ranging from 19 to 88 years. Neither participants' gender nor age influenced the results of the study.

A 2 (city) x 2 (mortality salience versus control condition) x 2 (own beer versus foreign beer) between-subjects design was applied with mortality salience and beer sort randomly manipulated and two fixed city samples (Düsseldorf versus Cologne). The dependent variable was the *gustatory* evaluation of the beer's taste compared to that of an ideal beer (100-point scale).

4.5.1.2 Experimental Procedure

The procedure was very similar to that of Study 1, the only major difference being that in "part 2" of the experiment, the investigator did not ask for beer preferences at a cognitive level but instead gave participants the opportunity to try the respective beer sort and evaluate its taste. Upon completion of "part 1", the experimenter entered the room, offered participants a bottle of beer and a glass, and informed them of the beer's origin and sort but not brand (any influence of brand on the dependent measure should be avoided). The experimenter then asked participants to pour, try, and rate the beer on the "compared-to-ideal scale" adopted from Study 1. The following items corresponded to those administered in Study 1. Participants were debriefed by mail after completion of the experiment.

4.5.2 Results and Discussion

4.5.2.1 PANAS Findings

In accordance with Study 1, the PANAS scale was used to determine whether the priming conditions influenced participants' moods. In contrast to the results of the first study but in line with previous research, no such effects were identified: two ANOVAs on participants' overall positive and negative scale values revealed no significant results, $F_{PA}(1, 178) = 2.23$, $p = .14$ and $F_{NA}(1, 187) = 0.30$, $p = .58$. The unequal degrees of freedom were due to 12 participants who failed to answer the PA-Scale and 3 participants who failed to answer the NA-Scale.

4.5.2.2 Evaluation of Beer Tastes

In order to test the main hypothesis of the study, a three-way ANOVA was conducted with city of residence (i.e., Cologne versus Düsseldorf), priming (mortality salience condition versus control

condition), and beer's origin (own beer versus foreign beer) as factors and evaluations of beer taste as dependent variable.

Independently of priming, participants from both cities rated their own beer as tasting better than that from the other city. Across both experimental conditions, participants rated beer from their own hometown with a mean value of 66.09 (*SD* = 20.62) on the 100-point scale and beer from the other city with a mean value of only 50.59 (*SD* = 22.68). This main effect was highly significant, $F(1, 184) = 25.46$, $p < .001$.

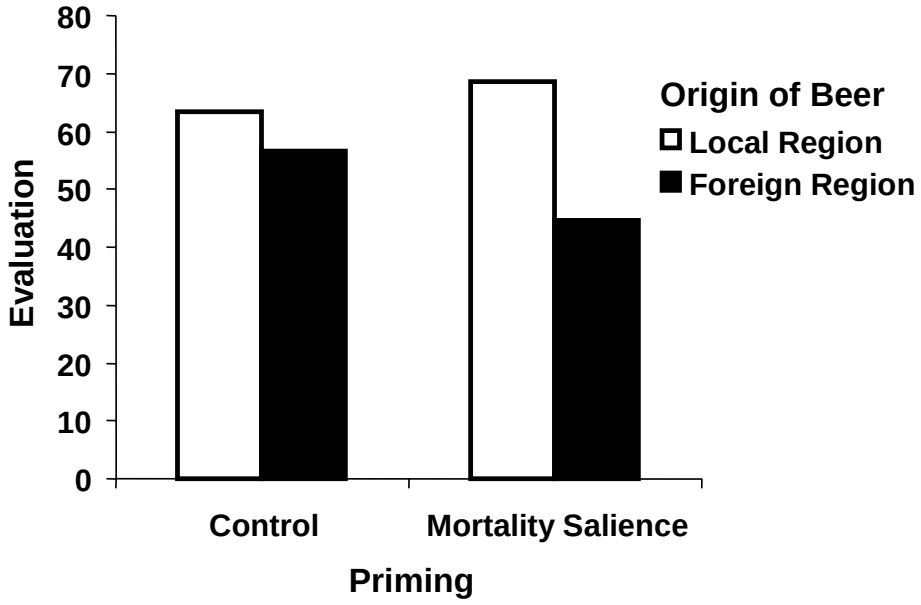

Figure 6 **Influence of experimental condition on the *gustatory* evaluation of a foreign- and local-regional beer sort (Study 3). Evaluation scales ranged from 0 to 100.**

The main hypothesis of the present study was that the ethnocentric bias ought to be higher in the mortality salience than in the control condition. As Figure 6 shows, this hypothesis was confirmed. A significant two-way interaction between priming and beer sort, $F(1, 184) = 7.85$, $p < .01$, implies a different priming effect on

the evaluation of a beer sort from participants' own city than on that of a beer sort from the respective other city. No other significant main effects or interactions were either expected or found.

Interestingly, no significant effect of beer sort emerged in the control condition; the difference between ratings amounted to only 6.9 points. Participants rated a beer from their own hometown with an average of 63.50 points (SD = 19.04) and a beer from the other city with an average of 56.60 points (SD = 19.13), $t(184) = 1.59$, $p = .11$, $d = 0.36$, two-tailed. In the mortality salience condition, however, a substantial beer sort effect was observed; the difference between ratings amounted to 24.11 points. Participants rated a beer from their own hometown with an average of 68.69 points (SD = 21.98) and a beer from the other city with an average of only 44.58 points (SD = 24.49), $t(184) = 5.55$, $p < .001$, $d = 1.04$, two-tailed. The lack of effect in the control condition corresponds to results of Study 2 and contradicts those of Study 1. This interesting side result will be discussed further in the general discussion. Planned contrasts revealed that the interaction was solely caused by a decreased taste-rating for the foreign beer sort and not an increased rating for the local beer sort ($t[184] = -2.77$, $p < .01$, $d = 0.55$, and $t[184] = 1.19$, $p = .12$, $d = 0.25$, one-tailed, respectively).

4.6 General Discussion

Three studies were conducted with the aim of exploring whether beer sorts may act as regional symbols and thus help people to maintain their regional identity and protect their local worldviews. Study 1 investigated whether people activate their cognitive preferences for a local beer sort and devaluate a foreign sort under mortality salience. As results showed, this was indeed the case. Study 2 looked to gain more information concerning the origin of regional beer preferences. It was assumed that beer preferences were so-

cially conditioned and specific to subjects' regional culture. From this perspective, it was interesting to establish whether participants' beer evaluations were due to acquired taste preferences or rather a cultural stereotype. To this end, a blind test was conducted in which the experimenter avoided giving participants any concrete information about the origin of the beer they had to taste, evaluate, and classify. Participants were only informed that they would drink a beer from either their hometown (i.e., Cologne) or the rival city (i.e., Düsseldorf). As it turned out, despite faith in their ability to discern between beer sorts, participants were unable to correctly identify the origin of the beer they tasted, and further did not show any actual taste preference for a particular sort. In light of these findings, Study 3 applied the procedure of Study 1 to a real taste test and a more heterogeneous sample. Data revealed that previous results can be expanded to encompass the taste level, a broader sample, and both competing regions.

Not surprisingly, the local beer's place of origin had an influence on consumer preferences in both cities – Cologne and Düsseldorf. Interestingly enough, this preference does not rest on the fact that people are accustomed to their region-specific taste. In fact, people seem to like their hometown beer simply because it is a representation and symbol of their own cultural worldview. Consuming a beer sort from their own region helps people to integrate themselves into their social cultural system. The consumption of these regional beers therefore fulfills a terror management function by incorporating people into an immortal part of their social selves.

The findings of the present work are in line with those of previous studies that also dealt with the influence of mortality salience on ethnocentric consumer preferences (e.g., Jonas et al., 2005). In these studies, however, the dependent variable was the *attitude* towards products and economic symbols from participants' own

versus a foreign country, and this attitude was measured using a conventional paper and pencil procedure. In contrast, the present paper postulated that the consumption of products which allow for enhancement of a social identity could also alter consumer perceptions of specific product *attributes*. If the consumer identifies her/himself with the product's country- or region-of-origin, consuming the product facilitates the maintaining and signaling of one's identification with this region. This effect can be so strong that consumers even evaluate product attributes more favorably than the attributes of competing products. On account of this, participants in the present paper were not only asked to indicate their attitudes towards a cultural consumption symbol, i.e., beer (Study 1), but were also given the opportunity to actually evaluate a particular crucial attribute, i.e., beer taste (Study 3). Hence, the findings show that the effects of mortality salience on consumer preferences are not restricted to attitudes but also extend to gustatory sensations and evaluations. It is arguable that such a dependent variable is less cognitively controlled than attitudes that are measured in a more conventional manner.

These studies extend previous research in yet another important way. Previously, research on the effects of mortality salience on ethnocentric attitudes – both in general and in relation to consumer behavior – have focused on the national level. It is important to acknowledge, however, that Social Identity Theory is not a theory which solely pertains to nationalism. Indeed people can define themselves as members of a large number of different social groups. This seems to be especially true in the realm of consumer behavior. People do not buy only as "Americans" or "Germans" but also as "New Yorkers", "women", or fans of the "Chicago Bulls". Thus, scholars in consumer research should broaden their focus to encompass many more social identities.

Maheswaran and Agrawal (2004) recently pointed out the need for more research that aims to disentangle the consequences of a low versus a high degree of mortality salience on consumer cognitions and motivations. They argue that the mortality salience effects identified so far could, at least in part, be due to a kind of defense motivation that causes consumers to stick to their habitual consumption patterns and leads them to avoid any information or experience that might be inconsistent with their dominant attitudes or behaviors. The results presented here are very much in line with such reasoning. Participants in the control condition were much more open to admitting that beer from the other city actually did not taste so bad than participants in the mortality salience condition. This was especially the case in Study 3 in which the difference in ratings between both beer sorts did not reach the level of significance. In this control condition, people may have realized that the foreign beer sort did not taste as bad as they had previously thought – or, more extremely, not even have tasted a difference between beer from the other and beer from their own city. In sum, it seems quite obvious that the ethnocentric bias observed under mortality salience was not qualified by participants' actual gustatory experience of the beers but exclusively by the beers' regional labels.

In line with this argumentation, the results of Studies 2 and 3 revealed that beer preferences in Cologne and Düsseldorf seem to be mainly due to the perceived region of origin rather than the actual taste of the beer sorts. When asked to indicate their preferences in the blind tasting of Study 2, in which participants were not informed about the origin of the beer they were given to drink, participants' preference for a beer sort from their own region disappeared.

To summarize, these studies add to the emerging line of research that attempts to relate Terror Management Theory to consumer behavior. As the results of these studies demonstrated, consumer preferences for regional products are significantly influenced by the degree to which they are aware of their own mortality and are thus motivated to cling to the behaviors and preferences of their in-group and psychologically protect and defend their cultural symbols. This effect seems to be due to the desire for social self-identification. Because inhabitants of Cologne and Düsseldorf identify themselves with the cities in which they live, consuming their local beer sorts allows them to maintain and signalize their social identities. While the world is globalizing, threats to our cultural worldviews might lead us to think and act rather locally.

CHAPTER 5
Conclusions

> *The human animal is a beast that dies and if he's got money he buys and buys and buys and I think the reason he buys everything he can buy is that in the back of his mind he has the crazy hope that one of his purchases will be life everlasting.*
>
> —Tennessee Williams (1983, p. 68), *Cat on a Hot Tin Roof*

This dissertation is devoted to adapting the implications of Terror Management Theory to the field of consumer behavior. Based on the work of Ernest Becker (1973), Terror Management Theory investigates the ways in which people cognitively and behaviorally manage existential fears. The theory postulates that humans, like other animals, have an inborn drive for self-preservation. However, unlike other species, people also have cognitive abilities with which they can reflect the past and ponder the future. This self-awareness helps people to "function" in the present in predicting not only the direct consequences of their behavior but also projecting them further into the future, which in turn also helps them to plan and influence their paths of life. Humans' increased self-awareness thus seems to be a perfect adaptation to managing many dangers, challenges, and insecurities of life. Nevertheless, our cognitive abilities with respect to anticipating future events have one crucial disadvantage: they also make us aware of the fact that our life is not endless and that the date of our final day is not predictable, strongly challenging our drive for self-preservation. Yet

more frightening still, we cannot even be certain that there is some kind of "afterlife" when this life has come to its end. At the point in our life when we realize that we are mortal and that we will inescapably cease to exist sometime in the near or far future, we may experience feelings of insecurity, sadness, and helplessness. This paralyzing feeling of existential terror questions the reason of our existence and motivates us to embark upon a quest for meaning and sense. For the purpose of regaining a more meaningful life, people form their cultural worldview, a shared set of beliefs about reality which are able to explain the nature of humankind and the meaning of their existence as well as justify their place in history. This worldview also shows humans how to act appropriately and what they can expect when they behave accordingly. As explicated above, the assimilation of a certain cultural worldview enables people to become immortal in one way or another – either literally or symbolically.

Terror Management Theory (Greenberg et al., 1986) hypothesizes that at most points of our life, our social behavior is strongly regulated by such shared cultural worldviews. Nevertheless, these become more important when our identity is challenged by external existential threat or after having contemplated our mortality. From this perspective, Greenberg et al. (1986) developed an experimental paradigm for the investigation of the components and consequences of people's cultural worldviews. Indeed, dozens of studies were subsequently able to underscore the importance of cultural worldviews for appropriate terror management and further describe many elements of these views by investigating individuals' situational behaviors under mortality salience. It has been shown that mortality salient individuals are strongly motivated to act in accordance with their salient worldviews and to protect them against external threats. Research has also show that in acting in accor-

dance with these views, people regain self-esteem, which can be seen as a behavioral goal in itself.

Since the main purpose of this dissertation was to translate Terror Management Theory to the field of consumer behavior, first empirical findings in this context were provided. It was shown that both terror management processes, i.e., cultural worldviews and self-esteem, have an impact on individuals' behavior as customers in reducing their mortality concerns. In this context, the potential ability of a consumption good to transfer meaning from the cultural world to consumers (cf. McCracken, 1986) seems to be of crucial importance. The loss of personal meaning and the increase of insecurity induced by mortality salience may lead consumers to invest in meaningful cultural symbols and to de-invest in cultural artifacts that have no meaning to them. In this context, Landau, Greenberg et al. (2006), for example, found that people refrain from modern art that is not part of their cultural worldview under mortality salience. Chapter 3 investigated whether this tendency to desist from objects that provide insufficient cultural meaning – and contrarily tend towards potentially meaningful objects – under mortality salience can be translated to products other than art.

5.1 Terror Management and Nostalgia

The first set of studies (Chapter 3) looked to establish whether consumers derive meaning from nostalgic objects. It was hypothesized that as materializations of our individual and collective history, nostalgic objects should provide more meaning and cultural security than contemporary objects. If this is the case, people under mortality salience should increase their preferences for nostalgic and decrease their preferences for contemporary objects. And indeed, in the case of automobile brands (i.e., VW Beetle, VW Golf, Mercedes SL) this pattern was observed. Mortality salience had a

different influence on subjects' preferences for nostalgic and contemporary cars, which further proved to be independent of initial preference patterns and objects' status relevance. More specifically, Studies 1-3 of this chapter showed that participants increased their preferences for the classic VW Beetle whereas they (partially) decreased their preferences for the contemporary VW New Beetle under mortality salience compared to control conditions. A very similar preference change was found in Study 4, where the objects of investigation were two cars of the VW Golf brand. However, in this case, preferences for the contemporary VW Golf Mark 5 decreased as hypothesized, whereas preferences for the classic VW Golf Mark 1 only descriptively (but not statistically) increased under mortality salience compared to control conditions. Finally, Study 5 used pictures of two Mercedes SLs (classic versus contemporary model) as product stimuli. In this study, results were perfectly in line with the hypotheses. Accordingly, the contemporary car model was evaluated less and the classic car model more positively under mortality salience compared to control conditions.

Overall, these five studies seem to strengthen the assumption that an object's historic meaningfulness has a strong influence on observed preference changes under mortality salience. However, these results also demonstrated that it is scarcely possible to predict whether mortality salient consumers will devalue a contemporary car, heighten their evaluation of a nostalgic car, or engage in both patterns of behavior. This leads to the conclusion that an object's cultural (and personal) meaningfulness seems to be strongly but not solely influenced by its age. There must therefore be other determining variables which to date remain unspecified. Given that these studies used an experimental setting where external factors other than experimental priming would be expected to have had a minor (or at least random) influence across all conditions, it would seem rather probable that subject-object factors (e.g., overall self-

esteem relevance of automobiles and car driving, personal experiences with the specific cars/brands) also played a crucial role. This seems to be especially relevant in an applied context in which "real" consumer goods (such as existing car brands) were used, and where each consumer has their own personal experience with and connection to the respective stimulus. Nevertheless, future research should look to more specifically address these assumptions.

5.2 Terror Management and (Regional) Ethnocentrism

As explicated above, the cultural meaningfulness of a nostalgic object seems to influence its ability to manage existential threat. However, this meaningfulness appears not only to be important within a certain cultural context but also across cultures (in order to extinguish any influence of the national origin of the product, Chapter 3 thus exclusively investigated brands from participants' own nation, i.e., Germany). As explained in previous chapters, our cultural worldviews can, for example, be directly protected by means of ethnocentric consumer decisions. Here, Terror Management Theory would predict that given the opportunity to choose between a product of our country and one of different national origin (to ensure equal self-esteem relevance of the stimuli, both products should share the same quality, price, and no country should be perceived as economically superior), we would demonstrate a stronger bias towards our home country (led by consumer ethnocentrism, cf. Shimp & Sharma, 1987) under mortality salience. This would manifest in higher preferences for the products of our own culture (Jonas et al., 2005), which in turn is explained by our motivation to protect and bolster our in-group, which acts as an enduring repository of our cultural worldviews and thus as a means of making our identity symbolically immortal.

However, until now, the influence of mortality salience on ethnocentric consumer behavior was investigated solely in the framework of national consumer ethnocentrism (Jonas et al., 2005; Nelson et al., 1997). Therefore, one purpose of Chapter 3 was to investigate whether regions may also act as repositories of cultural worldviews. In this context, two possible lines of argumentation are conceivable. On the one hand, the region – as opposed to the country – in which we live, is a more homogeneous and less inclusive entity. A region thus provides us with a more specific worldview that is usually more similar to our own. On the other hand, in comparison to countries, regions also seem to be less powerful and more vulnerable to external threat; a fact which does not seem to be the best prerequisite for longevity. From this perspective, it was interesting to determine whether consumers use region specific products as cultural identity markers.

Two beer sorts (i.e., "Kölsch" and "Altbier") from two rivaling cities (i.e., Cologne and Düsseldorf, respectively) were used as regional product stimuli. Not surprising, an initial study showed that these beers were evaluated very differently when mortality salience was employed as an additional factor. Across all conditions, participants from Cologne evaluated the "Kölsch" from their hometown as superior to the "Altbier" from Düsseldorf. More interestingly, mortality salience further increased this preference gap, providing first evidence that not (only) simple taste preferences but also regional ethnocentrism influenced these diverging preference patterns.

Since it seemed especially interesting to discover whether the different perceptions of these beers were mainly influenced by beer attributes (i.e., taste) or rather by an ethnocentric bias, a second study was conducted in which participants rated the taste of the beers during a blind-test. While participants were relatively certain that they would be able to correctly identify "their" beer sort, the

test revealed that this was not the case. Indeed the two beers were rated as tasting equally good, thus clearly showing that participants were guided more by a taste stereotype than by actual taste differences when reporting taste preferences.

Study 3 again used mortality salience treatment to investigate the motivational roots of these stereotyping processes. Participants from *both* cities now had to rate the *taste* of the beer sorts, either under mortality salience or control conditions. Consistent with the results of the initial study and the line of argumentation which supposes that products can act as regional identity markers, results indicated that taste preferences for the two beer sorts were reversed in both cities and the preference gap between beer from the own region and beer from the foreign region remarkably increased under mortality salience conditions. Explained in terms of Terror Management Theory, both beer sorts seemed to have been interpreted by participants as symbols of two competing regional worldviews, i.e., their own and a foreign one; the former of which they wanted to protect and latter of which they wanted to defend against under mortality salience in order to regain self-esteem. Furthermore, the studies showed that these protection/defense mechanisms not only affected participants' cognitive but also taste ratings, confirming an influence of mortality salience induced stereotyping on ratings of the attributes of regional products.

These results also appear to be highly relevant from a business perspective. If it is assumed that products and brands can act as a means of communicating a group-based, regional, or national social identity, marketing efforts that pursue a globalization strategy can result in loss of brand equity. This problem seems more serious still when marketing communication sacrifices a brand's local image for a more inclusive national or even global image without

embarking upon a dual strategy for local as well as national/global consumers.

5.3 Further Considerations

5.3.1 Is Current Terror Management Research too Ethnocentric?

It is a matter of fact that most empirical work in the context of terror management research has been conducted in the USA. However, for a theory that, inter alia, also aims to reveal intercultural (worldview) differences, this scope would appear rather limited. Especially in the applied field of consumer research, only very few cross-cultural terror management studies have thus far been carried out (e.g., Fischer, 2002), questioning at least to a certain degree the inter-cultural generalizability of specific terror management effects. Although this dissertation was not intended to investigate worldview differences at an inter-national level, a number of implications for future cross-cultural research shall be drawn by referring to some specific characteristics of the German study population used in the present studies.

As comprehensively explicated in a previous section of this dissertation, one of the basic assumptions of Terror Management Theory is that existential concerns motivate humans to more strongly cling to their worldviews and to protect them from external threat. According to previous research, these worldview protection efforts usually lead to increased stereotyping, out-group rejection, and patriotism (e.g., Castano, 2004; Castano et al., 2002; Jonas et al., 2005; Nelson et al., 1997; Schimel et al., 1999). Moreover, Terror Management Theory implicitly assumes that people must also be able to gain self-esteem from these protection behaviors. In this context, Dechesne, Greenberg et al. (2000) showed in their investigation of students' affiliations to sport teams, that mortality salient participants changed the group of reference (i.e., sport team) de-

pending on its ability to augment their self-esteem (i.e., team's success). Translated to a national group of reference, these results would imply that increases in patriotism can be regarded as an appropriate terror management strategy in so far as people have a positive emotional connection with their nation which enables them to gain self-esteem from this relationship. But what if this positive connection cannot strictly be assumed?

In light of its disastrous national socialist history in the first half of the last century, Germany could be considered a perfect example of a country in which feelings of nationalism and patriotism seem to be negatively framed and undermined by collective historical guilt (cf. Doosje, Branscombe, Spears, & Manstead, 1998). In such a nation, it is highly questionable whether its citizens are able to gain self-esteem from increased patriotism. The identification with a city or region would in this case appear to be a less negatively biased frame of reference for individual feelings of pride. From this perspective, it seems noteworthy that studies investigating German consumers' ethnocentric reactions under mortality salience on a national basis have led to rather unstable results. While, as previously mentioned, Jonas et al. (2005) provided some evidence for national ethnocentric consumer reactions in Germany, Fischer (2002), who aimed to replicate and expand Mandel and Heine's (1999) results (i.e., higher preferences for status items under mortality salience) by additionally manipulating products' national origin and samples' nationality, failed to find an ethnocentric bias in his German study sample.

In order to examine the influence of both distal terror management mechanisms, i.e., national ethnocentrism (worldview protection) and preference for high status products (striving for self-esteem), on product attribute evaluations (i.e., taste perceptions of red wine), Marchlewski (2006) conducted a study in which consumers

from Cologne, Germany, rated the taste of a red wine that was labeled as a wine from either Germany or the USA (manipulation of national origin) and as either high (20 €) or low (3 €) priced (manipulation of status relevance). In fact, in all four conditions, participants actually rated the *same* red wine and were misleadingly informed by the experimenter that the wine to be tasted belonged to one of the four national origin x status relevance categories listed above. Additionally, mortality salience was manipulated using two open questions targeting participants' contemplations and feelings concerning either death and dying (mortality salience) or dental pain (control condition). Three hundred and twelve subjects participated in the study. Age and gender were almost equally distributed across conditions.

In analyzing the influence of mortality salience, price, and product's national origin on taste perceptions, a 2 (priming) x 2 (price) x 2 (nation) between-subjects ANOVA with all factors randomly manipulated and taste evaluation as dependent variable was conducted. However, results only revealed a main effect of price, $F(1, 304) = 40.73$, $p < .001$, that resulted from a superior evaluation of the wine with the high price label ($M = 64.09$, $SD = 19.17$) compared to the wine with the low price label ($M = 49.60$, $SD = 20.61$). This can be interpreted as a kind of "placebo-effect" (Shiv, Carmon, & Ariely, 2005) and may be result from a simple price-quality heuristic (e.g., Shapiro, 1968). Other main or interaction effects were not significant (all Fs < 1). According to the line of argumentation that national ethnocentric consumer behavior does not seem to be an appropriate terror management mechanism in Germany, planned contrast tests were not able to find a priming effect on taste perceptions of either the German or the American labeled wine (all ps > .40).

This study design gives rise to some relevant points for potential critique (e.g., cultural relevance of red wine in Germany, different quality perceptions of German and American red wine, appropriate price range). Nonetheless, it would be interesting to replicate this experimental design in further research, examining cultures with high and low levels of national pride or experimentally manipulating collective guilt (e.g., reminding White Americans of the historical exploitation of African Americans or Native Americans, cf. Doosje et al., 1998) and investigating the moderating influence of this variable on participants' efforts to protect their (national) cultural worldviews (e.g., by applying the experimental design of this wine study or of Greenberg et al., 1995).

However, these results provide further empirical evidence that challenges the intercultural generalizability of specific terror management effects. As previously discussed, Mandel and Heine (1999) proposed that the consumption of high status items can be regarded as an alternative terror management mechanism, which directly increases participants' self-esteem. However, data from the wine study contradict these assumptions. Given that the wine with the high (low) price label was indeed perceived as a high (low) status product by participants, one would expect an interaction effect between price and mortality salience, i.e., increased (decreased) preferences for the high (low) priced wine under mortality salience compared to the control condition. Such an interaction effect was, however, not observed. Planned contrasts revealed no priming effect on taste perceptions for either the high or the low priced wine (all *p*s > .50). As in the case of the Mercedes SLs of Chapter 3 (Study 5), the replication study of Fischer (2002), and in line with Rindfleisch and Burroughs (2004) discussion, it seems highly likely that materialism (the consumption of luxury items can be regarded as an epiphenomenon of a materialistic worldview) cannot be regarded as an appropriate terror management mecha-

nism for all individuals, but is rather culture as well as value (material versus post-material values, cf. Inglehart, 2000; Inglehart & Abramson, 1994) dependent (see also Chapter 3). It would thus seem recommendable to further investigate the worldview importance of materialism across individuals and cultures and its influence on status consumption when participants are faced with existential concerns. However, according to the results of the studies in Chapter 3, as well as those found by Marchlewski (2006) and Fischer (2002) it is arguable that increased national ethnocentrism and materialism are appropriate terror management mechanisms in a country like Germany.

5.3.2 A New Tool for Market Research

The studies of the present paper show that Terror Management Theory can successfully be applied to the area of consumer behavior and research. The theory appears most useful for understanding the motivational underpinnings of our behaviors not only as humans, but also as customers. It can, to a certain extent, help to explain why we are so strongly motivated to conform to norms of the groups to which we belong and why we attempt to protect their symbols, ideals, and worldviews. It also sheds light on the reasons why our personal and group history and all the objects related to it are so important to us and become even more eminent and helpful during traumatic times of existential crises. This dissertation shows that the consumption of meaningful objects may indeed provide a means of overcoming existential concerns.

From this perspective, it could be worthwhile adopting this very simple experimental paradigm as a diagnostic tool within market research. The mortality salience manipulation could, for example, represent an additional means of measuring “personal relevance”, which also seems to be an integral part of brand equity. Personal relevance is commonly assessed in terms of brand recall, brand

recognition, and brand associations with personally relevant categories. The terror management manipulation could conceivably be a more valid technique when it comes to assessing whether a brand and/or its consumption constitute a part of consumers' selves, identities, and worldviews. In using this technique, it will most likely become increasingly evident that, in referring to the introductory words of Tennessee Williams, mortality salient humans probably will *not buy everything* but *only those things that provide meaning* to them.

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Education

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Thesis:
Marchlewski, T. (2002). *Typologie von Internetnutzern auf Basis psychologischer Determinanten des Online-Konsums. [A typology of internet users based on psychological determinants of the probability to purchase via the internet.]*. Hamburg, Germany: Diplomica.

Vordiplom, July 1997

University of Würzburg; Faculty of Management, Economics, and Social Sciences; Würzburg, Germany

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Research Interests

Terror Management Theory, Social Identity Theory, Culture and Consumption, Nostalgia.

Papers

Marchlewski, T., & Fetchenhauer, D. (2006). Mortality salience and regional consumer behavior. Effects of mortality salience on ethnocentric consumer behavior at a regional level. In C. Pechmann & L. L. Price (Eds.), *Advances in Consumer Research* (Vol. 33, pp. 322-323). Provo, UT: Association for Consumer Research.

Papers under Review

Marchlewski, T., Vosgerau, J. & Fetchenhauer, D. (2006). Social Identity and Product Evaluation, submitted for publication in *Marketing Science*.

Working Papers

Marchlewski, T. & Fetchenhauer, D. (2006). *Social Identity and the Consumption of Local Brands*.

Marchlewski, T. & Fetchenhauer, D. (2006). *Oldies but Goldies – The Influence of Mortality Salience on the Evaluation of Nostalgic Cars*.

Research in Progress

- "Nostalgia as a Terror Management Strategy"
- "National Ethnocentrism: A Terror Management Strategy in Germany?"
- "Influence of brand labelling on gustatory consumption preferences"
- "Cultbrands in Germany"

Conference Presentations

Marchlewski, T. & Fetchenhauer, D. (2006). *Drink doch ene met! Der Einfluss von Mortalitätssalienz auf die Geschmacksbewertung regionaler Biersorten*, paper presented at Deutsche Gesellschaft für Psychologie [German Psychological Association] Conference, Nürnberg, Germany.

Marchlewski, T. & Fetchenhauer, D. (2006). *If Tomorrow Never Comes – Effects of Mortality Salience on Ethnocentric Consumer Behavior at a Regional Level*, paper presented at Society for Consumer Psychology Conference, Miami, FL.

Marchlewski, T. & Fetchenhauer, D. (2005). *Effects of Mortality Salience on Ethnocentric Consumer Behavior at a Regional Level*, paper presented at Association for Consumer Research 2005 North American Conference, San Antonio, TX.

Teaching Interests

Consumer Behavior; Media, Communication, and Advertising Psychology

Teaching Experience

Lecturer, University of Cologne, Consumer Behavior, Winter 03/04 & 04/05

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Lecturer, University of Cologne, Practical Course: Experimental Research, Summer 05 & Winter 05/06