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# Coping with Life's One Certainty: A Terror Management Perspective on the Existentially Uncertain Self

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ur species' highly evolved sense of self is immensely useful in coping with an uncertain world, but it also gives rise to the potentially terrifying awareness of the inevitability of death. According to terror management theory (TMT; Greenberg, Solomon, & Arndt, 2008), and its intellectual forbearer Ernest Becker (1971, 1973), people manage existential anxieties stemming from the awareness of mortality by investing in a meaningful cultural worldview that offers literal or symbolic continuance beyond death to those who meet prescribed standards of value. However, because the meaning- and valueconferring aspects of death-denying worldviews are fragile social constructions, and confidence in their absolute validity is continually susceptible to threats, people are rendered existentially uncertain: unsure whether their lives have ultimate meaning and significance or whether they are instead fated only to absolute annihilation upon death. We begin this chapter by summarizing TMT and the far-reaching consequences of people's struggle to secure certain knowledge of the ultimate meaning and significance of their lives. We will then review research supporting these insights and contrast TMT with uncertainty management theory. Finally, we consider implications of TMT for understanding how to manage existential uncertainty with fewer negative repercussions for individual and collective well-being.

# THE ROOTS OF EXISTENTIAL UNCERTAINTY: THE FRAGILE BASES OF DEATH-DENYING MEANING AND VALUE

Each species has unique properties that enable it to adapt to uncertain and perpetually changing environmental conditions. Bacteria respond to randomly distributed food concentrations by heading in any direction arbitrarily, whereas lions rapidly estimate which of many available prey will yield the highest energy gain-to-loss ratio (cf. Glimcher, 2004). Humans are capable of remarkably flexible adaptation to uncertain conditions by virtue of our capacities for self-aware, symbolic, and temporally extended thought. These capacities enable us to construct complex mental models of the world and envisage the relative merits of hypothetical courses of action without having to confront negative consequences; we can furthermore reflect on accumulated experience and distant eventualities in flexibly

regulating goal-directed action, affording extraordinary success in diverse, extreme, and unpredictable environments (see Deacon, 1997; Langer, 1979).

Despite the adaptive advantages of human cognition, by knowing that we exist we also realize that we are vulnerable to all sorts of potentially lethal threats, and that our death is always potentially imminent and ultimately inevitable. Because these realizations conflict with our many biological systems geared toward survival, they have the potential to leave us paralyzed with terror. While the exact circumstances of our physical death are indeed uncertain (see, e.g., Florian & Mikulincer, 2004), its inevitability is undeniable and we are aware of the possibility that it signals the self's absolute obliteration.

TMT posits that people assuage the potential anxiety engendered by awareness of death's certainty by subscribing to cultural worldviews: humanly constructed beliefs about reality shared by individuals in a group. Cultural worldviews confer psychological security by providing people with a meaningful account of reality and their place within it, as well as prescriptions for valued conduct and the promise of immortality to esteemed individuals. Cultural worldviews offer members literal immortality through concepts such as an everlasting soul and heaven, and symbolic immortality through enduring groups and causes, offspring, and culturally esteemed accomplishments and possessions that testify to one's existence. A soldier, for instance, may derive a symbolic sense of immortality by identifying himself with a broader patriotic purpose that will survive his physical existence. Cultures not only help people to navigate uncertain circumstances by transmitting practically useful knowledge, they also sustain psychological equanimity by fortifying people's perceptions that they live in a world of meaning and enduring significance and are more than mere animals fated only to obliteration.

Assuaging death anxiety requires, in addition to faith in a cultural worldview, the perception that one is satisfying the individually internalized standards of value associated with one's social roles within the broader culture—in short, the maintenance of self-esteem. By subscribing to culturally prescribed routes to immortality and perceiving oneself as living up to their standards of value, people maintain psychological equanimity despite their certain knowledge of death. Self-esteem functions as a barometer of existential certainty: confident knowledge that one's cultural worldview represents a veridical account of reality and that the self is meeting or exceeding the standards of value associated with the worldview and thus qualifies for death transcendence.

#### Sources of Existential Uncertainty

The fragility of existence and the inevitability of its termination are conspicuously physical and unavoidable realities, whereas the cultural and personal bases for imbuing life with ultimate meaning and enduring significance are fragile social constructions—they are not necessarily "true" in any provable fashion—and are effective at managing death concerns only to the extent that the individual can maintain confident faith in their absolute validity (Berger & Luckmann, 1967). But what are the threats to this faith?

Meaning, Significance, and the Body One prominent threat to existential certainty is the awareness that we are finite physical creatures vulnerable to sudden destruction and subject to inexorable deterioration. That is, people have symbolic identities that bring them "sharply out of nature," but frail bodies that remind them that they are "hopelessly in it" (Becker, 1973, p. 26). People thus strive to manage the threat posed by their corporeal nature (e.g., through medical advances and cultural norms of sexual propriety), yet the continual evidence for our bodies' fragility and vulnerability threatens to undermine our efforts to secure certain knowledge of life's ultimate meaning and value.

Alternative Worldviews Confidence in the validity of the worldview is fortified when others believe similarly and thus corroborate our conceptions of reality (Festinger, 1954). Although some isolated communities may sustain traditional ways of life unchanged for centuries, most of us inhabit a globalized, media-saturated world that continually exposes us to people and ideas representing alternative worldviews. According to TMT, the existence of alternative worldviews threatens to undermine the confidence in one's own death-denying conceptions of reality, resulting in heightened motivation to reaffirm the absolute validity of those beliefs. In this way, efforts to reduce existential uncertainty lie at the core of intergroup aggression:

Since men must now hold for dear life onto the self-transcending meanings of the society in which they live, onto the immortality symbols which guarantee them indefinite duration of some kind, a new kind of instability and anxiety are created. And this anxiety is precisely what spills over into the affairs of men. In seeking to avoid evil, man is responsible for bringing more evil into the world than organisms could ever do merely by exercising their digestive tracts.

(Becker, 1975, p. 5)

Unjust or Meaningless Events Worldviews manage terror in part by providing largely implicit expectations and beliefs about the structure of reality, typically portraying the world as a just and orderly place where things happen for a reason and people generally get what they deserve (e.g., Lerner, 1980). However, we continually encounter natural and social events that challenge our faith in a benevolent cosmic order. Rain dances don't always bring rain, tsunamis summarily extinguish thousands of people, and our revered religious and political leaders are exposed for all manner of untoward practices. The arbitrary nature of loss and tragedy-its unfairness and inexplicability-is likely to make the world seem an indeterminate and unsympathetic place over which the person can exert limited influence. In such a world, it can be difficult to maintain faith that by "doing the right thing" one is assured safety and some form of death transcendence.

Self-Esteem Threats As with faith in the cultural worldview, social recognition and approval provide the foundation for the individual's faith in their personal significance (e.g., Mead, 1934). As Erving Goffman (1959) explicated, people transform everyday social interactions into a continual staged ceremony whose purpose is to create and enhance selfesteem. Participants in this ceremony are motivated to manage the impression they give off to others, and they use various devices (e.g., bumper stickers, clothing, the appearance of their homes) to advertise that they are satisfying the standards of value associated with the social roles they inhabit in the context of the worldview. Moreover, people adhere to culturally prescribed, face-saving ritual formulas for social encounters, rites of passage, and ceremonies that serve to designate and publicly recognize major life transitions, achievements, group affiliations, and the possession of certain identities. So long as everyone plays their role, no one sees through the farce, and all can continue to express and gain validation for their self-worth. For TMT, the distal motivation driving these elaborate selfpresentational behaviors is the psychological need for a certain sense of death-denying value. Deprived of social acknowledgment of one's existence and validation for one's claims to culturally prescribed identities and achievements, individuals would have great difficulty believing their lives have enduring value, and would potentially face the disturbing realization that they are destined, like any zebra or zucchini, to whither into nothingness.

Circumstances may not only fail to validate our worth, they can also threaten it. Biological and situational factors can hamper pursuits of success in various domains of life (e.g., erectile dysfunction, papers rejected), and the very standards upon which our self-worth is based can be called into question (e.g., perhaps the United States is the evil empire; perhaps social psychology is a silly endeavor). Moreover, it's often difficult to know with certainty when the self has accrued enough value. There is no straightforward limit to the amount of wealth, fame, or pleasure one can attain, and although our accomplishments may confer moments of security, such experiences are transient and we are continually striving for more personal value. It is as though earning one more publication, winning one more tennis match, or losing 10 more pounds will guarantee one's immortality and finally quell the existential anxiety rumbling beneath the surface of consciousness. Erich Fromm (1942/ 2002, pp. 78-80) noted how these underlying fears keep us busy:

The state of anxiety . . . and especially the doubt concerning one's future after death, represents a state of mind which is practically unbearable for anybody. . . . One possible way to escape this unbearable state of uncertainty and the paralyzing feeling of one's own insignificance is ... the development of a frantic activity and a striving to do something.

#### Summary: The Uncertainties of Terror Management

In summary, the cultural and personal bases for viewing life as meaningful and believing in some form of death transcendence are fragile social fictions, faith in which is ultimately forged and sustained by social consensus. The confidence with which people subscribe to their worldview and valuable self-conceptions, and thus the protection from the potential for terror that these psychological structures provide, can be undermined by numerous threats encountered in everyday life, including our corporeal nature, other people with competing or alternative conceptions of reality, chaotic and unsympathetic natural events, and the vagaries involved in obtaining validation from others for one's valued identities and achievements. Consequently, lurking just beneath the surface of our efforts to cling to whatever meaning and personal value we can is a deep-seated uncertainty stemming from the cognizance of the possibility that our lives are devoid of meaning and that we are just transient animals in a purposeless universe destined only to obliteration upon death.

The following section reviews evidence for the role of mortality concerns in people's motivations to defend personally valued sources of certain meaning and self-esteem.

#### TMT RESEARCH: EVIDENCE THAT MORTALITY CONCERNS MOTIVATE SUSTAINING FAITH IN CULTURAL WORLDVIEWS AND SELF-ESTEEM

Support for TMT is provided in part by a large array of studies showing that reminders of death (i.e., mortality salience; MS) instigate a wide spectrum of thoughts and behaviors oriented toward defending faith in one's worldview and self-esteem against threats to their absolute validity (for a review, see Greenberg et al., 2008). In the typical paradigm, participants complete two open-ended items about their death (e.g., "Describe the emotions that the thought of death arouses in you") embedded in a packet of personality assessments to sustain a cover story and distract participants from the true purpose of the study. Participants are then assessed on diverse attitudinal and behavioral efforts to bolster and defend aspects of the worldview and self-esteem. Additional research established that MS effects can be obtained using different operationalizations of MS (e.g., accident footage, proximity to funeral homes and cemeteries, and subliminal primes of the word "dead") and are quite specific to thoughts of death. Asking participants to ponder their next important exam, speaking in public, general anxieties, being paralyzed, worries after college, social exclusion, uncertainty, and intense bouts of physical pain of uncertain duration, intensity, and effect do not produce the same effects engendered by the MS induction.

#### Denying Animality

As discussed, faith in the enduring meaning and significance of life is potentially undermined by the knowledge that one is a finite, physical animal. Accordingly, research shows that MS heightens diverse efforts to distance from the physical aspects of the self (see Greenberg et al., 2000). For example, MS increases preference for viewpoints emphasizing the differences between people and other animals, and decreases men's interest in carnally seductive, but not wholesome, depictions of women (Landau et al., 2006). MS also leads highly neurotic individuals to distance from non-sexual physical sensation, as reflected in less time spent using a foot massager and keeping one's arm submerged in ice-cold water.

Research also demonstrates that perceptions of humans' similarity to other animals moderate MS effects on bodily attitudes. Individuals primed with humans' similarity to other animals responded to MS with decreased preference for physical (but not romantic, culturally valued) aspects of sex; this effect was eliminated, however, when individuals were instead primed with the idea that humans are particularly unique from other animals, suggesting that heightening certainty about humans' privileged status in the world can eliminate MS-induced distancing from creaturely activities. Moreover, reminders of one's animal nature increase the accessibility of death-related cognitions.

Taken together, the findings from multiple studies showing defensive distancing from the body when mortality is salient, and the attenuation of this effect when bodily activities are lent cultural meaning, provide converging evidence for TMT's claim that our physical nature poses a fundamental threat to our certain faith in life's meaning and significance.

## Bolstering and Defending the Cultural Worldview

A large body of TMT research shows that MS polarizes attitudes toward people and ideas that uphold or violate the individual's cultural worldview. In one such set of studies (Greenberg et al., 1990), American participants primed with death or a control topic evaluated two essays purportedly written by foreign exchange students, one attacking the United States and the other extolling its virtues. As predicted, MS increased positive reactions to the pro-US targets and negative reactions to the anti-US targets.

Notably, worldview defenses emerge in response to implicit as well as explicit worldview threat. For example, mortality salient Christian participants show more positive reactions (e.g., liking, desire to meet) toward a fellow student who appeared to be Christian and more negative reactions to a fellow student who appeared to be Jewish (Greenberg et al., 1990)

MS affects behavioral as well as attitudinal responses to potential worldview threats. For example, MS led to more reluctance to handle culturally valued artifacts in sacrilegious ways as part of a problem-solving task (Greenberg, Simon, Porteus, Pyszczynski, & Solomon, 1995). Similarly McGregor et al. (1998) showed that MS produced greater physical aggression against someone who did not share one's political orientation.

Studies also show that threats to cultural meaning increase the accessibility of deathrelated thought. For example, Canadians exposed to threats to the Canadian worldview show increased death-thought accessibility (but not increased accessibility of other negative and neutral words) unless the threat can be easily dismissed (Schimel, Hayes, Williams, & Jahrig, 2007). These findings support our current conceptualization because they show that weakening people's sure confidence in their cultural conceptions of reality threatens to expose them to mortality concerns.

Additional research shows that MS heightens the need to bolster the sense that other people and the broader world are structured in consistent, coherent, and benevolent ways (Landau, Johns et al., 2004). As discussed earlier, the belief that social events follow a just and benevolent order constitutes a fundamental building block of terror-assuaging meaning by allowing individuals to deny the possibility that they are leading meaningless lives that are vulnerable to contingency and death at the hand of incalculable forces. Landau, Johns et al. (2004) assessed the possibility that just world beliefs would provide terror-assuaging meaning, particularly among those disposed to simple and certain knowledge (as assessed by personal need for structure; Thompson, Naccarato, Parker, & Moskowitz, 2001). In one study, high and low structure-seeking participants contemplated their own mortality or a control topic and, in an ostensibly separate study, read about a senseless tragedy (a person non-fatally wounded by a gun shot). Participants were then given the opportunity to choose among information that cast the victim in either a positive or negative light. As predicted, individuals disposed to structured knowledge and who had contemplated their mortality were especially interested in discovering negative information about the victim, presumably because such information helps them restore their belief in a just world. More recently, Hirschberger (2006) has conceptually replicated these findings, showing that MS leads people to derogate a victim more when the victim's plight was severe and the victim was not culpable for his fate.

Landau, Johns et al. (2004; see also Hirschberger, 2006) also showed that threatening just world beliefs by presenting positive information about the victim of a senseless tragedy heightened the accessibility of death-related thought among participants high, but not low, in need for structure. These results suggest that for those inclined toward structured meaning, just world beliefs serve a terror management function.

The research just reviewed demonstrates that when mortality is made salient people defend specific cultural belief systems and structured conceptions of everyday life more vigorously, and when other people and social events threaten to undermine those structured beliefs, thoughts of death become more accessible. These findings support our claim that certain faith in these meaning-conferring beliefs helps individuals to manage core existential fears.

# Identifying with Meaningful Social Groups and Individuals

TMT sheds light on how efforts to secure existential certainty influence social relationships. Earlier we theorized that people's confidence in their lasting personal value depends critically on the feedback they receive from other people. To supply their lives with confident meaning and death-transcending significance, people often envision a role or function in something larger than themselves, seeking personal significance in identification with the state, the revolution, the advancement of science, or some other cultural enterprise (see Rank, 1930/1998). Castano, Yzerbyt, Paladino, and Sacchi (2002) recently tested this analysis by examining the effects of MS on the extent to which people identify with and favorably evaluate their in-group and view their group as a real entity rather than as a loose assemblage of individuals. Consistent with TMT, Italians primed with death identified more strongly with Italy, perceived Italy as more entitative, and judged Italians, but not Germans, more positively.

In addition to group identities, people also minimize existential uncertainty by transferring power to and investing faith in an exalted other such as a lover, mentor, or political figure. Instead of bearing the responsibility for establishing the meaning and value of one's own life, and coping with the attendant existential uncertainty, the person merges him or herself with an "other" who is perceived to be a secure foundation of meaning. From a TMT perspective, these figures command affection and devotion in part because they promise validation of the self's worth through unconditional affection or a significant role in a grand cultural vision that transcends death. Becker (1971, p. 161) discussed how the appeal of larger-than-life, all-powerful others is expressed in attitudes toward political leaders:

It is [fear] that makes people so willing to follow brash, strong-looking demagogues with tight jaws and loud voices: those who focus their measured words and their sharpened eyes in the intensity of hate, and so seem most capable of cleansing the world of the vague, the weak, the uncertain, the evil. Ah, to give oneself over to their direction-what calm, what relief.

It follows that these leaders should be especially attractive following an event that arouses existential uncertainty by undermining faith in the worldview's absolute righteousness and invulnerability. Supporting this analysis, Landau, Solomon et al. (2004) found that prior to the 2004 Presidential Election, reminders of death and the 9/11 terrorist attacks (which increased death thought accessibility) intensified support for President Bush, a political leader who portrayed himself as spearheading a divinely sponsored crusade intended to triumph over evil.

MS also increases investment in close relationships for securely attached individuals (see Mikulincer, Florian, & Hirschberger, 2003). After MS, securely attached participants reported higher attraction-based commitment and higher intimacy-striving than control participants. Additionally, priming a secure romantic relationship eliminated MS-induced worldview defense, and contemplating relationship threat increased death-thought accessibility. Taken together, these findings provide convergent support for the role of terror management motivation in people's tendencies to merge with and support others who represent power and significance in the context of a meaningful worldview.

Recent evidence shows that people may even sacrifice opportunities to assert self-worth to sustain faith in meaning-providing exalted others. In one study (Landau, Greenberg, & Sullivan, 2009), mortality salient participants given test results indicating they had excellent leadership potential self-enhanced by exaggerating the validity of the leadership test; if, however, participants were additionally led to believe that their score exceeds that of a cherished political figure, MS led them to discount the test's validity. A second study similarly found that MS increased self-serving perceptions of one's standing on valued characteristics but not if self-enhancement meant asserting superiority over one's parents. By surpassing these exalted figures the self threatens to compromise the existential certainty provided by merging with a self-transcending source of meaning and value.

## Self-Esteem Striving and Defense

Numerous studies have shown that people react to MS with increased efforts to enhance and protect their self-esteem (see Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004). Many of these studies show that reminders of mortality increase efforts to live up to the standards of value from which one's self-esteem is derived, including risky driving

behavior among those who value their driving ability as a source of self-esteem, restricted consumption of nutritious but fattening foods, and increased interest in improving one's appearance with a radiant tan. Taken together, these findings suggest that people are motivated to manage concerns about mortality by living up to cultural standards of value, even if those efforts threaten to endanger their physical health.

TMT research has also addressed the psychological function of accumulating wealth. Aside from its utility in acquiring resources, wealth may facilitate terror management by serving as a culturally sanctioned testimony to one's personal value, with the consequent assurance of security in this life and figurative immortality thereafter (Becker, 1975). Tennessee Williams (1955/2004, p. 91) put it this way:

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 ever-lasting.

Distilling these insights, TMT posits that procuring wealth functions in part to allay concerns about the finality of death. Accordingly, multiple studies demonstrate that MS increases consumerist and materialistic tendencies, even if they have negative implications for social and environmental well-being (see Arndt, Solomon, Kasser, & Sheldon, 2004, for a review). In one study (Kasser & Sheldon, 2000, Study 2), mortality and control-primed participants engaged in a forest-management simulation and were told that although harvesting large amounts of timber would be personally profitable in the short term, it would have negative long-term consequences for the environment. Despite the awareness of these consequences, those reminded of their own mortality reported intending to harvest more of the available acres of forest than control-primed counterparts. These results suggest that deep-seated needs for death-transcending value significantly contribute to consumptive and competitive tendencies; by amassing wealth we hope to establish more securely the significance of our being.

In some situations, however, striving to enhance self-esteem carries a substantial risk of self-esteem-damaging failure or loss, which would render the individual even more uncertain about his or her self-worth. Landau and Greenberg (2006) found that, faced with these types of risky decisions, high but not low self-esteem individuals responded to MS by pursuing opportunities for excellence despite substantial risk of failure (presumably because these individuals possess more positive self-views capable of coping with potential failure). In one study ostensibly designed to assess creative intelligence, participants were free to choose which creativity test they would complete and receive feedback on; the test forms offered varying degrees of opportunity to assess one's creativity, with the consequent risk of excelling or failing dismally. High self-esteem participants responded to MS with increased risk, choosing a test that offered greater possibilities of showing one's creativity or lack thereof. In contrast, low self-esteem individuals primed with death became more riskaverse, choosing a test that offered little opportunity to asses their creativity level. This latter finding suggests that in some cases people manage death concerns by avoiding the potential for failure and regret and thereby protecting themselves from further uncertainty about their personal worth.

# Constructing and Maintaining Self-Narrative Meaning

A number of psychologists (e.g., Erikson, 1968; McAdams, 1993) have observed that people are fundamentally motivated to integrate diverse personal experiences across time into unified and temporally continuous self-conceptions, often in the form of a life-narrative

with overarching pattern and purpose. From a TMT perspective, a coherent organization of personal experience over time confers terror-assuaging meaning (see Landau, Greenberg, & Solomon, 2008). Without a higher level structure within which elements of their personal history can be integrated, people are left with the disturbing realization that life is basically a chaotic succession of isolated moments, each one never to be repeated and soon to be forgotten, and that even major occurrences in life are inherently purposeless.

For example, I could look back upon my experiences over the past hour as amounting to nothing more than the pointless button-punching of a (relatively) hairless ape who is now one hour closer to death; but instead I view my actions as meaningfully connected to abstract, culturally sanctioned endeavors (e.g., "advancing human knowledge") and in this way fit them into a continuous and coherent narrative about who I am and what I am becoming in time. The narrative is personal, but it only provides existential certainty because it fits within a cultural framework that defines valued conduct and its normal

Landau, Greenberg, Sullivan, Routledge, and Arndt (2009) recently tested this analysis by examining the impact of MS on different ways of meaningfully organizing personal experiences over time. One study examined whether MS would motivate participants to view their past experiences as meaningfully connected to their current sense of self. This study also assessed the possible moderating role of individual differences in personal need for structure. High and low structure-seeking participants generated autobiographical memories from various times in their lives, contemplated either their own death or a control topic, and then indicated which remembered experiences have had a significant influence on how they see themselves today (by drawing lines connecting boxes representing the specific memories to a box representing their current self). As predicted, high, but not low, structure-seeking participants responded to MS by drawing more meaningful connections between past events and their current sense of self, suggesting that they were more concerned with establishing meaningful continuity in their lived experience.

A second study assessed whether MS combined with a threat to the coherence of past events would prompt a compensatory bolstering of the past's overall meaningfulness. Participants generated 20 autobiographical memories, contemplated death or another aversive topic, and then organized their memories into either a coherent temporal structure or an alphabetical organization that is structured but devoid of personal narrative meaning. Finally, participants rated the overall meaningfulness of their past. The coupling of an MS-induced need for meaningful self-continuity with the threat induced by a personally arbitrary organization of past events led to a compensatory reassertion of the past's overall meaningfulness, suggesting that participants under these conditions were defending against a fragmented view of their personal history. These results indicate that, to defend against death concerns, people minimize existential uncertainty in part by maintaining a meaningful narrative organization of the separate elements of their past against threats of incoherence.

In a similar fashion, people are motivated to view their current actions as meaningfully continuous with their personal future. We (Landau, Kosloff, & Schmeichel, 2009) recently tested this analysis by examining whether MS would heighten the tendency to meaningfully connect separate ongoing activities with broad, personally significant long-term goals, and whether this effect would be particularly strong among those individuals high in action identification—i.e., those individuals prone to derive meaning by thinking about their actions in more abstract, encompassing ways (see Vallacher & Wegner, 2000). High and low action identification participants first listed 5 abstract goals they have for the next 40 years, as well as 10 specific activities they will be engaging in over the next week. After an MS

manipulation, they were then asked to indicate which current activities meaningfully relate to long-term personal goals (i.e., by listing a goal and then listing any and all activities that meaningfully subserve that goal). As predicted, MS led high, but not low, action identification participants to perceive more meaningful connections between concrete current actions and broader, personally significant long-term goals. These findings suggest that, at least for high action identification people, MS increases the desire to perceive continuity of upcoming activities with long-term goals. Taken together, the studies just reviewed support the broader notion that the perception of one's life as a coherent narrative unfolding in time with purpose functions partly to obscure the threatening concern that one's biological existence is ultimately pointless and temporary.

#### IS DEATH THE WORM AT THE CORE? TERROR MANAGEMENT VS. UNCERTAINTY MANAGEMENT

TMT asserts that efforts to minimize uncertainty about the meaning of life and one's significance are motivated by concerns about mortality, and research supports this analysis in many ways. However, Van den Bos and Lind's (Chapter 7) uncertainty management analysis posits that these efforts reflect an aversion to uncertainty per se, rather than a need for death transcendence, and that death is troubling because it arouses uncertainty rather than because it is certain and may be the absolute end of one's existence. The merits of this alternative view have been addressed in a number of other terror management papers (e.g., Landau et al., 2006; Pyszczynski, Solomon, Greenberg, & Maxfield, 2006) but warrant consideration in this chapter as well. We believe that: (1) death is a fundamental problem not because of uncertainties surrounding it but rather because it is certain and likely to be the obliteration of one's self and very existence; (2) TMT can help account for a wide range of phenomena not explicable in terms of uncertainty management; (3) as this chapter hopefully shows, TMT can help explain why certain kinds of uncertainties are troubling for people while others are not; and (4) the empirical literature overwhelmingly favors a terror management explanation of MS effects over any attempt to explain the body of evidence via the concept of uncertainty. We will begin with broader conceptual issues, and then turn specifically to the experimental evidence.

TMT is built upon knowledge of human evolution, biology, history, anthropology, cognition, and development. Most of our bodily and limbic systems are geared toward keeping us alive, yet the human neo-cortex makes us aware of the inevitability of death, which will thwart all of those systems. This poses a perpetual problem of potential terror and despair. In short, death is a uniquely potent psychological problem because natural selection strongly favors animals built to avert death, yet we humans know death is the only inevitable future event, and it threatens to thwart all human desires, whether for pleasure, control, belonging, or growth.

Managing this problem required worldviews that specifically provide hope of transcending death in some form. From birth on, humans must be imbedded in worldviews that provide security in the face of threats to continued existence and the ultimate threat of inevitable death; psychological equanimity is sustained throughout the life-span by acceptance of a meaning-imbuing, ordered, and benign view of reality and the sense that one is valued and therefore protected and worthy of continuance in some form beyond death. This analysis helps to explain the valuing of medicine, consumer safety, military prowess and memorials, the needs for self-esteem and meaning, childhood fears, phobias and anxiety disorders, depression, nationalism, prejudice, individual differences in attitudes, judgments, and goal striving based on different worldviews and bases of self-worth,

and the centrality and appeal of literal and symbolic modes of death-transcendence in virtually all known cultures past and present (see Greenberg et al., 2008).

TMT thus helps to inform our understanding of human evolution and history, individual development and goal striving, and culture. It also helps to explain the aversiveness of specific types of self-relevant uncertainty. Prescriptions for death-transcending value vary widely by culture, but they usually entail the self demonstrating competence in some domain, establishing and maintaining positive social relationships, upholding a certain public image, and committing to long-term goals deemed valuable by others. Uncertainty over how the self fares relative to these prescriptions can be subjectively distressing for a number of reasons, but from a TMT perspective it ultimately signals a threat to the self-esteem that normally buffers the individual from death anxiety.

In contrast to TMT, we believe that Van den Bos and Lind's (Chapter 7) notion that uncertainty is aversive and that people desire to reduce uncertainty can explain little about human behavior because it is too vague and broad. First, people don't seek any certainties, they seek certainties that buttress the meaningfulness of life and their own self-worth. Do people and cultures seek to be certain that life is meaningless or meaningful? Do they seek to be certain that they and their cultures are worthy or that they are worthless? Do they seek to believe that life and their impact on life continue after death or that they don't? Think how easy it would be to feel certain that life is meaningless and that one is entirely worthless. Yet people generally seek the opposite kind of certainties.

Second, people differ greatly in the importance of certainty to them, as work on need for closure, need for structure, sensation-seeking, openness to experience, and uncertainty orientation make abundantly clear (e.g., Sorrentino & Sort, 1986). A good theory about uncertainty would have to be able to explain these important individual differences.

Third, people often seek uncertainty rather than certainty. Would people rather believe there may be an afterlife or that there certainly isn't one? Would they rather believe they will certainly never succeed or hold out hope that they might? Would they rather be sure they are low in ability or remain uncertain? Avoiding diagnostic medical or academic tests and self-handicapping are among many behaviors in which people choose uncertainty over certainty. People generally don't like uncertainties that involve possible death or other negative outcomes, but they would usually prefer them to certainty of those negative outcomes.

Furthermore, people actively seek uncertainties that could lead to possible positive outcomes. Indeed, it is highly adaptive to seek out uncertainties-taking chances to find a mate, succeed in business, develop one's competencies. When people do shrink from such strivings, it is because they fear failure in these domains, not because they can't handle uncertainty. Seeking uncertainties is essential for growth. If people don't like uncertainty, why is gambling so popular? In the United States, it is limited to Nevada, Atlantic City, and Indian reservations, but those venues are very popular because of it and it is not legal elsewhere because people fear it would be so popular that people would seek the uncertainties of the roulette wheel, slots, and blackjack tables so fervently they would become addicted and bankrupt. Sports entertainment, reality television, lottery tickets, thrill-seeking activities, suspense/mystery novels and movies, surprises—the list of uncertainties people seek could go on and on. So sometimes uncertainty is avoided, and sometimes it is sought, and a good theory about uncertainty would have to explain the what, when, and why of seeking certainty and uncertainty.

We don't believe that Van den Bos and Lind's (Chapter 7) theory or empirical work is sufficiently developed to answer such questions. TMT does answer some of these questions in some domains, but it is not relevant to others. We believe that progress in understanding uncertainty would be made by acknowledging the role of TMT in seeking and avoiding uncertainty, e.g., in self-esteem-relevant contexts, but developing or drawing on other motivational theories as well.

Because Van den Bos and Lind (Chapter 7) seem to claim that MS effects result from the problem of uncertainty rather than death, let's turn to the experimental evidence regarding this issue. Van den Bos, Poortvliet, Maas, Miedema, and Van den Ham (2005) reported five studies showing that both uncertainty salience primes and MS produced stronger reactions to fair and unfair treatment and stimuli that uphold or violate participants' cultural norms and values relative to a control induction.

However, other more recent studies have found quite different effects for mortality and uncertainty salience (e.g., Friedman & Arndt, 2005; Landau, Johns et al., 2004; Martens, Greenberg, Schimel, & Landau, 2004; Routledge, Arndt, & Goldenberg, 2004). Specifically, the effects of reminders of death have been compared to, and found to be different than, reminders of a wide array of uncertain and unknown threats, including thoughts about meaninglessness, paralysis, an upcoming exam, various anxieties, worries about the future, worries about life after college, giving a speech in public, failure, being socially excluded, uncertainty, and intense physical pain of uncertain duration, intensity and effect (see Greenberg et al., 2008). In addition, Arndt, Greenberg, Pyszczynski, and Solomon (1997) found that subliminal death primes led to different effects than subliminal primes of pain or failure. If death were just one of many uncertainties, why would MS effects so commonly be found to differ from the effects of salience of these threats of uncertainty?

Moreover, over a dozen published studies (e.g., Landau, Johns et al., 2004; Landau et al., 2006; Routledge et al., 2004) have compared MS specifically with Van den Bos's personal uncertainty induction and have consistently found that contemplating personal uncertainty does not produce the same effects elicited by MS inductions. For example, in a recent set of two studies, Landau and Greenberg (2006) found that MS, relative to uncertainty salience, increased high self-esteem participants' preference for riskier, uncertain actions over less risky actions. All told, well over 30 studies have found different effects for MS and the salience of various life uncertainties.

Thus, concerns about uncertainty sometimes do, but far more often don't, seem to result in the same defensive responses elicited by MS. Complicating matters is evidence that thoughts of uncertainty can in some cases arouse death-related thought (Chaudary, Tison, & Solomon, 2002). Similarly, threats of creatureliness, threats to belief in a just world, threats to relationship security, and threats to faith in one's worldview all have been shown to increase death-thought accessibility (e.g., Hirschberger, 2006; Landau, Johns et al., 2004; Mikulincer et al., 2003). Indeed, Schimel et al. (2007) found that worldview threats increased accessibility of death-related thoughts but not negative thoughts associated with uncertainty.

Van den Bos et al. (2005) also reported that participants in the MS condition showed stronger reactions to fairness manipulations and worldview transgressions if, in writing about their own death, they discussed feelings of uncertainty. They have (Chapter 7) interpreted these findings as evidence that mortality reminders can sometimes arouse uncertainty concerns, which are in turn the fundamental threat underlying MS-induced worldview defense. There are two problems with this. First, the "feelings of uncertainty" measured may be better interpreted as expressions of fear and anxiety. Secondly, it makes sense that those least able to marshal strong defenses and most disturbed about death within the MS induction would be most likely to bolster defenses in subsequent measures.

We should also note that there are many other TMT findings that link MS effects specifically to the problem of death and that would be inexplicable from an uncertainty perspective. Indeed, there is a substantial body of work supporting a very specific sequence of cognitive events that lead from MS to worldview defense and self-esteem striving, involving quite different proximal (thought suppression, denial of vulnerability, intentions to live more healthily) and distal terror management defenses (see Greenberg et al., 2008). These immediate and delayed responses to MS differ, except when cognitive load is high. The whole empirically supported sequence shows that elevated death thought accessibility arouses symbolic defense and such defenses reduce death thought accessibility back to baseline levels. Other lines of research demonstrating the role of death concerns in distancing from the body, distancing from negatively framed ingroups, and immediate and delayed health-related responses, also seem to be outside the scope of an uncertainty account (Greenberg et al., 2008).

We concur with Van den Bos and Lind (Chapter 7) that a constructive reconciliation of the uncertainty and terror management views will not likely be achieved by continually accumulating findings that uncertainty salience does and does not elicit defensive responses, but rather by constructing a more sophisticated understanding of how different types of psychological threats interact given aspects of the situation and the person. The current chapter hopefully makes progress toward this goal by: (1) explicating the role played by the human awareness of the certainty of death in many of the ways people react to uncertainties regarding the self and the meaning systems upon which the self is predicated; (2) pointing out inadequacies in current uncertainty management theory; and (3) acknowledging that there are aspects of uncertainty outside the domain of TMT.

#### MAKING THE UNCERTAIN CERTAIN: IMPLICATIONS FOR SADISM, SCAPEGOATING, AND METAPHOR

In this section we examine three processes by which people seek to transform abstract symbolic meaning and value into tangible, concrete aspects of experience that can be controlled. Although these processes may strengthen existential certainty, they can carry negative individual and collective consequences. We have only recently begun to research these processes, and we briefly suggest directions for future inquiry.

#### Sadism: The Fetishization of Value

In books like Angel in Armor (1969) and Escape from Evil (1975), Becker argued that when people are thwarted from asserting their personal worth, they will sometimes cope with feelings of uncertainty and inadequacy through fetishization: reducing threatening aspects of reality to a narrow, concrete range of responsiveness. In the sexual domain, for example, the individual may deal with insecurities over not being able to interact effectively with another person in his or her totality by reducing the threatening object (the whole person) to a narrow aspect-a breast, a high-heeled shoe-that one can manage and manipulate with confidence. It's as though the individual says "By focusing my attention on this, I can securely establish my sexual competence and derive some satisfaction for myself." Becker's analysis of fetishism has broader implications for a host of related behaviors that reflect the same problem.

For example, self-esteem is sustained by meeting or exceeding cultural standards of value. However, because we can never have full access to others' private opinions, we can never establish with absolute certainty that we are valued in their eyes. In some cases, individuals cope with this uncertainty by treating others cruelly or sadistically, stripping them of their private attitudes, reducing them to mere physical creatures, and thereby relating to them in simplified, more manageable terms. If the individual feels, for example,

that his reputation is suspect, or that others are unwilling to recognize his unique greatness, he may resort to physically abusing others, humiliating them, or even killing them (as witnessed perhaps most saliently in school shootings); by reducing the other to the barest terms of the body, the individual can assert power and status in a more tangible, objectively certain fashion, and is therefore temporarily freed from the uncertain task of managing others' private attitudes and upholding a favorable impression in their minds.

Future research could assess whether fetishization functions to provide existential security against death concerns by manipulating people's confidence in their ability to relate to total persons and secure self-worth in the symbolic realm of social relations. Similarly, participants could be reminded of others' fickleness and the uncertain possibility that they will fail to validate or even recognize one's claims to unique personal value. One prediction is that such threats, when combined with MS, will incline people to assess others' worth in terms of superficial, easily quantifiable attributes (e.g., annual income, weight, and number of publications) rather than elusive latent attributes. Also, MS combined with threatened existential certainty should intensify commitment to clearly delineated systems of social rules and heighten condemnation of those whose deviations from sharply defined norms might otherwise be dismissed as trivial eccentricities.

#### Scapegoating: The Fetishization of Evil

Becker's (1973, 1975) analysis of fetishism sheds light on the psychological function of scapegoating. As discussed, the presence of "evil"-seemingly arbitrary suffering and calamity-aggravates doubts about the ultimate significance of one's existence. To allay these doubts, almost all cultures create belief systems that explain (or explain away) evil as the operation of a single focal force or entity, such as Karma, Divine Intervention, or Providence. In some cases, however, evil is focalized onto a scapegoat—a group either outside or inside the culture that is designated as the sole impediment to the realization of the culture's economic, moral, and religious superiority over others. The act of scapegoating transforms evil from the result of impersonal forces that can neither be understood nor controlled to the willful misdeeds of a single, highly identifiable, and tangible source that can be controlled and even eradicated. By fetishizing evil, scapegoating helps to allay feelings of helplessness and lingering doubts about one's insignificance and finitude. The irony, however, is that this process often triggers more evil (Becker, 1975).

Given the existential certainty afforded by scapegoating, it's no surprise that charismatic leaders have risen to power by promising their followers a heroic victory over a focal source of evil identified as the sole impediment to the group's majestic destiny. Hitler, for example, solidified public support by blaming the Jews not only for Germany's post-war economic crisis, but also for undermining the purity and moral integrity of the German people. The individual's inflated regard for such leaders essentially represents a double fetishization: the heroic Great Leader becomes the firm locus of death-transcending meaning and power, and the scapegoat becomes the sole embodiment of all that is unsure, impure, and threatening. How can the individual be existentially uncertain when they can literally point to the powers of good and evil?

Partial support for this analysis is provided by the aforementioned findings that reminders of mortality increase the appeal of good vs. evil ideologies and those who espouse them (Cohen, Solomon, Maxfield, Pyszczynski, & Greenberg, 2004; Landau, Solomon et al., 2004). Additional support is provided by a recent pair of studies showing that MS led Iranian college students to favor suicidal martyrdom against the United States rather than peaceful approaches and led American conservative students to advocate extreme violent military actions against Middle Eastern nations that may pose a threat to the United States (Pyszczynski, Abdollahi et al., 2006). This suggests that, across cultures, concerns with mortality motivate individuals to lash out at others perceived as "evil" threats to one's cherished beliefs.

#### Metaphor: The Fetishization of Meaning

A cultural worldview capable of assuaging mortality concerns must provide compelling beliefs about existentially relevant concepts, such as life, power, soul, status, and time. Despite the central role that these concepts play in death-denying ideologies, they are abstract and elusive, whereas death itself is a concrete reality. A central way in which people impose structured meaning on vague or elusive concepts is to conceptualize them metaphorically in terms of other kinds of experiences or objects that are more concrete and clearly delineated in their experience, such as physical orientation, seeing, journeys, and physical confrontation (e.g., Asch, 1955; Jaynes, 1976; Lakoff & Johnson, 1980). Some of this work illustrates the pervasiveness of metaphor in lending concrete meaning to existentially relevant concepts.

Lakoff and Turner (1979) have analyzed the metaphors commonly used for death itself, many of which entail the possibility of continued existences (e.g., "exiting" life and "moving on"). Suzanne Langer (1979) proposed that entire cultural ideologies are rooted in metaphors designed to account for the mysteries of life and existence in terms of the regularities of nature: "The cosmic setting of man's existence is imponderable, or at best a mere nightmare, until the sun and the moon, the procession of stars, the winds and waters of earth, exhibit divine rule, and define the realm of human activity" (p. 180). By enabling the individual and the larger collective to conceptualize abstract and symbolic aspects of the world and themselves in terms of concrete, familiar concepts that are in the purview of one's comprehension and control, metaphors serve as a primary means by which people construct meaningful conceptions of reality and valuable conceptions of self, and are therefore instrumental in reducing the threat posed by the existential uncertainty associated with the awareness of death.

Future research might examine whether MS heightens the tendency to use conceptual metaphor to impose structured meaning on existentially pertinent concepts. For example, people often conceptualize the self—an abstract and often ambiguous notion—in terms of a journey (as reflected in such ordinary expressions as making one's way in life, giving oneself direction, getting somewhere, and having a head start). This metaphor enables people to use recurring bodily experiences and cultural knowledge associated with journeys (e.g., dealing with impediments to motion, etc.) as the foundation for a meaningful organization of temporally extended experience. Partial support for this analysis is provided by the aforementioned findings that MS increases tendencies to seek and defend a story-like organization of self-relevant information over time (Landau et al., 2009). More direct evidence could be provided by examining whether MS heightens the tendency to think and talk about life events using the structure of journeys (or other structuring metaphors) rather than literally.

#### REDUCING, CHANNELING, AND EMBRACING EXISTENTIAL UNCERTAINTY: IMPLICATIONS FOR PERSONAL AND COLLECTIVE WELL-BEING

Throughout this chapter we have reviewed evidence that the awareness of death is a ubiquitous concern that underlies diverse efforts to bolster and defend certain faith in

the ultimate meaning and value of one's life, and that these efforts can have negative consequences for personal and collective well-being. To review a few examples: People respond to MS with increased prejudice and aggression toward those who represent alternative worldviews. The findings that MS increases the appeal of charismatic leaders and reluctance to surpass such figures are consistent with insights of Otto Rank, Erich Fromm, Rollo May, and others who converged on the notion that the freedom to establish the significance of one's own life can be overwhelming, driving the person to merge with larger, more secure foundations of meaning and value. Also, MS increases efforts to attain cultural prescriptions for value even at the expense of physical health.

Efforts to maintain existential certainty may have other, more insidious negative consequences for personal growth. Becker (1969) argued that we are all fetishists to some degree because in coping with mortality we organize our personalities and invest our self-worth around a narrow set of themes and concerns. The problem is that this confines us to a very limited range of experience. For example, a person may become encapsulated in a world of money, interpreting and evaluating everything through its lens, because that is the small area of the world in which she can exercise her control and assert personal worth. Changing, growing, and broadening away from one's narrow focus of meaning and value (e.g., taking up a new occupation or creative endeavor) often entails exposing oneself to the threat of absolute meaninglessness, acting in ways that are neither expected nor in compliance with the wishes of others, and thereby jeopardizing external validation of one's terror-assuaging significance. People can therefore be reluctant to expose themselves to people, points of view, and other stimuli that might disconfirm their secure sense of self, becoming closed off to the richness of the world and stifled in the development of their various individual potentialities and creative impulses. Below we consider some possible routes to mitigating the negative consequences of defensive certainty-seeking.

## Reducing Existential Uncertainty

If defensively maintaining one's cultural worldview and self-esteem functions to assuage mortality concerns, then bolstering these psychological structures should attenuate these defenses, even when mortality is salient. In accordance with this prediction, Dechesne et al. (2003) found that MS led to worldview defense but this effect was eliminated if participants were presented with scientific evidence for life after death. Boosts to selfesteem and self-affirmation also eliminate the need for worldview defense and defensive self-enhancement after MS (Harmon-Jones et al., 1997; Landau & Greenberg, 2006; Schmeichel & Martens, 2005). As a strategy to ameliorate defensiveness, however, bolstering confidence in life's meaning and the self's value may have only temporary effects.

As noted earlier, MS is less likely to arouse worldview defense in individuals high in attachment security (Mikulincer et al., 2003). Presumably such individuals have a more reliable sense of personal worth stemming from the unconditional acceptance they tend to perceive, and therefore exhibit fewer defensive efforts to secure constant affirmation of life's meaning and value. One limitation of this strategy is that it's not completely clear how to promote a secure attachment style among those individuals who are not already disposed to it. However, there is evidence that temporary inductions of secure attachments mitigate defensiveness. Weise, Pyszczynski, Cox, and Arndt (2008) have shown that MS reduced support for extreme military violence when participants were primed to think of an unconditionally accepting interaction with an important person from their past.

However, not all situational cues about one's positive value reduce defensive responding. Research suggests that the nature of social validation that individuals receive may temper the extent of defensiveness they exhibit. For instance, Schimel, Arndt, Pyszczynski, and Greenberg (2001) found that receiving positive feedback for one's achievements did not alleviate participants' tendency to defensively distance themselves from a negatively portrayed other, whereas receiving positive feedback for intrinsic aspects of self (i.e., "who one is") did alleviate this defensive response. This suggests that positive interpersonal feedback may reduce defensiveness when it is a response to intrinsic self-characteristics, as opposed to self-features that are more contingent and rooted primarily in objective aims for garnering others' approval. This research also showed that making salient intrinsically based self-worth reduced downward social comparison, self-handicapping, and conformity to the opinions of others, whereas making salient extrinsically based self-worth did not. Thus, intrinsic self-esteem seems to help ameliorate some of the negative consequences of seeking existential certainty. These findings support the notion that situations conducive to fulfilling self-esteem needs in personally significant yet socially embedded ways can help individuals to mitigate concerns with mortality by healthy and productive means.

Another possible means of reducing defensive certainty-seeking is to disinvest selfesteem from the everyday arena of human relationships and institutions and instead to seek personal meaning and value in a more stable external source. A number of thinkers throughout history have advocated emancipation from worldly woes through the identification with something immutable, self-sufficient, and eternal that transcends the finite limitations of one's physical existence (e.g., Plato's Ideas, Aristotle's Essences, Spinoza's Nature, Hegel's Absolute Spirit, Marx's Progression of History, St. Thomas Aquinas's God). In line with these thinkers, there is evidence that people who invest their self-esteem in stable, relatively non-contingent sources (e.g., "God's love") have higher and more stable self-esteem compared to those who find value in fame, wealth, and other socially contingent sources (Crocker & Wolfe, 2001). The problem is that it's not clear how feasible it is for the average person to maintain value in this way without the broad validation of others. Also, these ways of seeking meaning and value can take on defensively rigid forms. In line with this, Jonas and Fischer (2006) found that individuals high in intrinsic religiosity—those who have truly integrated spirituality into the self-when reminded of their religiosity did not demonstrate worldview defense or elevated death thought accessibility after MS. In contrast, individuals high in extrinsic religiosity—those who use religion merely to fit in—did not show attenuated defensiveness when reminded of their religiosity before MS.

# Channeling Existential Uncertainty

Reducing existential uncertainty is only one type of strategy for fostering constructive change. Existential uncertainty can also be channeled into constructive directions, spurring people to find novel, creative avenues for increasing mastery of the environment. Scientists aim to discover heretofore unknown regularities in nature and thus give it meaning. Many artists attempt to lend concrete form to abstractions, giving material manifestation to complex and often uncertain phenomena while also symbolically insuring their own lasting reputation. The same fetishization impulse discussed earlier in the context of sadism and scapegoating may also fuel the creative urge that produces much of the world's great works of art.

There is some evidence pertinent to this point. Recent findings by Motyl et al. (2009) suggest that creating a sense of common humanity across cultures may ameliorate MS-induced negative reactions to others. Although reducing uncertainty by clinging to groups and causes can have negative social consequences, these results suggest that seeking meaning and value in identification with the broader human enterprise might reduce these effects.

#### Embracing Existential Uncertainty

A third way of coping with existential uncertainty is to try to accept that uncertainty about the ultimate meaning and value of one's life is an inevitable element of the human condition. This prescription was put forward by a number of existentialist philosophers (see Olson, 1962), who argued that the optimal mode of life involves accepting that one's existence is fraught with complexity, mystery, and tragedy, and that there is no inherent meaning to existence other than that which we humans decide to give to it. Advocating a more acute awareness of the tragedy and uncertainty inherent in the human condition may seem nihilistic, but such a worldview can also be liberating: By knowing that frustration and disillusionment will inevitably accompany any attempt to seek fulfillment or guarantee our significance through worldly pursuits like wealth, social approval, and fame, we need not act so compulsively in pursuit of these goals and can explore other creative pursuits; by appreciating the fact that as individuals we are fundamentally alone, and that absolute harmony and union with another is impossible, we can be less preoccupied with merging completely with an "other" and instead recognize our own and others' freedom to create new meaning and value; and, by recognizing that there is no grand plan for our lives, no global purpose, we can focus more on the moments, relishing in the passing satisfaction of a good conversation, pumpkin scone, or a Mozart sonata without deliberating over how such experiences contribute to the satisfaction of abstract prescriptions of value. Although potentially liberating, pragmatics and dangers of life, along with concern for others, limit the extent to which we can sustain intensely lived experience. But perhaps grabbing all the life we can, while accepting these constraints, is the best that we can do.

#### REFERENCES

- Arndt, J., Greenberg, J., Pyszczynski, T., & Solomon, S. (1997). Subliminal exposure to death-related stimuli increases defense of the cultural worldview. Psychological Science, 8, 379-385.
- Arndt, J., Solomon, S., Kasser, T., & Sheldon, K. M. (2004). The urge to splurge revisited: Further reflections on applying terror management theory to materialism and consumer behavior. Journal of Consumer Psychology, 14, 225-229.
- Asch. S. E. (1955). On the use of metaphor in the description of persons. In H. Werner (Ed.), On expressive language: Papers presented at the Clark University Conference on Expressive Language Behavior (pp. 29-38). Worcester, MA: Clark University Press.
- Becker, E. (1969). Angel in armor. New York: Free Press.
- Becker, E. (1971). The birth and death of meaning. New York: Free Press.
- Becker, E. (1973). The denial of death. New York: Free Press.
- Becker, E. (1975). Escape from evil. New York: Free Press.
- Berger, P. L., & Luckmann, T. (1967). The social construction of reality. Garden City, NY: Anchor.
- Castano, E., Yzerbyt, V., Paladino, M., & Sacchi, S. (2002). I belong, therefore, I exist: Ingroup identification, ingroup entitativity, and ingroup bias. Personality and Social Psychology Bulletin, 28, 135-143.
- Chaudary, N., Tison, J., & Solomon, S. (2002). What's death got to do with it?: The role of psychological uncertainty on implicit death thoughts. Paper presented at the annual meeting of the American Psychological Society, New Orleans.
- Cohen, F., Solomon, S., Maxfield, M., Pyszczynski, T., & Greenberg, J. (2004). Fatal attraction: The effects of mortality salience on evaluations of charismatic, task-oriented, and relationshiporiented leaders. Psychological Science, 15, 846-851.
- Crocker, J., & Wolfe, C. (2001). Contingencies of self-worth. Psychological Review, 108, 593-623. Deacon, T. (1997). The symbolic species: The co-evolution of language and the brain. New York: Norton.

- Dechesne, M., Pyszczynski, T., Arndt, J., Ransom, S., Sheldon, K. M., van Knippenberg, A., et al. (2003). Literal and symbolic immortality: The effect of evidence of literal immortality on self-esteem striving in response to mortality salience. Journal of Personality and Social Psychology, 84, 722-737.
- Erikson, E. (1968). Identity: Youth and crisis. New York: Norton.
- Festinger, L. (1954). A theory of social comparison processes. Human Relationships, 1, 117-140.
- Florian, V., & Mikulincer, M. (2004). A multifaceted perspective on the existential meanings, manifestations, and consequences of the fear of personal death. In J. Greenberg, S. L. Koole, & T. Pyszczynski (Eds.), Handbook of experimental existential psychology (pp. 54-70). New York: Guilford Press.
- Friedman, R. S., & Arndt, J. (2005). Reconsidering the connection between terror management theory and dissonance theory. Personality and Social Psychology Bulletin, 31,
- Fromm, E. (2002). The fear of freedom. London: Routledge. (Original work published 1942)
- Glimcher, P. W. (2004). Decisions, uncertainty, and the brain: The science of neuroeconomics. Cambridge, MA: MIT Press.
- Goffman, E. (1959). The presentation of self in everyday life. Garden City, NY: Doubleday.
- Greenberg, J. L., Pyszczynski, T., Greenberg, J., & Solomon, S. (2000). Fleeing the body: A terror management perspective on the problem of human corporeality. Personality and Social Psychology Review, 4, 200-218.
- Greenberg, J., Pyszczynski, T., Solomon, S., Rosenblatt, A., Veeder, M., Kirkland, S., et al. (1990). Evidence for terror management II: The effects of mortality salience on reactions to those who threaten or bolster the cultural worldview. Journal of Personality and Social Psychology,
- Greenberg, J., Simon, L., Porteus, J., Pyszczynski, T., & Solomon, S. (1995). Evidence of a terror management function of cultural icons: The effects of mortality salience on the inappropriate use of cherished cultural symbols. Personality and Social Psychology Bulletin, 21,
- Greenberg, J., Solomon, S., & Arndt, J. (2008). A basic but uniquely human motivation: Terror management. In J. Shah & W. Gardner (Eds.), Handbook of motivation science (pp. 113-134). New York: Guilford Press.
- Harmon-Jones, E., Simon, L., Greenberg, J., Pyszczynski, T., Solomon, S., & McGregor, H. (1997). Terror management theory and self-esteem: Evidence that increased self-esteem reduces mortality salience effects. Journal of Personality and Social Psychology, 72, 24-36.
- Hirschberger, G. (2006). Terror management and attributions of blame to innocent victims: Reconciling compassionate and defensive responses. Journal of Personality and Social Psychology, 91, 832-844.
- Jaynes, J. (1976). The origins of consciousness in the breakdown of the bicameral mind. Boston:
- Jonas, E., & Fischer, P. (2006). Terror management and religion: Evidence that intrinsic religiousness mitigates worldview defense following mortality salience. Journal of Personality and Social Psychology, 91, 553-567.
- Kasser, T., & Sheldon, K. M. (2000). Of wealth and death: Materialism, mortality salience, and consumption behavior. Psychological Science, 11, 348-351.
- Lakoff, G., & Johnson, M. (1980). Metaphors we live by. Chicago: University of Chicago Press.
- Lakoff, G., & Turner, M. (1979). More than cool reason. Chicago: University of Chicago Press.
- Landau, M. J., Goldenberg, J. L., Greenberg, J., Omri, G., Solomon, S., Cox, C., et al. (2006). The siren's call: Terror management and the threat of men's sexual attraction to women. Journal of Personality and Social Psychology, 90, 129-146.
- Landau, M. J., & Greenberg, J. (2006). Play it safe or go for the gold? A terror management perspective on self-enhancement and self-protective motives in risky decision making. Personality and Social Psychology Bulletin, 32, 1-13.
- Landau, M. J., Greenberg, J., & Solomon, S. (2008). The neverending story: A terror management perspective on the psychological function of self-continuity. In F. Sani (Ed.), Individual

- and collective self-continuity: Psychological perspectives (pp. 87-100). Mahwah, NJ: Lawrence Erlbaum Associates.
- Landau, M. J., Greenberg, J., & Sullivan, D. (2009). Managing terror when self-worth and worldviews collide: Evidence that mortality salience increases reluctance to self-enhance beyond authorities. Journal of Experimental Social Psychology, 45, 68-79.
- Landau, M. J., Greenberg, J., Sullivan, D., Routledge, C., & Arndt, J. (2009). The protective identity: Evidence that mortality salience heightens the clarity and coherence of the self-concept. Journal of Experimental Social Psychology.
- Landau, M. J., Johns, M., Greenberg, J., Pyszczynski, T., Solomon, S., & Martens, A. (2004). A function of form: Terror management and structuring of the social world. Journal of Personality and Social Psychology, 87, 190-210.
- Landau, M. J., Kosloff, S., & Schmeichel, B. (2009). Imbuing everyday actions with self-relevant meaning in response to existential threat. Manuscript under review.
- Landau, M. J., Solomon, S., Greenberg, J., Cohen, F., Pyszczynski, T., Arndt, J., et al. (2004). Deliver us from evil: The effects of mortality salience and reminders of 9/11 on support for President George W. Bush. Personality and Social Psychology Bulletin, 30, 1136-1150.
- Langer, S. (1979). Philosophy in a new key. Cambridge, MA: Harvard University Press.
- Lerner, M. J. (1980). The belief in a just world. New York: Plenum Press.
- Martens, A., Greenberg, I., Schimel, I., & Landau, M. J. (2004). Ageism and death: Effects of mortality salience and perceived similarity to elders in reactions to elderly people. Personality and Social Psychology Bulletin, 30, 1524-1536.
- McAdams, D. (1993). The stories we live by. New York: William Morrow.
- McGregor, H., Lieberman, J. D., Solomon, S., Greenberg, J., Arndt, J., Simon, L., et al. (1998). Terror management and aggression: Evidence that mortality salience motivates aggression against worldview threatening others. Journal of Personality and Social Psychology, 74,
- Mead, G. H. (1934). Mind, self, and society. Chicago: University of Chicago Press.
- Mikulincer, M., Florian, V., & Hirschberger, G. (2003). The existential function of close relationships: Introducing death into the science of love. Personality and Social Psychology Review, 7,
- Motyl, M., Pyszczynski, T., Cox. C., Siedel, A., Maxfield, M., & Weise, D. R. (2009). We are family: The effects of mortality salience and priming a sense of common humanity on intergroup prejudice. Manuscript submitted for publication, University of Colorado at Colorado Springs, CO.
- Olson, R. G. (1962). An introduction to existentialism. New York: Dover Press.
- Pyszczynski, T., Abdollahi, A, Solomon, S., Greenberg, J., Cohen, F., & Weise, D. (2006). Mortality salience, martyrdom, and military might: The Great Satan versus the axis of evil. Personality and Social Psychology Bulletin, 32, 525-537.
- Pyszczynksi, T., Greenberg, J., Solomon, S., Arndt, J., & Schimel, J. (2004). Why do people need self-esteem?: A theoretical and empirical review. Psychological Bulletin, 130, 435-468.
- Pyszczynski, T., Solomon, S., Greenberg, J., & Maxfield, M. (2006). On the unique psychological import of death: Theme and variations. Psychological Inquiry, 17, 328-356.
- Rank, O. (1998). Psychology and the soul (G. C. Richter & E. J. Lieberman, Trans.). Baltimore: Johns Hopkins University Press. (Original work published 1930)
- Routledge, C., Arndt, J., & Goldenberg, J. L. (2004). A time to tan: Proximal and distal effects of mortality salience on sun exposure intentions. Personality and Social Psychology Bulletin, 30, 1347-1358
- Schimel, J., Arndt, J., Pyszczynski, T., & Greenberg, J. (2001). Being accepted for who we are: Evidence that social validation of the intrinsic self reduces general defensiveness. Journal of Personality and Social Psychology, 80, 35-52.
- Schimel, J., Hayes, J., Williams, T., & Jahrig, J. (2007). Is death really the worm at the core? Converging evidence that worldview threat increases death-thought accessibility. Journal of Personality and Social Psychology, 92, 789-803.
- Schmeichel, B. J., & Martens, A. (2005). Self-affirmation and mortality salience: Affirming values

- reduces worldview defense and death-thought accessibility. Personality and Social Psychology Bulletin, 31, 658-667.
- Sorrentino, R. M. & Sort, J. C. (1986). Uncertainty orientation, motivation, and cognition. In R. M. Sorrentino & E. T. Higgins (Eds.), Handbook of motivation and cognition: Foundations of social behavior (Vol. 1, pp. 379-403). New York: Guilford Press.
- Thompson, M. M., Naccarato, M. E., Parker, K. C. H., & Moskowitz, G. B. (2001). The personal need for structure and personal fear of invalidity measures: Historical perspectives, current applications, and future directions. In G. B. Moskowitz (Ed.), Cognitive social psychology: The Princeton Symposium on the Legacy and Future of Social Cognition (pp. 19-39). Mahwah, NJ: Lawrence Erlbaum Associates.
- Vallacher, R. R., & Wegner, D. M. (2000). What do people think they are doing? Action identification and human behavior. In E. T. Higgins & A. W. Kruglanski (Eds.), Motivational science: Social and personality perspectives (pp. 215-228). New York: Psychology Press.
- Van den Bos, K., Poortvliet, P. M., Maas, M., Miedema, J., & Van den Ham, E.-J. (2005). An enquiry concerning the principles of cultural norms and values: The impact of uncertainty and mortality salience on reactions to violations and bolstering of cultural worldviews. Journal of Experimental Social Psychology, 41, 91-113.
- Weise, D., Pyszczynski, T., Cox, C., & Amdt, J. (2008). Interpersonal politics: The role of terror management and attachment processes in shaping political preferences. Psychological Science, 19, 448-455.
- Williams, T. (2004). Cat on a hot tin roof. New York: New Direction Books. (Original work published