

TERROR MANAGEMENT IN THE COURTROOM

Exploring the Effects of Mortality Salience on Legal Decision Making

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This article reviews legally oriented research guided by terror management theory. An analysis of terror management, a social psychological theory that explicates the central role of mortality concerns in human social behavior, is applied to domains associated with legal decision making. This article reviews research demonstrating that reminders of death instigate pervasive efforts to defend culturally derived belief systems. Next, the authors introduce empirical inquiry that has explicitly examined how mortality salience affects judgments toward criminal offenders, due process concerns, and compliance with judicial admonitions. Finally, the article explores implications for understanding potential bias in trial strategy, deliberation, and outcomes, as well as the psychological consequences of different punishments.

Keywords: terror management, legal decisions and bias, psychology and law, jury decision making

A number of media reports attribute both rises and declines in jury monetary awards across a variety of cases to feelings evoked by the September 11th, 2001, attacks on the World Trade Center and the Pentagon (e.g., Lawyers Weekly, 2003; Sepos, 2001). It is undeniable that these tragic events have pervasively influenced a host of social and psychological activities, which, in turn, raises important questions regarding the potential effects on legal decision making. Clearly, the shock and impact of 9/11 led many people to desire punishment for individuals perceived as threats to American culture and the American way of life (Pyszczynski, Solomon, & Greenberg, 2003). Judges and jurors must also confront individuals who have rejected the laws of society on a daily basis and are frequently exposed to reminders of death as part of the trial process itself. How then are legal decisions affected by such reminders of personal vulnerability and death in both extreme forms such as the events of 9/11 and other catastrophes and in more common forms such as through testimony and exhibits?

Of course, extraneous events are supposed to have little impact on legal outcomes as the criminal justice system strives to achieve fairness in the court-

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room. It is toward this end that laws, statutes, and formal procedures (such as the Federal Rules of Evidence and approved pattern instructions) exist to guide the adjudication of guilt or innocence as well as degrees of punishment or retribution. However, despite iconic images of justice being blind, legal decisions are often made through a subjective lens worn by judge and jury (Hans & Vidmar, 1986; Kassin & Wrightsman, 1988). This lens reflects a considerable amount of bias that permeates legal judgments and undermines the presumption of fairness that is at the heart of legal intent (e.g., Dane & Wrightsman, 1982; Mazzella & Feingold, 1994). Although social scientists and legal scholars have discovered a number of critically important factors relevant to these biased outcomes, there is still much to be learned about what influences individuals in the context of rendering legal decisions. We believe an important piece of this puzzle can be gleaned from examining how people's social judgments help manage psychological concerns engendered by the unique human awareness of death. When considering the powerful intimations of mortality an event like 9/11 could elicit, the legal ramifications can be quite disturbing. Perhaps even more troubling is that legal judgments may also be affected by more subtle and even unconscious provocations of death-related thought.

In this article, we briefly present an overview of terror management theory (TMT; Greenberg, Pyszczynski, & Solomon, 1986), which posits that fear of death exerts a powerful influence on human social behavior, and we briefly review the considerable body of empirical evidence that supports this assertion. After elucidating ways that legal proceedings may provoke concerns about death, we describe experimental research designed to test theoretically derived hypotheses regarding a variety of issues pertaining to legal matters. Indeed, in recent years, legal scholars and trial attorneys have recognized the pertinence of TMT for understanding bias and other factors in courtroom proceedings (e.g., Judges, 1999; Rowland, 2002). In this light, we conclude by proposing some implications and applications of these ideas for understanding the role of bias induced by mortality salience (MS) in trial strategies, outcomes, and punishment and note how TMT and research offer a productive new way to understand human social behavior in legal contexts.

Terror Management Theory and Research

Terror Management Theory

TMT (for a more thorough explication, see, e.g., Greenberg, Solomon, & Pyszczynski, 1997) is based largely on the work of Ernest Becker (e.g., Becker, 1973). Using an evolutionary perspective, Becker noted that all forms of life—including humans—share a biological predisposition toward survival in the service of reproduction. However, humans are unique in that they have remarkably sophisticated cognitive capabilities. Although this cognitive sophistication provides humans with considerable self-regulation, behavioral plasticity, and creativity, it also reveals to humans that they can perish at any time for reasons that cannot be anticipated or controlled, that life can be snatched away with the sudden onset of disease, random accident, or terrorist attack. For a species endowed with a biological proclivity for survival, the awareness that death is always potentially

imminent and ultimately inevitable creates the potential for profoundly debilitating anxiety.

Why then are people not shriveled in a corner, cowering in existential terror, and groping for (to borrow a phrase from Woody Allen) valiums the size of Buicks? TMT posits that the solution to this existential dilemma emerges in the form of culture. *Cultural worldviews* are belief systems about the nature of reality shared by groups of people that structure human perceptions in ways that infuse the universe with meaning, order, and permanence (Solomon et al., 1991). Cultures also provide prescriptions for valued behavior that when fulfilled, confer protection and ultimately death transcendence either literally, through such beliefs as heaven or reincarnation, or symbolically, through identification with entities beyond oneself. As a literal example, a Christian who lives a pious life can feel good about him- or herself and also be assured that he or she will go to heaven after physical death. On a symbolic level, a patriotic American may not believe in a literal afterlife but can derive a figurative sense of immortality by believing that America and the American way of life will exist after his or her demise. From this perspective, many socially constructed identifications make it possible for people to perceive themselves as valued and significant members of a meaningful universe, in other words, (following Becker, 1971), to have self-esteem.

Though not often formally or explicitly articulated, many elements of a cultural worldview are reflected in the laws of a society, which help in part to provide moral guidelines and facilitate perceptions that people live in a just and fair world (cf. Lerner, 1980). An important implication of this analysis, however, is that cultural worldviews are socially constructed. Thus, the self-esteem one derives from them is culturally relative. For example, whereas sports celebrities may be glorified on a Wheaties cereal box, there are no lucrative endorsement opportunities for the scholar who out-publishes all of his or her peers in an academic year. Yet, within an academic subculture, such accomplishments are highly regarded. In other cultures, radically different behaviors may bring honor and status to individuals (see, e.g., Goldschmidt, 1990). For some Palestinian adolescents and young adults, self-esteem may be obtained by *shahid*—martyrdom via suicide bombings. At the Jabaliya refugee camp in the Gaza Strip, Nicholas D. Kristof (reporting in the *New York Times* on April 5, 2002) observed:

One cute 8-year-old boy showed me a portrait his family had taken of him clutching an AK-47 rifle. He initially lied and said that his older brother was a shahid—then he hung his head and admitted that no, his brother is alive and never did anything so grand. (p. A23)

Thus, cultural worldviews and the sense of self-esteem they facilitate are socially constructed and effective only to the extent that an individual can maintain faith in their validity (Berger & Luckmann, 1967). As Festinger (1954) and many others have observed (e.g., Berger & Luckmann, 1967), confidence in a particular view of the world is fortified when others believe similarly and corroborate one's conceptions of reality. However, when others believe differently or act in such a way as to undermine the sanctity of one's conceptions of what constitutes right and wrong, they threaten those cultural worldviews and undermine the psychological security derived from them. If faith in these beliefs is compromised, they can no longer function as effective anxiety buffers. Thus,

according to TMT, faith in a cultural worldview and self-esteem are essential to sustain psychological equanimity.

Empirical Assessment of Terror Management Theory

Of course, maintaining cultural worldviews and self-esteem are not the only reactions that knowledge of mortality (MS) provokes. According to the theory, these are the types of responses elicited by unconscious concerns with death. However, people must also at times deal with a fear of death on a conscious level. TMT research has explicated some of the cognitive and psychodynamic processes through which conscious and unconscious awareness of death impacts human social behavior (see Arndt, Cook, & Routledge, 2004; Pyszczynski, Greenberg, & Solomon, 1999 for reviews). These processes are depicted in the square boxes in Figure 1 and are later used to provide a framework from which we summarize some legal implications of this analysis.

Briefly, explicit death thoughts first provoke *proximal defenses* designed to remove death-related cognitions from conscious awareness. People generally do not like to think about their vulnerability to mortality and thus use a variety of means to avoid doing so (e.g., via suppressing death thoughts, denying vulnerability, or seeking to minimize it; see Arndt et al., 2004, for a review). This then results in low conscious death-thought accessibility. Once these proximal defenses are relaxed, if the individual lacks secure anxiety buffers (e.g., self-esteem) that provide protection from unconscious existential fears, death-thought accessibility increases outside of conscious awareness and spreads to activate the

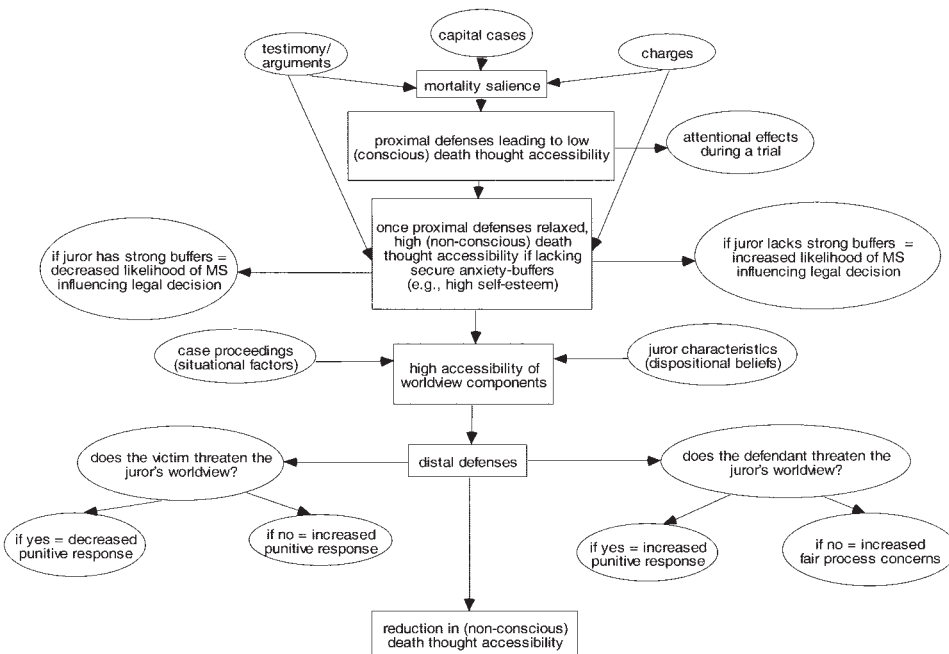


Figure 1. Basic terror management processes and their implications for jury decision making. MS = mortality salience.

(dispositionally or situationally) important worldview-relevant beliefs that offer psychological protection (Arndt, Greenberg, & Cook, 2002). Such beliefs are then more likely to be defended as the individual seeks to affirm the beliefs that imbue his or her life with a sense of meaning and significance; these defenses then function to reduce nonconscious death-thought accessibility (Arndt, Greenberg, Solomon, Pyszczynski, & Simon, 1997). Because much of the remainder of this article is devoted to understanding how these symbolic reactions to the awareness of death may affect legal decision making, we briefly consider the scope and specificity of these effects.

The MS hypothesis. According to TMT, because an individual's affiliation with a cultural worldview is motivated at least in part by knowledge of his or her mortality, reminding people of their deaths (MS) should motivate individuals to invest in and defend that cultural worldview. This contention, known as the *MS hypothesis*, has been supported in almost 200 studies to date. For example, Greenberg, Pyszczynski, Solomon, Simon, and Breus (1994), in a study ostensibly on the relationship between personality and interpersonal judgments, had American participants answer two open-ended questions about their death using the most typical MS manipulation. This manipulation consists of the requests "Please briefly describe the emotions that the thought of your own death arouses in you" and "Jot down, as specifically as you can, what you think will happen to you as you physically die and once you are physically dead" or parallel questions with respect to a control topic. Participants were later told that as part of an impression formation task, they were going to read and evaluate two essays about the United States purportedly written by foreign exchange students. One essay attacked the political and moral backbone of the United States, and the other extolled the virtues of this country. Results of these studies indicated that participants, when reminded of their mortality, engaged in *worldview defense*, that is, they became more positive than control participants in their evaluations of targets who supported their worldview and more negative in their evaluations of targets who challenged it.

Research has also demonstrated that reminders of mortality affect overt behavior as well as evaluations of worldview-relevant others. As one example, McGregor et al. (1998) showed in a series of studies that reminding participants of their mortality led them to be more physically aggressive to those who threatened their worldview. Across a number of different paradigms, reminders of mortality produce evaluative and behavioral efforts to bolster faith in anxiety-buffering beliefs about the nature of reality. Often, such responses have been found to take the form of embracing those with similar worldviews while derogating, rejecting, or harming those with different worldviews.

Replication and specification of MS effects. MS effects have been obtained in independent laboratories in the United States and at least nine other western and nonwestern countries (e.g., Israel, Japan) from a variety of demographically and age-diverse samples (e.g., fifth graders, college students, older Americans, Israeli soldiers, Australian Aborigines) and with regard to a variety of cultural and social identifications (e.g., religious or even sports-fan affiliations). Convergent support for the unique role of death thoughts in these effects comes from the multiple ways MS has been operationalized (e.g., using fear-of-death scales, showing fatal-accident footage, interviewing pedestrians in close proximity to a funeral

parlor, presenting participants with subliminal death primes) and from the convergent manifestation of these defenses and increases in death-thought accessibility. MS effects have been compared with other aversive thoughts (e.g., thoughts of intense physical pain, meaninglessness, social exclusion, failing an important exam, uncertainty, dental pain, or an actual failure experience have not produced the effects obtained in response to MS) and, furthermore, are not mediated by self-report or physiological arousal and affect (as measured by pulse rate, peripheral blood volume, skin conductance, facial electromyography; for reviews, see, e.g., Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004; Solomon, Greenberg, & Pyszczynski, 2004).

Summary. TMT posits that awareness of mortality leads to a number of psychological defenses by which people seek to protect their worldview. Substantial research has established that mortality concerns play a critical role in a number of seemingly diverse arenas of social life (e.g., prejudice, creativity, sexual behavior, romantic attachments, clinical maladies such as depression; see, e.g., Solomon et al., 2004, for a review). Because the legal system is designed to allow for the application and regulation of cultural guidelines and because mortality concerns have been found to have pervasive effects on people's affirmation of cultural beliefs, it is imperative to consider whether MS also exerts an influence on legal decisions. This is particularly important to investigate given the diverse ways that mortality may become salient during the trial process. Extant theories do not consider the role of death awareness and the motivations it provokes in legal decision making and are thus unable to facilitate an understanding of these issues. However, a growing empirical literature suggests that TMT can offer new and productive ways to understand the effects of MS on a variety of legal judgments.

Death in the Courtroom

The Elicitation of MS Through Trial Proceedings

Although TMT asserts that a substantial proportion of human social behavior functions to mitigate existential fears that routinely rumble beneath the conscious surface, a basic postulate of the theory is that heightened thoughts of death provoke particularly vigorous defenses. In the course of a trial, reminders of death may occur in at least three general ways. First, the charges or details of cases may necessitate discussion of mortality-related issues (e.g., negligent homicide, manslaughter). Second, reminders of mortality may be introduced by witness or attorney statements. Third, the most overt way that mortality may become salient to jurors is probably in the penalty phase of a bifurcated murder trial in which capital punishment is an option.

However, it is important to remember that blatant reminders of death are not necessary to activate terror management processes. In fact, as previously noted, symbolic terror management processes stem from the unconscious resonance of death thoughts that explicit reminders of death engender (Arndt, Greenberg, Pyszczynski, & Solomon, 1997). For example, imagine a liability case against an automobile company sued for producing defective brakes in either a domestic- or foreign-made automobile. As part of the evidence presented during the trial, one of the attorneys shows the jurors video footage of a fatal accident. How might

such exposure affect people's judgments? In a study by Nelson, Moore, Olivetti, and Scott (1997), American participants shown footage of a fatal car crash rendered more favorable judgments toward American manufacturers and less favorable evaluations of foreign manufacturers, particularly when the movie footage reminded participants of their own mortality. Thus, although most TMT research has used laboratory-based procedures to trigger MS, it is clear that a variety of stimuli people may encounter in the course of trial can similarly activate terror management defenses. Below, we review some recent studies that have used attorney statements to activate thoughts of death. Yet, notwithstanding the cognitive and emotional upheaval that might result from conscious thoughts of death, it is the subtle reminders of mortality—or the unconscious reverberations of explicit references to death—that may be of particular concern.

Terror Management Research on Legal Decision Making

Laws, along with religious writings, can be seen as one of the few explicit prescriptions of a value system that serves to define appropriate and moral behavior. They specify to members of a culture what behaviors are not tolerated and what the punishment is likely to be if a person is caught engaging in behavior that rejects the aspects of the worldview the laws are regulating. For example, although a person's cultural belief system may lead him or her to believe killing another person is wrong, laws formally regulate this belief by structuring differences in intention to kill (e.g., first-degree murder, second-degree murder, manslaughter, self-defense). As another example, people in a society may have different conceptions of what constitutes deviant sexual behavior. However, laws formalize and regulate these conceptions by saying that having sex with certain partners (e.g., minors) or engaging in certain acts (e.g., sodomy in certain jurisdictions) is not tolerated. Similarly, although people may believe that they have the right to alter their states of consciousness if they so choose, laws provide a regulated system of permissible (e.g., consuming alcohol if over the age of 21) and impermissible (e.g., using cocaine, marijuana, heroin, etc.) ways to do that. Laws thereby formally imbue the world with a sense of meaning and facilitate the orderly regulation of otherwise nebulous behaviors. This is not to say that what is espoused by a legal system is equivalent to a worldview but rather that laws reflect important elements of cultural worldviews via sanctions of immorality and legality.

To date, recently emerging directions of research on terror management and legal decisions have not been reviewed comprehensively. Accordingly, in the following section, we consider this research as it reflects on punitive and lenient reactions toward defendants, due process judgments, and compliance with the law and judicial admonitions. Relevant details of each legally oriented terror management study are presented in Table 1. We then highlight an emerging heuristic framework to consider how the processes by which people defend themselves from the awareness of death can impact legal decisions.

Effects of MS on increased punitive reactions toward defendants. In the original empirical assessments of the MS hypothesis, Rosenblatt, Greenberg, Solomon, Pyszczynski, and Lyon (1989) examined the effects of MS on bond amounts for alleged criminals by municipal court judges. Rosenblatt et al. were
(text continues on p. 420)

Table 1
Terror Management Studies With Legally Relevant Outcomes

Reference	Participants	IVs	Case/stimuli	DVs	Relevant results
Cook, Arndt, & Lieberman (2004b)	NA university students ($N = 41$)	MS vs. pain through prosecution's closing statement; dispositional authoritarianism	Armed robbery	Continuous verdicts	Greater punitiveness among MS compared with control and was strongest among high authoritarians.
Cook, Arndt, & Lieberman (2004a) Study 1	NA university students ($N = 127$)	OE MS vs. pain; critical evidence admissible vs. inadmissible vs. omitted; dispositional nullification	Armed robbery; critical evidence; incriminating wiretap	Continuous verdicts	MS \times Evidence \times Nullification interaction. MS \times Evidence interaction not significant for low null participants whereas did manifest for high null participants. Here, control participants were more punitive with inadmissible evidence whereas MS participants were more lenient with inadmissible evidence.
Cook, Arndt, & Lieberman (2004a) Study 2	NA university students ($N = 119$)	OE MS vs. pain; critical evidence admissible vs. inadmissible; high vs. low nullification instructions	Same armed robbery case and evidence as Study 1; included judge's instructions for high/low nullification	Continuous verdicts	MS \times Evidence \times Nullification interaction. MS \times Evidence interaction significant for high nullification participants and revealed MS participants were more punitive in the admissible than the inadmissible condition. Control participants showed the opposite results.
Dechesne et al. (2003) Study 3	NA university students ($N = 138$)	OE MS vs. dental pain; evidence supporting vs. refuting an afterlife	Vignettes included traffic offense, burglary, robbery, forgery, fraud, and medical malpractice	MSTS with severity of crime and punishment were assessed for each scenario	MS \times Afterlife interaction for punishment ratings. In end-of-life conditions, MS participants showed harsher punishment ratings than control participants whereas no effect of MS for afterlife participants.

table continues

Table 1
(continued)

Reference	Participants	IVs	Case/stimuli	DVs	Relevant results
Florian & Mikulincer (1997) Study 1	IS university students ($N = 190$)	OE MS vs. control	Vignettes included traffic offense, burglary, robbery, forgery, fraud, and medical malpractice	MSTS	MS participants judged crimes as more severe and were more punitive than control participants.
Florian & Mikulincer (1997) Study 2	IS university students ($N = 163$)	Intrapersonal MS vs. interpersonal MS vs. control; interpersonal FOD; intrapersonal FOD; transgression: personal and interpersonal	Same as Study 1	MSTS	MS \times Interpersonal FOD \times Transgression interaction. Increased severity only when death salience, participants predominant FOD, and transgression focused on interpersonal concerns. Salience \times Intrapersonal FOD \times Transgression. Same pattern with intrapersonal concerns.
Florian & Mikulincer (1998) Study 2	IS university students ($N = 120$)	OE MS vs. end of the school year; symbolic immortality: high vs. low	Prostitution	Bond set for the alleged prostitute	MS participants set higher bonds than control participants, but main effect qualified by Salience \times Symbolic Immortality interaction, showing that effect primarily evident for participants low in symbolic immortality.
Florian, Mikulincer, & Hirschberger (2002) Study 2	IS university students ($N = 60$)	OE MS vs. watching TV; romantic commitment salience vs. neutral	Vignettes included traffic offense, burglary, robbery, forgery, fraud, and medical malpractice	MSTS	MS \times Commitment interaction. Neutral MS participants showed more punitiveness than controls, but effect eliminated when relationships were made salient.

table continues

Table 1
(continued)

Reference	Participants	IVs	Case/stimuli	DVs	Relevant results
Florian, Mikulincer, & Hirschberger (2001) Study 1	IS university students ($N = 120$)	OE MS vs. watching TV; dispositional hardness	Vignettes included traffic offense, burglary, robbery, forgery, fraud, and medical malpractice	MSTS	MS led to more severe judgments and punishment ratings vs. controls.
Greenberg et al. (2001) Study 3	Caucasian university students ($N = 44$)	OE MS vs. dental pain; Black vs. White target	Hiring discrimination suit	Judgment of racism, length of sentence	MS \times Target interaction, showing MS participants more lenient toward White target vs. control participants. Also MS participants rated White target as less racist than Black target, with opposite pattern among control participants.
Lieberman et al. (2001) Study 1	NA female university students ($N = 23$)	OE MS or dental pain prime	Hate crime legislation	Responses to hate crime legislation	MS participants expressed greater support for hate crime legislation than control participants.
Lieberman et al. (2001) Study 2	NA university students ($N = 136$)	OE MS vs. dental pain; target of crime	Anti-Semitic, or heterosexist, or ambiguously motivated assault	Bail amount	MS \times Crime interaction, showing control participants set higher bail for hate crime perpetrators vs. ambiguous assault, but MS participants set lower bail for hate crime perpetrators vs. ambiguous assault.
Mikulincer & Florian (2000) Study 1	IS university students ($N = 225$)	Attachment style; OE MS/immediate response, OE MS/delayed response, control	Vignettes included traffic offense, burglary, robbery, forgery, fraud, and medical malpractice	MSTS	Main effect for MS/delay participants showing more severe judgments. Condition \times Attachment interaction showing avoidant participants more severe after MS/delay and anxious-ambivalent participants more severe in both MS conditions. Secure participants no effect of MS.

table continues

Table 1
(continued)

Reference	Participants	IVs	Case/stimuli	DVs	Relevant results
Nelson, Moore, Olivetti, & Scott (1997)	US university students ($N = 93$)	MS (fatal car-accident footage) vs. control (driver's ed video); American vs. Japanese car manufacturer	Civil case in which the plaintiff was in a car accident, sustained permanent injuries, and is suing the car manufacturer	Rated extent to which plaintiff responsible for accident and extent to which company was at fault	MS \times Company Nationality interactions found for blame on company and driver. Under MS, more blame on Japanese company and less on driver, and less blame on American company and more blame on driver.
Pickel & Brown (2002) Study 1	US university students ($N = 151$)	MS vs. dental pain through prosecution's closing statement; defendant remorse	DUI and resisting arrest	Verdicts and sentence recommendations	MS participants recommended harsher sentences than did controls for DUI and resisting arrest charges, regardless of remorse expressed by defendant. No effects for verdict DV.
Pickel & Brown (2002) Study 2	US university students ($N = 123$)	MS vs. illness through prosecution's closing statement; ease of imagining death	Armed robbery and attempted murder	Verdicts and sentence recommendations	MS participants recommended harsher sentences than controls for armed robbery and attempted murder charges regardless of ease of imagining death. No effects for verdict DV.
Rosenblatt et al. (1989) Study 1	Municipal court judges ($N = 22$)	OE MS vs. no prime	Prostitution	Amount of bail in dollars	Judges in MS condition assigned higher bail than those in control condition.
Rosenblatt et al. (1989) Study 2	NA university students ($N = 51$)	OE MS vs. no prime; assessed attitudes about prostitution	Prostitution	Amount of bail in dollars	MS \times Attitude interaction: participants with negative attitudes toward prostitution recommended higher bail for prostitute in MS condition compared with control, but no difference among those with positive attitudes toward prostitution.

table continues

Table 1
(continued)

Reference	Participants	IVs	Case/stimuli	DVs	Relevant results
Rosenblatt et al. (1989) Study 3	NA university students ($N = 32$)	OE MS vs. no prime; assessed attitudes about prostitution	Prostitution, violent mugging	Bail amount; award money for tips leading to arrest of violent mugger	MS participants recommended higher bonds for prostitute and greater rewards for hero, compared with control conditions.
Simon et al. (1996) Study 2	NA university students ($N = 61$)	Depression; OE MS vs. watching TV; attitudes toward flag burning	Legal issue of flag burning; each read a pro- and anti-flag-burning essay	Evaluation of essay author and essay position	MS \times Depression \times Target interaction. MS induced derogation of worldview threat for both mildly depressed and nondepressed participants, but stronger among mildly depressed participants.
van den Bos (2001) Study 1	Dutch university students ($N = 116$)	OE MS vs. watching TV; outcome: equal or worse than other	Received feedback on computer task that they did as well as the "other" in the study; received a number of lottery tickets (same or fewer than the "other")	Negative affect	MS \times Procedure interaction expresses more negative affect when outcome was worse than equal. Pattern stronger in MS condition vs. control condition.
van den Bos (2001) Study 2	Dutch university students ($N = 160$)	Self-affirmation vs. none; OE MS vs. taking an exam; voice vs. no voice in procedure	Same computer task as Study 1; participants were either given or not given voice in lottery ticket distribution	Negative affect reported as a result of fair vs. unfair treatment	With no affirmation, a main effect of procedure qualified by the MS \times Procedure interaction, participants were less negative when they received a voice compared with no voice, and effect stronger in MS condition. But MS affected only no-voice condition; no effect for MS within the voice condition.

table continues

Table 1
(continued)

Reference	Participants	IVs	Case/stimuli	DVs	Relevant results
van den Bos & Miedema (2000) Study 1	Dutch university students ($N = 88$)	OE MS vs. none; voice vs. no voice in procedure	Performed computer task in which participants judged figures and told they did as well as "other"; via computer, participants either given a voice or not given a voice in the lottery ticket distribution	Positive affect after lottery distribution	Affect ratings were more positive in the voice compared with no-voice condition but qualified by MS \times Procedure interaction. Main effect stronger within MS condition than control condition.
van den Bos & Miedema (2000) Study 2	Dutch university students ($N = 61$)	OE MS vs. dental pain; voice vs. no voice in procedure	Same as Study 1	Negative affect	Participants were less negative when allowed to voice their opinions, but effect was qualified by Procedure \times Salience interaction. Effect of MS found only in no-voice condition.
van den Bos & Miedema (2000) Study 3	Dutch university students ($N = 80$)	OE MS vs. dental pain; accurate vs. inaccurate procedure	Job interview scenario in which there were 9 selection parts; participants were informed that either 1 or 9 parts of the process were graded	Positive and negative affect	Main effects of procedure were found on both negative and positive affect, but were qualified by Procedure \times Salience interactions.

Note. IV = independent variables; DV = dependent variables; NA = North American; IS = Israeli; MS = mortality salience; OE = open-ended; FOD = fear of death; MSTs = Multidimensional Social Transgressions Scale.

interested in whether awareness of mortality would lead people to engage in worldview defense and thus be more unfavorable to those who threaten their beliefs. If so, judges reminded of their deaths should make more punitive judgments (i.e., set higher bond amounts) for an alleged criminal, in this case, a prostitute, than judges for whom mortality was not made salient. Judges were chosen in part because they are trained to be objective administrators of the law. Thus, Rosenblatt et al. believed that judges would offer a particularly stringent test of the situational influences of mortality reminders.

A group of municipal court judges was given packets of materials described as part of a study on personality, attitudes, and bond decisions. The packets contained a number of personality questionnaires, including the typical MS induction for half of the participants (determined by random assignment). The judges were later given information about an alleged prostitute that included copies of the same materials a judge would typically inspect to determine bail amounts (e.g., the suspect had unverified community ties, a prior arrest, and no prior failures to appear at other trials) and were subsequently asked to prescribe a bail amount. The results indicated that judges who had been reminded of their mortality set bail at an average of \$450, an amount substantially and significantly higher than the \$50 average awarded by judges in the control condition. From a TMT perspective, this effect occurred because awareness of death leads people to reaffirm their conceptions of meaning. Given judges' apparent belief in legal statutes, they were more punitive to those who threatened that aspect of their beliefs. Indeed, this study was replicated using college students as participants, and MS effects emerged only when participants held negative beliefs about prostitution (Rosenblatt et al., 1989, Study 2).

The findings reported in Rosenblatt et al. (1989) became a springboard for replications in a number of different contexts and with a variety of different types of legal violations serving as evaluative scenarios. For example, Florian, Mikulincer, and colleagues used this paradigm as the basis to examine the influence of attachment and relationship needs (Florian, Mikulincer, & Hirschberger, 2002; Mikulincer & Florian, 2000), fear of death in different (interpersonal or intrapersonal) domains (Florian & Mikulincer, 1997), beliefs about symbolic immortality (Florian & Mikulincer, 1998), and personal hardiness (Florian, Mikulincer, & Hirschberger, 2001). In the course of this research, they developed the Multidimensional Social Transgressions Scale (MSTS), which presents a series of social and legal transgressions in the form of newspaper vignettes. Twenty different crimes such as robbery, fraud, medical malpractice, and assault and battery were presented to participants who then rated the severity of the crime and degree of punishment warranted. For example, participants read about a man who broke into an artist's studio and stole the artist's lifework. This research demonstrated that MS increases punitive judgments across a broad range of legal transgressions and that MS effects are moderated by theoretically relevant measures of individual differences and situational factors.

Although Table 1 provides a limited summary of how MS effects on the evaluation of legal transgressions are affected by these factors, a more thorough review is beyond the scope of this article. However, we briefly note that a sense of symbolic immortality, personal hardiness, secure attachment, and salience of secure relationships have all been found to lessen the impact of MS on punitive

responses to legal transgressions. For example, individuals with less secure relationship attachments are prone to respond to MS by engaging in especially punitive judgments of legal and moral violations, whereas individuals who have secure relationship attachments tend to respond to MS with other types of reactions (e.g., endorsing romantic commitments). Mikulincer and colleagues proposed that the attachment system represents a third type of anxiety-buffering system in addition to the self-esteem and worldview systems (see Mikulincer Florian, & Hirschberger, 2003). Thus, from this perspective, reminders of mortality activate a need to affirm a different (i.e., attachment) system in individuals with secure attachment styles than in people with less secure attachment styles. Alternatively, it has also been suggested that the people with secure attachment styles derive more meaning and value from interpersonal relationships and thus prefer to affirm such domains after MS.

We have also recently examined the effects of MS on a specific class of legal transgressions: hate crimes (Lieberman, Arndt, Personius, & Cook, 2001). A first study assessed whether reminders of mortality would lead participants to generally increase their disdain for hate crimes when abstract views on such crimes were solicited, that is, in a general scenario in which there was no particular victim. After a typical MS or dental pain treatment, participants were given a questionnaire that began with the definition of a hate crime (“offenses motivated by hatred against a victim based on his or her race, religion, sexual orientation, ethnicity, or national origin”; Lieberman et al., 2001, p. 552), were told about a debate on hate crime legislation, and were then asked for their attitudes on two viewpoints that either supported or opposed hate crime laws. The viewpoint in support of hate crime legislation advocated harsher punishment for hate crime offenders because bias-motivated assaults target not only the victim but all members of the victim’s group. The opposition viewpoint was based on the argument that hate crime laws violate the concept of equal protection under the law. That is, two victims of separate attacks could have identical injuries, but if one attack was a bias-motivated assault, the offender in that case would receive a longer sentence, which is unfair to the other victim. Participants then answered questions about their support for each of the two viewpoints, as well as about what punishments they would prescribe for defendants convicted of a hate crime. Consistent with previous research, MS as compared to the control condition did indeed lead to more negative views of hate crimes and recommendations for stronger punishment for hate crime offenders when hate crimes were discussed in general terms.

Recently, Pickel and Brown (2002) examined the effects of MS on punitive reactions toward lawbreakers, with a specific focus on juror decision making. However, in this research, the manipulation of MS was incorporated into the prosecutor’s arguments, thus enhancing external validity. In one of the studies, participants were presented with testimony about a defendant charged with driving under the influence of alcohol and resisting arrest. The prosecutor reminded participants in an MS condition that two people who were in a car the defendant hit could have been killed and asked them to imagine what it would be like for them to personally die in such a manner. Control participants were told that the two people in the car that was hit were on the way home from a dentist after one of them had his wisdom teeth pulled, and participants were asked to

think about experiencing such pain. The results paralleled earlier research. When the prosecution encouraged participants to consider their own deaths, they were more likely to convict the defendant (on a charge for which trial information was ambiguous) and recommended longer sentences (on a charge for which the trial information clearly indicated guilt). These results were replicated in a second study that involved a robbery and attempted murder trial.

It should be noted that in some conditions, Pickel and Brown (2002) also had participants focus on the death of other people (the crime victims) rather than their own deaths. Although previous research has indicated that MS effects are stronger when a person focuses on his or her own mortality (Greenberg et al., 1994; see also Nelson et al., 1997), Pickel and Brown found that thinking about the death of another person produced effects that were as powerful (and sometimes more so). One possible explanation is that the Greenberg et al. (1994) findings were in the context of a subtle manipulation and that Pickel and Brown may have created a more powerful manipulation than is typically used. Future research should examine how bringing to mind the death of others in courtroom situations may instigate MS effects.

Notably, these basic findings of Pickel and Brown (2002) were recently replicated by Cook, Arndt, and Lieberman (2004b), using a slightly modified manipulation of MS in the context of an assault trial. The prosecutor encouraged one group of participants to put themselves in the place of the victim and imagine their lives could have been ended by the attack or encouraged another group of participants to put themselves in the place of the victim and imagine the pain they would have felt during the attack. Again, participants exposed to the prosecutor who highlighted the possibility of personal mortality advocated more punitive judgments. As in previous TMT research (e.g., Greenberg et al., 1990), this reaction was most strongly pronounced among those who were highly authoritarian.

There is thus a growing body of research conducted in a variety of independent laboratories demonstrating that intimations of mortality increase punitive judgments toward lawbreakers. These effects include punitive judgments about prostitution, assaults, drunk driving, and hate crimes, as well as the variety of legal transgressions featured in the MSTs, and are consistent with a plethora of other research showing that MS increases negative responses and behaviors toward those who threaten one's cultural worldview. However, the results of other studies have demonstrated that the relationship between MS and legal decision making is far more complex. MS does not just increase negative reactions to worldview-threatening others but, as reviewed earlier, increases positive responses to those who validate a person's beliefs as well. For example, in Rosenblatt et al. (1989, Study 3), participants who were reminded of their mortality recommended a higher award for a person who gave information that led to the apprehension of a violent criminal (relative to those reminded of a control topic). In addition, TMT also offers a unique perspective in allowing one to understand why in certain situations, the salience of death can lead participants to actually be more lenient toward defendants.

Effects of MS on increasing leniency toward defendants. According to TMT, the potential for MS to provoke leniency emerges when the adoption of a favorable perception of a defendant's lawbreaking action may actually serve a worldview-defensive function. Such would be the case if the victim of the crime

represents a worldview threat. Recall that, as in other studies, in Lieberman et al. (2001, Study 1), individuals who were reminded of mortality were more punitive toward hate crime offenders in general than were participants in a control condition. Thus, on the surface, one would expect more punitive reactions to hate crime offenders when mortality is salient and people hear of a specific instance of a hate crime. However, hate crimes are atypical criminal acts in that they are not committed because an attacker hopes to gain something (such as money or other valuables) from a specific victim or because of dislike of the specific person being attacked. Rather, they are committed because a victim possesses some characteristics that the attacker finds offensive (being gay, Jewish, Black, etc.), and this may also be a characteristic that represents a worldview threat to others. If a specific victim represents a worldview threat to perceivers, then MS may attenuate rather than intensify the greater intolerance typically demonstrated toward lawbreakers.

Lieberman et al. (2001, Study 2) investigated this possibility. Heterosexual non-Jewish participants were reminded of their mortality or not and given one of three crime vignettes to read. The vignettes, adapted from Craig and Waldo (1996), described a physical assault by two men against a person who left a rally. Participants in a control group read a vignette with no motivation attributed to the attackers. However, participants in an antihomosexual group read that the victim had left a Gay Pride rally and that the assailants shouted antigay insults at the victim during the attack. Similarly, participants assigned to an anti-Semitic condition read that the victim had attended a Jewish Pride rally and that the attackers had made anti-Semitic insults. Following Rosenblatt et al. (1989), participants were then given information that judges typically rely on when making bail decisions and were asked to set a bail amount that served as the primary dependent measure. Results indicated that, in the absence of MS, participants were more punitive when they believed attacks were motivated by out-group bias. However, although MS participants were more punitive than dental pain participants when presented with an ambiguous crime description, they were actually less punitive than control participants when responding to the antigay and anti-Semitic attacks.

Hence, taken together, the results of the Lieberman et al. (2001) studies indicated that MS led participants to express increased negative reactions to bias-motivated attacks when hate crimes were discussed in generic terms. However, MS instead produced significantly less punitive reactions against such alleged criminals when a worldview-threatening victim of the hate crime was specified. As a result, we begin to see that MS may produce complex reactions depending on the motivations of the offenders and important aspects of the cultural worldviews of those who pass judgment upon them. When a criminal commits a moral transgression, people are generally more punitive in their reactions. However, when the actions of the transgressor serve to bolster or defend the worldview of the perceiver, individuals may be more tolerant of the transgression.

In research on reactions to White supremacists, Greenberg, Schimel, Martens, Solomon, and Pyszczynski (2001) obtained a similar pattern of results. Greenberg et al. pointed out that it is unlikely that most White Americans would express direct support for the racist beliefs of White supremacists. In fact, it is possible that a White person expressing racial pride might even be perceived as being more

racist than a racially proud Black person. Indeed, in Study 1 of their research, Greenberg et al. found this was the case. However, as MS has been shown to enhance in-group identification, reminders of death may serve to attenuate the pejorative view of the White racist. This possibility was assessed in a second study. As in the previous study, participants in a non-MS control condition judged a White author as significantly more racist than a Black author. This trend was eliminated in the MS condition, however, where instead there was a tendency to view the racially proud White author as less racist than the Black author.

Greenberg et al. (2001) noted that enhanced in-group identification is not necessarily a negative consequence; it becomes malignant when it results in harmful behavior to out-groups. Consequently, a third study was conducted to determine whether the results would extend to impressions of a target who had engaged in illegal discriminatory behavior. Participants were assigned to be mortality salient or not and presented with a description of a legal case in which either a White or a Black supervisor had been found guilty of discrimination in the hiring of employees. The case file contained information that clearly indicated the defendant was White and was guilty of discriminating against Blacks or that the defendant was Black and was guilty of discrimination against Whites. Participants were asked to (a) indicate the extent that they thought the defendant was guilty of discrimination, (b) indicate the extent to which they thought he held racist beliefs, and (c) assign a jail sentence in months to the defendant. Paralleling the previous study, participants in the control condition reacted more negatively to the White defendant, compared with the Black defendant, and were more punitive to him. However, in the MS condition, reactions were more lenient, and participants were less likely to view the White defendant as racist.

The interaction of MS and race in these studies is similar to the hate crime findings obtained by Lieberman et al. (2001). When Lieberman et al. and Greenberg et al. (2001) are compared, in control conditions, White racist views and hate crimes against gay and Jewish victims are perceived more negatively. However, MS serves to create leniency or a more positive view of the White racist/hate crime offender. Thus, when mortality is salient, individuals may not always be hyperpunitive of defendants. From a TMT perspective, many of the biases people have (thus making them candidates for a juror–defendant similarity bias) are based on their worldview (e.g., religious, racial) beliefs. One unique contribution of TMT is that conceptualizing biases in this fashion then allows for understanding the function that these particular biases may serve (i.e., imparting a view of the world that facilitates the management of existential fears) and when such biases may be more or less operative in legal judgment (i.e., when case factors increase peoples' concern about their own mortality).

Effects of MS on increasing fairness. On the basis of the studies described here, one might be tempted to draw the conclusion that heightened awareness of death creates a subjective system of justice in which the influence of extralegal factors, such as defendant or victim characteristics, always dictate the outcome of the proceedings. Does this mean it is impossible to render judicial decisions in a fair and equitable manner after individuals have been reminded of their mortality? Is a desire for fair process inherently contradictory to biases elicited by MS? Fortunately, the answer appears to be no. Several studies have examined the relationship between procedural fairness and MS and have found that fair process

concerns are greater after individuals contemplate their own deaths (van den Bos, 2001; van den Bos & Miedema, 2000).

A sizable body of research has indicated that procedural fairness is a fundamental concern for people (e.g., Folger & Cropanzano, 1998; Tyler & Lind, 1992). The opportunity to express one's voice during a trial proceeding leads to greater satisfaction with the trial process, both in experimental research (e.g., Folger, Rosenfield, Grove, & Corkran, 1979) and in cross-cultural studies (e.g., Leung, 1987). When mortality is salient to individuals, terror management studies have shown that there is an increase in the importance of upholding social norms and values. Furthermore, it is possible that MS increases fair process effects because fairness appears to be a value that is quite important to people.

To investigate the effects of MS on fair process reactions, van den Bos and Miedema (2000) conducted a series of studies in the Netherlands. Fair process was manipulated by allowing participants to express an opinion (or not) regarding the allocation of rewards for a task performance, specifically, the amounts of reward they and another person should receive for a task that they had performed independently and equally well. Participants who were allowed to express their voice regarding the allocation of reward typically said that the rewards (lottery tickets for a substantial prize) should be allocated evenly between themselves and the other person, regardless of MS. This indicates that the participants were interested in performance-based fair outcomes. However, there were important interactions between MS and opportunity to express one's voice on participants' affective reactions. Across three studies, in comparison with control participants, MS individuals displayed higher positive affect and lower negative affect when they were allowed to express their voices. Additionally, MS participants who were allowed to voice their opinions expressed more positive attitudes regarding their relationship with the experimenter than did participants in a no-voice condition. Thus, MS appears to affect both perceptions of fair process of procedures and perceptions of fairness of authority figures themselves.

In a follow-up study, van den Bos (2001) extended these findings by demonstrating that the impact of MS on fairness is not limited to procedural fairness but also carries over to distributive fairness. That is, MS also enhances negative affect when people have received outcomes that they believe are unfair. Furthermore, van den Bos's results indicated that MS individuals are significantly less likely to experience negative affect in response to unfair procedures when their self-esteem has been bolstered. As previously mentioned, TMT maintains that self-esteem acts as an anxiety buffer against the distressing thoughts associated with one's *quietus*. In later sections of this article, we discuss the use of self-esteem to counteract the negative consequence of MS in greater detail.

Of course, these studies pertain to individuals' concerns with the fairness of their own outcomes rather than the outcomes of others. An important issue from a legal standpoint is, Does MS increase concern for the fair treatment of others? Can one hope that a juror would be motivated to use a fair process when evaluating a defendant after a situation has rendered thoughts of death cognitively accessible? Additional insight regarding the fair treatment of defendants can be gained by considering the research of Cook, Arndt, and Lieberman (2004a) on mock jurors' use of inadmissible evidence.

Effects of MS on compliance with judicial admonitions. Judges must periodically instruct jurors to ignore certain testimony. Previous research has indicated that such admonitions are largely ineffective and sometimes actually lead jurors to pay more attention to the information than if the testimony had been ruled admissible, a phenomenon known as the *backfire effect* (see Lieberman & Arndt, 2000, for a review). Obviously, jurors' consideration of inadmissible testimony jeopardizes the defendant's right to a fair trial. Recent findings by Cook et al. (2004a) indicated that terror management processes can provide a way to understand both the backfire effect and the motivational factors that influence its manifestation.

Although participants who have been reminded of their deaths generally tend to be more punitive toward legal and moral transgressors, van den Bos and Miedema's (2000) findings regarding the importance of fair process led Cook et al. (2004a) to reason that this typical punitive reaction might stem from participants supporting a worldview that prescribes what are believed to be fair and just laws. On this basis, Cook et al. predicted that MS would increase a juror's desire to uphold beliefs about the importance of following the law and obeying a judge's instructions because doing so should allow for a fairer trial process. In turn, adhering to a judge's admonitions regarding inadmissible evidence should attenuate the backfire effect.

According to Cook et al. (2004a), the effects of MS and evidence admissibility would be moderated by the emphasis jurors placed on following their personal beliefs about justice. That is, dispositional and situational factors might lead jurors to be more prone either to strictly follow the law or to place their own views of what is just above legal instruction. This tendency to rely on one's own sense of justice rather than the written law, which typically results in the rejection of the law and refusal to convict a person whom a juror feels has transgressed the letter but not the spirit of the law, is known as *nullification* (Lieberman & Sales, 1997; Wiener, Habert, Shkodriani, & Staebler, 1991). In general, jurors who are inclined to use their own sense of justice should acquit a defendant if they think a law should not apply but should also convict if they believe a person is truly guilty. Furthermore, if a judge admonishes jurors to ignore incriminating information, nullification-prone jurors should be inclined to ignore such instructions and consider the testimony instead, thus, producing the backfire effect. However, because MS has been shown to increase concern for fair process outcomes, MS individuals who are inclined to rely on their own sense of justice should apply fair process concerns. As consideration of inadmissible evidence would result in an unfair trial for a defendant, there should be a tendency to adhere to inadmissible evidence admonitions among MS participants who value reliance on personal views of justice. Cook et al. conducted a series of studies to test this prediction.

A first study in this line of research presented participants with questions to measure individual tendencies either to adhere to the law or to rely on one's own sense of justice. After an MS or control manipulation, participants were presented with a transcript of a robbery trial. A key piece of incriminating evidence was ruled admissible, inadmissible, or omitted altogether, and participants were asked to render a verdict (which, when combined with a confidence rating, yielded a continuous measure).

Participants were more punitive when the evidence was ruled inadmissible

than when it was admissible (thus replicating the backfire effect) but only among participants who scored highly on the justice nullification measure and who were not mortality salient. Jurors whose personal beliefs involved a strict adherence to the law did not exhibit a backfire effect regardless of MS. These results imply that in situations that do not involve heightened concern with mortality, inadmissible evidence may only be more influential than admissible evidence when people follow their own sense of justice rather than the law. It is important to note, however, that among high nullification-oriented participants, MS actually reversed the backfire effect. MS participants were appropriately less punitive in the inadmissible condition compared with the admissible and control conditions. This finding supports the hypothesis that MS leads people to defend a worldview that often includes upholding the law and an increased desire for fairness when they rely on their own sense of justice. A second study replicated and extended these findings by manipulating nullification proneness through judicial instructions. These results suggest that reminders of death can lead not only to stronger negative reactions to lawbreakers but, in some cases, to greater leniency toward defendants.

MS and Legal Decisions: A Heuristic Process Model

Taken together, the research above indicates that death-related thoughts can influence a number of domains that are relevant to trial situations, including (a) both punitive and lenient treatment of legal transgressors, (b) increased attention to norms of procedural fairness, and (c) greater tendency to comply with judicial admonitions. The nature and scope of these effects and their provocation by subtly activated concerns about death cannot be understood unless one considers the psychological implications of a person's existential plight. It seems difficult to explain these findings using theories other than TMT that neglect this facet of human experience. Yet there remain a number of critical questions. For example, under what conditions do reminders of death influence legal decision making? When and for which types of jurors do such reminders lead to more or less punitive judgments? Although more research is needed, we begin to answer these questions below by considering the processes through which reminders of death influence human thought and behavior and how legal judgments can be implicated at each phase of this progression. In this light, we return to Figure 1, which was previously used to depict the basic progression of MS effects; however, we now add (via the text in circles) the legal interfaces of this analysis. We emphasize that this explication is intended to be illustrative rather than exhaustive. Furthermore, it could also be adapted to include not only jurors but other parties in the courtroom.

As noted, jurors' concerns about mortality can be activated by a number of facets of a trial experience, including the nature of the charge, the details of testimony, or the sentence that may be considered. Given that conscious death-related thoughts provoke unique cognitive effects (e.g., Arndt, Greenberg, Solomon, et al., 1997), this could in turn affect a juror's ability to evaluate evidence and consider case proceedings. When jurors are consciously thinking about death, this may lead to proximal defenses through which the jurors try to remove death-related thoughts from focal attention, for example, by trying to suppress

these thoughts. To the extent that the suppression of unwanted thoughts demands the use of cognitive resources (see, e.g., Wegner, 1994, for detailed consideration of this issue), a juror in such situations might be less capable of devoting attention to the information that he or she is presented with during the trial. Moreover, this would be particularly likely immediately following the testimony or exposure that elicited mortality concerns and with testimony that is complex and filled with legal jargon, which jurors already find quite difficult to understand without being otherwise cognitively challenged (Lieberman & Sales, 1997).

Previous TMT research has found that once these proximal defenses are relaxed, death-thought accessibility increases outside of conscious awareness and that this is most likely to occur for people (or, in this context, jurors) who lack secure anxiety-buffering mechanisms such as high self-esteem (Harmon-Jones et al., 1997). Notably, as we consider later in more detail, these reactions may also occur more strongly when people engage in an experiential, intuitive mode of processing information (Simon et al., 1997), and an experiential processing mode may be activated by emotionally oriented language and exhibits (Lieberman, 2002). It is important to note, however, that more subtle death-related testimony and exhibits may also directly increase unconscious thoughts of mortality. When thoughts of death are accessible but outside focal attention, they spread to activate (dispositionally or situationally) important beliefs and values (Arndt, Greenberg & Cook, 2002), which can render these beliefs more influential in a person's judgment or decision. Both juror characteristics (such as individual differences in level of identification with certain beliefs) and situational elements of the case (that make particular beliefs more salient) could then lead certain biases to be more or less operative as the juror's motivation to manage unconscious death-related concerns through distal defenses increases.

Because individuals with strong anxiety buffers (e.g., having high self-esteem) are better able to prevent the unconscious reverberations of death-thought accessibility after MS, these individuals may be less prone to having MS influence their legal decisions. For example, numerous studies indicate that psychological defenses in response to MS are attenuated among those who have high self-esteem (e.g., Harmon-Jones et al., 1997; van den Bos, 2001). In addition to the buffering effects of self-esteem, recent research has found that bolstering participants' belief in an afterlife as a form of literal immortality—and, thus, directly targeting the threat of death as absolute annihilation—can attenuate MS-induced bias in legal decisions (Dechesne et al., 2003, Study 3).

The direction of bias instigated by thoughts of death would then depend on the nature of the juror's worldview. If the defendant on trial represents a worldview threat to the juror, a more punitive response to that defendant could be expected. However, if the victim of the crime represents a worldview threat to the juror, a more lenient response should emerge. For example, in Rosenblatt et al. (1989), it was only those participants who had a negative view of prostitution who responded to MS with more punitive judgments toward an alleged prostitute. In short, an individual must believe in a particular value for MS to provoke a response to that which impinges on it.

In cases where characteristics of neither the victim nor the defendant have substantial bearing on a juror's worldview, there may be a pull between two motivations. On the one hand, a juror may simultaneously see an alleged law-

breaker as potentially violating the worldview to the extent the juror's beliefs emphasize the importance of adherence to the law. On the other hand, given the importance many individuals place on fair process concerns, for some, MS would increase a juror's proclivity for a fair and just verdict. Whether a juror responds in a particular trial by upholding a legal process or by being more punitive or lenient toward a defendant can be understood as a function of the centrality of that domain to the person's belief system. Additionally, in situations in which the juror is confronted with multiple threats to his or her belief system (as is potentially the case with hate crimes; see Lieberman et al., 2001), the juror may be motivated to defend the element that is most central to their worldview. Because worldviews are subjective, the degree of personal investment in each of these orientations (i.e., degree of individual prejudice) should determine which type of threat is most likely to predominate.

When mortality is salient, situational primes can also influence the types of beliefs and values that become accessible and are more or less likely to be defended. For example, Greenberg, Simon, Pyszczynski, Solomon, and Chatel (1992) found that dispositional investment in tolerance and situations that prime the value of tolerance can reduce biased responses to different others after MS (Greenberg et al., 1992). In most TMT research, MS has presumably elicited a need for a defense that is satiated by the available option of evaluation or behavior presented to participants. In trial situations, attorneys, judges, and witnesses all have the capacity to influence the worldview elements that become salient. An attorney, for example, may emphasize that people need to follow their own sense of justice or contemplate the scenario in a rational as opposed to an intuitive (or experiential) mindset or may highlight the stereotypes associated with a particular group (e.g., playing the infamous race card); each of which has been found to influence MS outcomes (e.g., Arndt, Greenberg, Schimel, Pyszczynski, & Solomon, 2002; Schimel et al., 1999; Simon et al., 1997). On a more encouraging note, this research would also suggest that if a concern with a fair process can be instilled as a salient value, MS should be able to increase jurors' attention to such concerns in a trial scenario (Cook et al., 2004a). This analysis thus suggests that there is a range of potential ways in which terror management processes can influence courtroom decisions.

Managing the Effects of MS During a Trial

Although TMT argues that much of people's ongoing and daily activity is ultimately motivated by unconscious concerns about death, terror management processes are more vigorously engaged when situations render mortality concerns particularly accessible. Thus, a terror management analysis may be best directed at understanding trial strategy and outcomes in situations in which the case or argument is likely to remind people of their deaths. In the section below, we further consider some potential issues relevant to predicting and attenuating MS-induced bias in courtroom judgments.

Predicting and attenuating bias during voir dire. The findings of Lieberman et al. (2001) provide one of many examples of how a juror's preexisting attitude toward a case-relevant topic (e.g., homosexuality) could potentially lead to more bias (e.g., against the plaintiff) when cases may remind the juror of death (e.g., a

lethal hate crime against a homosexual person). These findings extend from judgments based on racial, ethnic, nationalistic, and religious affiliations to a variety of more specific opinions, such as political preferences and attitudes about flag burning, prostitution, and even academic majors (see Greenberg et al., 1997). Over the years, social psychological research has revealed that preexisting attitudes generally are poor predictors of behaviors (e.g., Wicker, 1969), particularly in the case of jury selection (e.g., Berman & Sales, 1977; Diamond, 1990). However, TMT is unique in suggesting that there is likelihood of greater convergence between attitude and behavior in situations in which mortality is made salient and the attitude or belief is an important component of an individual's anxiety-buffering belief system. In these situations, it is important to be able to detect the potential for bias during *voir dire*.

Attenuating bias during a trial. Attorneys have limited control over jury selection via challenges for cause and peremptory challenges and have only limited knowledge about jurors' beliefs (depending upon the extent of *voir dire* allowed by the trial judge) to guide those challenges. It is therefore important to consider other ways to counteract the biasing effects of mortality-related cognitions. For example, encouraging jurors to deliberate in a rational and logical, as opposed to intuitive, manner (Simon et al., 1997) is a good way, based on previous research, to help mitigate bias induced by MS. Thus, a judge or attorney might remind participants of the importance of considering the verdict with a strict legal definition in mind and to think analytically about the evidence at hand. In the Simon et al. (1997) studies, direct instructions to this effect were found to eliminate the influence of MS on how participants evaluated those from different groups.

Future research might also examine other tangible strategies for reducing the experiential processing that tends to facilitate MS effects. For example, reducing cognitive demands by allowing jurors to take notes, utilize case notebooks, and ask questions may facilitate their ability to process information and thus reduce the experiential and heuristic processing that tends to result. Another possible way to reduce MS-induced bias is to prime tolerance, which in previous TMT research has been found to help mitigate bias in response to MS. In Greenberg et al. (1992), participants were reminded of the importance of tolerance of interpersonal differences, and these instructions were sufficiently effective to reduce MS-induced bias. Similarly, judges might also try to encourage fairness and strict legal adherence as a cognitively accessible worldview motive. Although these are not novel suggestions, the TMT analysis offers a deeper understanding of why they may be effective and when they are likely to be particularly prudent.

Emphasizing similarities between defendants and jurors. Previous TMT findings have repeatedly shown that MS increases positive identification with worldview supporters and others who share similar backgrounds (Greenberg et al., 1997). This, as noted earlier, lends itself to the notion that MS may increase juror–defendant similarity biases. Indeed, previous research has shown that in general, jurors are less punitive toward defendants who are similar to them on factors such as race, religion, native language, or values (see Devine, Clayton, Dunford, Seying, & Pryce, 2001, for a review). However, recent research has also suggested this reduced punitiveness toward similar others may not always be the

case, at least in particular situations where identification with the defendant could threaten the integrity of the juror's own sense of self-esteem.

For example, Kerr, Hymes, Anderson, and Weather (1995) reported that when the evidence against a defendant was weak, basic similarity–leniency effects emerged (e.g., Black mock jurors were more lenient toward Black defendants than White defendants). However, when the evidence was strong, this trend was reversed in situations in which jurors anticipated that their group would be in the minority on the jury. When Black mock jurors thought that they would be on a jury that was composed mainly of White jurors and there was a great deal of damaging evidence against a defendant, they were more likely to convict a Black defendant than a White defendant. Additionally, a recently emerging set of empirical findings indicated that MS can lead participants to distance themselves from a group when identification with that group serves to threaten the participants' self-esteem. For example, Hispanic Americans were found to distance themselves psychologically from Hispanic identification when they were reminded of death and made aware of negative stereotypes about Hispanics as a group (Arndt, Greenberg, Schimel, et al., 2002). The combination of these studies suggests that attempting to foster increased identification between the jurors and defendant may at times backfire and lead jurors to try to psychologically deny such similarities. This may be particularly likely when people have been reminded of death and are therefore in need of strong anxiety buffers.

Terror Management Theory and Punishment of Offenders

Much of the existing legally oriented terror management research has focused on reactions to offenders and has clear applications for the courtroom setting. TMT may also provide a useful framework for understanding other issues related to criminal justice, such as different facets pertaining to criminal punishment. In particular, one important area especially amenable to this analysis is capital punishment.

Although research has consistently demonstrated that MS produces especially punitive reactions in a variety of cases (e.g., assault, prostitution, or burglary), all cases are not necessarily created equal in terms of their potential to implicate terror management processes. Extrapolating from much of the terror management research, Judges (1999) argued that excessively punitive reactions to moral transgressions resulting from MS are apt to be especially common in capital cases:

American capital punishment is largely a nonconscious, symbolic defense against the terror that accompanies the awareness of human mortality. This proposition is based on terror management theory's link between fear of death awareness and several phenomena that are relevant to capital punishment: (1) hyperpunitiveness, (2) aggression, and (3) authoritarianism. People tend to increase the level of punishment of and aggression toward values transgressors (e.g., criminals) when an experimental manipulation is imposed (heightened death awareness) that activates the nonconscious defense mechanism of identification with and protection of cultural institutions. (p. 161)

Capital cases may in general lend themselves to a TMT analysis. For example, a racial-similarity bias has been found to be particularly robust in capital cases (Devine et al., 2001). Such a proliferation of bias in capital cases may be

explained, in part, by the TMT thesis that thoughts of death intensify worldview-supportive biases, and capital cases may increase thoughts of mortality, through both the charge on file and the punishment options. In this light, one might also use TMT to help understand why some people believe so fervently in capital punishment—in short, why some people demand the right to have the power to make life and death decisions about other individuals. In the classic writings upon which TMT is based (e.g., Becker, 1971; Rank, 1932/1989), scholars have argued that part of the enduring appeal of epic mythical stories of the hero who triumphs over death is that such tales resonate with people if they can identify with the protagonist and experience the power of controlling death. This in turn may be seen to increase confidence in overcoming the precariousness of existence. Capital punishment symbolically allows the state to remove the power of taking life from those who do so arbitrarily (offenders) and give it to those who will use it in a more predictable manner (at least theoretically) that is socially sanctioned (the state itself is delegating the power to the jury). Consequently, individuals are afforded some protection from death by the removal of the offender from society and by their own adherence to the laws of society.

Judges (1999) also hypothesized that death sentences for capital crimes have been and will be more common at historical moments when death is especially salient (e.g., wars and economic and political upheaval) and reviewed demographic evidence in support of this proposition. Accordingly, given the events of 9/11 and their lingering consequences, this analysis would predict that, in certain cases, more severe sentences that go beyond what might be warranted by the nature of the crimes will be handed out because of jurors' compensatory defensive response to heightened concerns with death. Thus, in addition to the more blatant effects of 9/11 that are quite understandable from the perspective of TMT (e.g., the striking upsurge in patriotism and nationalistic sentiment that followed these tragic reminders of vulnerability), this analysis suggests there may also be lingering consequences of substantial relevance to legal behavior. Indeed, over the years, we have been consulted by attorneys a number of times about the impact of MS on juror decision making in capital cases, and a number of legal commentators have commented on the potential effects of 9/11 on punitive awards (e.g., Sepos, 2001).

Conclusion

A substantial body of research provides a solid empirical foundation for the TMT idea that people's self-esteem and faith in culturally derived belief systems provide essential protection from rather basic existential fears and that the awareness of mortality plays a pervasive role in a wide variety of social psychological domains. One critically important area of inquiry concerns understanding human social behavior in legal contexts. The purpose of this article has thus been to articulate a TMT analysis of legal decision making.

One can readily see the need for insight into factors that affect legal decision making in the light of the variety of high-profile legal cases that have captured national attention in recent years. Although considerable strides have been made in delineating psychological factors that influence jurors' decisions, further understanding is needed, and this article describes theory and research that we hope

can contribute to this end. Our intent here has not been to suggest that a TMT analysis need supplant, or fundamentally contradict, other criminological or jury decision-making perspectives. Rather, the aim of this work has been to highlight the notion that deeply rooted concerns with mortality, which exert a pervasive influence on social behavior, also have wide-ranging and predictable effects on legal decision making. Consideration of these findings can be used to augment current explanations regarding legal matters. This research has indicated that heightened death-related thought has a number of effects: It can increase aggression, punitive legal judgments toward perpetrators who violate one's worldview, leniency toward offenders who support one's beliefs, attention to fair process proceedings, and compliance with judicial admonitions. Furthermore, these effects can vary as a function of individual differences and situational factors that influence the availability of different routes for existential protection and worldview bolstering. These factors have significant implications for reducing bias in various phases of jurisprudence.

Although other social psychological theories make predictions about various legal issues discussed in this article and articulate a need for people to perceive fairness in the world, TMT provides an important and unique contribution to this area. First, other theories fail to take into account peoples' concerns with their mortality, which may be at the root of some of these phenomena. For example, just-world theory may predict that people have a desire for fairness in outcomes (e.g., bad things should happen to bad people), but TMT goes beyond this and offers reasons why individuals have a need for meaning and order in their lives. TMT also goes beyond showing that biases exist and presents a fundamental psychological root cause of these biases. Given that MS has been shown to affect a wide variety of behavior in hundreds of studies to date, it becomes important to explore the additional effects of MS on some of the well-known phenomena in the legal decision-making literature (e.g., defendant similarity effects, inadmissible evidence effects, procedural justice issues, etc.). Failure to consider the effects of MS leaves one open to ignoring possible remedies that may attenuate some of the negative behaviors caused by these biases.

Many of the studies reviewed here were laboratory experiments. Thus, one may wonder to what extent the findings can be generalized to understand the real-world domain of legal decision making. This is the ultimate concern of this article, and we feel there are a number of points to keep in mind in this regard. First, recall that terror management findings have been obtained in a variety of countries, with a variety of participant populations (including actual municipal court judges), and with a variety of ecologically valid techniques of activating thoughts of death (e.g., prosecutors' statements, proximity to a funeral home) and measuring their effects. Second, the potential of these ideas to enrich understanding of legal process has been increasingly recognized by legal scholars and practicing attorneys (e.g., Judges, 1999; Rowland, 2002). Third, from a philosophy of science perspective, it is important to consider that a vital role of empirical research is to assess the merits of theoretically derived hypotheses, support for which can then be taken as support for the theoretical premises, which in turn are the ideas that can be used to inform understanding of real-world behavior. We suggest that the terror management analysis, considered from these perspectives,

is a viable conceptual vehicle for understanding (at least in part) the psychological basis of legal decisions.

Although the focus of the present article has been on how TMT and research enable one to comprehend the ways that core human motivations for meaning and self-esteem affect the manner in which people respond to crimes, we hope this analysis has been more illustrative than exhaustive. Future research should be directed not only toward further examinations of the domains reviewed but toward other areas of the criminal justice system as well. For example, elements of this analysis might be used to explain the motivational factors that increase the likelihood that individuals will commit crimes in the first place. We have previously touched on the motivations that might in part underlie the commission of hate crimes, but to broaden this perspective, we would also follow the anthropological view offered by Goldschmidt (1990) and others and suggest that needs for self-esteem in the service of existential defenses play an important role in leading inner-city youth to be socialized into gangs that perpetuate violence and other criminal activity. As the United States and other nations continue to face seemingly escalating reminders of vulnerability and the fragility of life, it is essential to move toward a broader understanding of those factors that may help to advance a peaceful coexistence with others.

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