

Chapter 6

A Terror Management Theory Perspective on the Human Needs for Self-esteem, Meaning, Close Relationships, and Significance

Tom Pyszczynski

Jonathan Morgan

ORCID: 0000-0003-4008-3384

ORCID: 0000-0001-5442-4026

University of Colorado Colorado Springs

Abstract

Terror management theory views the quest for significance as part of a system that functions to manage anxiety inherent in human awareness of the inevitability of death. People manage death anxiety by upholding faith in a cultural worldview, striving for self-esteem by living up to the standards of their worldview, and maintaining close interpersonal relationships. These are three pillars of significance that enable people to view themselves as valuable contributors to a meaningful universe. Research supporting this analysis is reviewed and implications of the theory for understanding discomfort regarding the corporeal nature of the human body, romantic love, religion, and ideology are discussed.

A Terror Management Theory Perspective on the Human Needs for Self-esteem, Meaning, Close Relationships, and Significance

The idea that people are powerfully motivated to maintain a sense of personal value and significance goes back to the very earliest days of scientific and academic psychology and continues to be a central component of many influential contemporary psychological theories (e.g., Aronson, 1969; Baumeister & Leary, 1995; Kruglanski et al., 2022). William James referred to this as the need for self-esteem and famously wrote, “the deepest principle of human nature is the craving to be appreciated” (1896, p. 1). Self-esteem refers to a person’s evaluation of themselves, their sense of worth or value. Different theorists have used various terms to refer to this general construct, including self-worth, self-regard, self-evaluation, personal significance, and (perhaps most commonly) self-esteem. The self-esteem motive has been posited to be an underlying need motivating such diverse forms of behavior as aggression, helping, achievement striving, conformity, deviance, friendship, romantic relationships, individual and intergroup conflict -- indeed, most everything people do. Similarly, clinical psychologists have linked difficulties maintaining self-esteem to a wide range of psychological disorders, including anxiety, depression, personality disorders, eating disorders, substance abuse, PTSD, and even schizophrenia (Zeigler-Hill, 2011).

Despite broad agreement about the important role that self-esteem plays in diverse human behaviors, and an ever-growing literature documenting the effect of threats to self-esteem, when Jeff Greenberg, Sheldon Solomon, and I (TP) were embarking on our academic careers in the early 1980s, the question of *why people need self-esteem* had yet to be raised by empirically-oriented psychologists. This is one of the many reasons reading cultural anthropologist Ernest

Becker's books, *The Birth and Death of Meaning* (1962), *The Denial of Death* (1973), and *Escape from Evil* (1975) was such an eye-opening experience for us. Becker provided compelling arguments that the primary function of self-esteem is to buffer or manage anxiety, and that the primary source of human anxiety is rooted in awareness of the inevitability of death. To us, this was initially a shocking proposition. We had never encountered discussions of death or the anxiety that surrounds it in the psychological literature, much less the suggestion that death anxiety might be a driving force motivating behavior that bears no obvious connection to this fear. But Becker reviewed the work of a wide range of thinkers within and beyond psychology who had argued that much of what people do functions, at least in part, to keep death anxiety at bay. He used William James' (1890/1981) colorful phrase to argue that "death is 'the worm at the core' of man's pretensions to happiness" (Becker, 1973, p. 15). We found these arguments especially intriguing because they suggested an answer to the question of why people need self-esteem.

Becker's books were complex and drew heavily from psychoanalytic and existential thinking, neither of which were given much credence in academic circles. Nonetheless, we felt his ideas fit well with much of what social psychologists had learned about human behavior and might provide useful tools for integrating ideas and findings from diverse domains of inquiry within our field. This led us to embark on a project of extracting what we believed were the most central elements of Becker's thinking to use in formulating an empirically testable theory we hoped would answer three basic questions:

- 1) Why do people need self-esteem?
- 2) Why are people motivated to believe that out of all the different ways of understanding reality, theirs is the only one that is factually correct?

3) Why do people have such animosity toward others who are different from themselves?

Borrowing Becker's term for the intense emotional turmoil set loose by human awareness of the inevitability of death, we labelled the theory *terror management theory* (TMT; Greenberg et al., 1986; Solomon et al., 1991).

In addition to addressing the question of why people need self-esteem, TMT also provided a definition of self-esteem as the sense that one is a *person of value in a world of meaning; a valuable contributor to a meaningful universe*. This definition not only expressed the way the term is typically used, but it also provided a link between self-esteem and social psychologists' long-standing interest in how people understand and assign meaning to the world in which they live. Recognizing that link provided a new perspective on the relation between meaning and personal value. By emphasizing the impact of culture and other people's opinions on one's private beliefs and sense of significance, the theory also shed light on the ongoing debates regarding the interplay between public and private aspects of self and behavior. Prilleltensky & Prilleltensky (2021) recently defined the concept of *mattering* in a similar way: "feeling valued and adding value" to self and others (Prilleltensky & Prilleltensky, 2021, p. 5). *Mattering* is central to Kruglanski et al's conception of significance, "to matter, to feel worthy and appreciated by others whose positive regard one seeks" (Kruglanski et al., 2022, p. 1051).

Terror Management Theory: Core Ideas and Fundamental Propositions

TMT starts with a consideration of how human beings are both similar to and different from other animals. Like all other living creatures, humans are born with a suite of evolved motives and behavioral proclivities that function to keep them alive long enough to reproduce and care for their offspring, which increases the likelihood that these tendencies will persist in future generations. To show our intellectual debt to the psychoanalytic scholars (e.g., Zilboorg,

1943) who promoted this idea, early presentations of the theory metaphorically referred to these evolved proclivities as a *self-preservation instinct*. What sets humankind apart from other species is a set of sophisticated socio-cognitive abilities; though other species show rudimentary versions of these capacities, none show them to the extent found in humans. Specifically, the theory emphasizes the human capacities for symbolic thought and language, future-oriented thought, and self-awareness or auto-noetic thought. These capacities all play prominent roles in influential theories of motivation and self-regulation (e.g., Carver & Scheier, 1981). Becker argued that these cognitive abilities evolved to increase the flexibility of human behavior to facilitate adaptation to diverse and changing environmental niches.

Though highly adaptive, sophisticated human intelligence gives rise to some uniquely human problems, especially awareness of the inevitability of death. Given that hominids have always lived in groups, encounters with the death of conspecifics was a regular occurrence, and the capacities for language, future-oriented thought, and self-awareness inevitably leads to awareness that death is one's own inevitable fate as well. The juxtaposition of awareness of death with strong motives oriented toward staying alive gives rise to the potential for *existential terror*. Though other animals experience fear in response to clear and present threats to life, only humans are aware of the inevitability of their own death (at least as far as we can know). This potential for terror is both extremely aversive and likely to interfere with goal-directed behavior needed to survive and prosper.

TMT posits that humans manage the problem of terror by using the same sophisticated cognitive abilities that gave rise to it – by creating meaning systems and conceptions of themselves that buffer anxiety. This potential for terror had a powerful influence on the conceptions of reality our ancestors were inventing to understand the world they inhabited. We

speculate that the first meaning systems were focused on facilitating survival and group living (which was, itself, essential for survival). But once death awareness dawned on our species, ideas that were useful for detoxifying death became especially appealing, were more likely to be communicated to, and adopted by, others, and eventually became institutionalized as cultural knowledge. The utility of ideas for effective terror management became an important determinant of whether ideas (memes) spread. TMT posits that humankind manages the potential for death-related anxiety by inventing and adopting ideas that imbue life with meaning, structure, significance, and hope of transcending death.

These events and processes led to the emergence of an anxiety-buffering system consisting of three interacting components: cultural worldviews, self-esteem, and close relationships. *Cultural worldviews* are theories of reality that imbue life with meaning, structure, significance, and hope of transcending death. They provide standards of value used to evaluate one's own and others' behavior and attributes, thus making it possible for individuals to perceive themselves and the groups to which they belong as significant.

Cultural worldviews also provide the hope of either literally or symbolically transcending death. *Literal immortality* refers to cultural beliefs suggesting that death is not the end of existence, such as afterlife beliefs involving heaven, paradise, reincarnation, joining with ancestral spirits, or journeys to different realms of existence. Literal immortality is usually provided by the religious elements of cultural worldviews, though for most of human history religious and secular beliefs were not distinct. And similar to ancient quests for "islands of immortality" or "fountains of youth," hope of literal immortality is also provided by contemporary pursuit of indefinite life extension through science and medicine. *Symbolic immortality* refers to the sense that one can live on by being part of something greater and longer

lasting than oneself, such as a family, tribe, nation, profession, or other groups with which people identify. Beyond simply belonging to time-transcending groups, symbolic immortality is enhanced by making valued contributions to one's group and living on in the memory of those who survive us. Many cultures pursue symbolic immortality by spending vast resources on enduring monuments intended to exist far into the future, such as the pyramids of Egypt and the terra cotta warriors of China. Thus, TMT posits that in addition to the self-esteem that is provided by identifying with groups posited by social identity theory (Tajfel, 1971), symbolic immortality is a related motivating force underlying group affiliations (Castano & Deschesne, 2005).

Self-esteem is the sense of personal value and significance that is attained by perceiving oneself as living up to the standards of value that are part of one's cultural worldview. From this perspective, self-esteem is heavily dependent on one's cultural worldview; what provides self-esteem in one cultural context might be perceived as neutral or even shameful in others. This conception of self-esteem as depending on meeting cultural values is of course influenced by James' (1890/1981) conception of self-esteem as depending on one's successes relative to one's pretensions. Importantly, it is the person's *subjective perception* of how they stack up to cultural standards that determines self-esteem, which makes it possible to defensively distort one's beliefs to maintain or enhance one's self-esteem. The large body of research documenting the many ways that people distort their causal attributions, self-perceptions, and other judgments to defend and bolster their self-esteem shows that subjective perceptions rather than objective reality are what matters most for psychological security (Greenberg et al., 1986).

Both cultural worldviews and self-esteem are heavily dependent on one's perceptions of the beliefs and evaluations of other people. As Festinger (1954) pointed out, when there are no

objective referents for what is real (as is the case for the vast majority of things that are important to worldviews and self-esteem), people rely on *social reality* – that is, they use other people’s beliefs and judgments to evaluate and validate their own. When other people share one’s beliefs (about the world or oneself) it provides high consensus (Kelley, 1967) and implies an external attribution for those beliefs – that the beliefs are based on external reality and thus accurate rather than rooted in personal bias. When others’ beliefs are different from one’s own it implies low consensus and that one’s beliefs are due to aspects of oneself rather than objective reality. Consequently, people are highly motivated to view those who share these beliefs especially positively and thus as credible, and those with different beliefs especially negatively and thus as unreliable. From the perspective of TMT, consensual validation of one’s anxiety-buffering beliefs is one of the most important (but certainly not the only) functions that other people serve.

Close relationships with others can also buffer anxiety in a more direct way. Mikulincer et al. (2003) convincingly argued that interpersonal attachments and other close relationships should be considered a third component of the anxiety-buffering system. Bowlby (1969) posited that attachment to one’s parents or primary care-givers functions to relieve distress in otherwise helpless infants, and that this function continues throughout the lifespan. TMT posits that the capacity of self-esteem and worldviews to buffer anxiety develops out of the attachment system that regulates distress in early childhood (see Solomon et al., 1991; Pyszczynski et al., 2015 for a presentation of this analysis). Fittingly, an impressive body of evidence supports the claim that close relationships buffer death related anxiety (Plusnin et al., 2018).

To summarize, from the perspective of TMT, self-esteem is the feeling that one is a valuable and significant contributor to a meaningful universe. It is attained by perceiving oneself as living up to the standards of value inherent in one’s cultural worldview and is part of a system

of three interacting components that function to manage anxiety. Since self-esteem depends on the values of the cultural meaning system that one inhabits, it is powerfully affected by the evaluations one perceives oneself as receiving from others, in that (a) being liked and valued by others is a near-universal standard of value, and (b) people rely on others to validate their own perceptions of themselves; it is hard to believe that one is a good person when viewed negatively by others. Though self-esteem is dependent on physical and social reality, it is ultimately the person's own perception of their value that buffers their anxiety.

Empirical Tests of TMT Hypotheses

For almost 40 years, researchers have been testing hypotheses derived from TMT regarding the many ways people acquire self-esteem, meaning, and interpersonal connection. These studies have been conducted in over 30 nations and on all continents except Antarctica. Because of the size of this literature, and because our present focus is on personal significance, we will review just a representative sample, focused mainly on behavior relevant to self-esteem. To date, TMT research has focused on variations on and combinations of three major hypotheses.

Anxiety-buffer studies. The *anxiety-buffer hypothesis* states that, to the extent that a psychological structure provides protection against anxiety, strengthening that structure will reduce anxiety in response to threats and weakening it will increase anxiety. Prior to the emergence of TMT, there was already a substantial body of research consistent with idea that self-esteem functions as an anxiety-buffer. Studies had shown that self-esteem is negatively correlated with anxiety, threats to self-esteem increase anxiety and negative affect, and defending self-esteem reduces anxiety produced by self-esteem threats (for a review, see Greenberg et al., 1986). But to provide more definitive evidence for the anxiety-buffer proposition, it was

important to determine whether self-esteem had a causal impact on anxiety in response to threats unrelated to the dimension of self-esteem under study.

To assess this possibility, we randomly assigned participants to have their self-esteem increased with false feedback regarding the results of personality tests or their performance on a supposed intelligence test and compared this with a neutral feedback condition. Participants were then exposed to either threat (graphic video depictions of death; anticipation of painful electric shocks) or neutral conditions. The first of these studies (Greenberg et al., 1992, Study 1) found that although a graphic death video increased self-reports of anxiety in the neutral feedback condition, it had no effect on anxiety among participants whose self-esteem had been boosted. A follow-up study showed that whereas anticipating electric shocks increased physiological arousal under neutral conditions, this increase was eliminated when self-esteem was boosted. Another early pair of studies showed that both boosting state self-esteem and high levels of trait self-esteem were linked to lower levels of death-denying cognitive distortions (Greenberg et al., 1993). These studies showed that self-esteem does indeed buffer anxiety unrelated to the domain of self-esteem in question.

Mortality salience studies. The *mortality salience (MS) hypothesis* states that, to the extent that a psychological entity functions to buffer anxiety, then reminding people of the source of that anxiety should increase their motivation to maintain and defend that entity. This will lead them to react more positively to anyone or anything that strengthens it and more negatively to anyone or anything that weakens it. This is by far the most widely tested hypothesis derived from TMT (for a review, see Pyszczynski et al., 2015). For example, studies have shown MS to lead to: harsher punishments for moral transgressors (Florian & Mikulincer, 1997); more positive evaluations of a person who praises one's culture and more negative evaluations of a

person who criticizes it (Greenberg et al., 1990); greater anxiety when mishandling sacred cultural objects (Greenberg et al., 1995); greater ingroup bias (Castano et al., 2002); greater desire for romantic partners (Hirschberger et al., 2003), and a multitude of other instances of worldview defense.

A substantial body of research has also shown that MS increases self-esteem striving and defense. Studies have shown that MS increases self-serving attributional biases (Mikulincer & Florian, 2002), desire for fame (Greenberg et al., 2010), and preference for self-esteem enhancing romantic partners (Kosloff et al., 2010). Other studies have shown that MS affects the behavior of people for whom a value is relevant to self-esteem but not that of people not invested in that value. For example, MS has been found to increase grip strength of people who value physical strength (Peters et al., 2005) and risk-taking among people who value bravery (Taubman Ben-Ari et al., 1999). A rather large body of research has shown that MS increases behavior in line with both chronically valued and recently primed cultural standards. For example, studies have shown that MS reduces derogation of outgroup members when the value of tolerance has recently been primed (Greenberg et al., 1995) and reduces support for violent solutions to international conflicts when the value of compassion has recently been primed (Rothschild et al., 2009). Other studies have shown that MS effects tend to be consistent with regional cultural values. For example, studies in East Asia have shown MS to increase behavior oriented toward interdependence and familial piety (for a review, see Park & Pyszczynski, 2019). As noted above, these values are specific to one's cultural worldview and thus self-esteem depends on behaving in accordance with them.

Death thought accessibility studies. The *death thought accessibility (DTA) hypothesis* states that if a psychological entity provides protection against death anxiety, then threatening

that entity should make death-related thoughts come to mind more readily (that is, increase DTA) and bolstering that entity should reduce the accessibility of such thoughts. Research has shown both of these effects with all three anxiety buffer components. Whereas threats to self-esteem or insults to one's group increase DTA, as assessed by completing word-stems with death-related words or responding more rapidly to death-related words on a lexical decision task, boosts to self-esteem or praise for one's group decrease DTA, even after it has been primed with MS. Several studies have shown that these effects are specific to the accessibility of death-related words and does not emerge for other negative words (for a review, see Hayes et al., 2010). Interestingly, the conditions that increase DTA are those that have been shown to increase worldview defense (Harmon-Jones et al., 1997). There is also evidence that increases in DTA produced by death reminders mediate effects on worldview defense (Das et al., 2009).

Combining the hypotheses. Researchers have also combined these three core hypotheses and assessed the interplay between the three components of the anxiety buffering system. For example, it has been shown that increasing self-esteem, validating one's worldview, or priming attachment relationships eliminates the effect of MS on worldview defense and DTA (Cox et al., 2008; Harmon-Jones et al., 1997). Other studies have shown that blocking suppression of death-related thoughts with cognitive load increases the effect of MS on worldview defense (Arndt et al., 1997) and that ostensibly scientific evidence that near death experiences show that life continues after death eliminates the effects of MS on both worldview defense and self-esteem striving (Dechesne et al, 2003). Tests of these logically distinct but inter-related hypotheses derived from TMT provide converging evidence for the theory. Though alternative explanations might be possible for individual findings, we know of no alternative theoretical perspective capable of explaining the convergence of findings in the TMT literature (see Pyszczynski et al.

2015 for a discussion of alternative explanations for TMT findings and why we believe they fall short of providing a viable alternative to the theory).

Distinct Defensive Responses to Conscious and Non-conscious Threats

One of the most interesting implications of TMT is that the awareness of the inevitability of death affects widely diverse forms of behavior that bear no logical connection to the problem of mortality. Research has shown that thoughts of death affect political attitudes, prejudice, support for war and terrorism, helping behavior, romantic attraction, sexual preferences, disgust, affection for one's parents, preference for well-structured information, the appeal of marijuana, environmental attitudes, and the tendency to objectify women, among many other behaviors without obvious implications for the problem of mortality. However, the problem of mortality also leads people to engage in behavior more directly related to death, such as health-promoting behavior and suppression of death-related thoughts (Goldenberg & Arndt, 2008).

The dual process model (Pyszczynski et al., 1999) is an extension of TMT focused on differences in the dynamics of coping with thoughts of death when they are in focal attention compared to when one is not actively thinking about death. When one is consciously thinking about death, the problem is dealt with in a way that directly addresses mortality. These are referred to as *proximal defenses*. This may entail engaging in (or intending to engage in) healthier behavior, avoiding things that could kill you, denying one's vulnerability, or suppressing death-related thoughts. These proximal defenses deflect the distress that such thoughts entail, but do nothing to deal with the fact that, regardless of how long one forestalls death, it will ultimately and most certainly terminate one's existence. Proximal defenses reduce the accessibility of death-related thoughts and prevent distress, but like other suppressed thoughts, they eventually rebound and increase in accessibility (Wegner et al., 1990).

When death-related thoughts become highly accessible but remain out of conscious awareness, *distal defenses*, involving the pursuit of self-esteem, faith in one's worldview, and attachment relationships, are activated. These forms of defense are the primary focus of TMT and this chapter. Though distal defenses bear no logical relation to the problem of death, they imbue one's life with meaning, value, and interpersonal connection, thereby enabling one to view oneself as a valuable and significant contributor to a meaningful reality, and in this way, manage the potential for existential terror.

Support for the distinct dynamics of proximal and distal defenses comes from studies showing that: a) whereas distal defenses emerge only when there has been a delay or distraction between the death reminder and assessment of defensive responses, proximal defenses emerge immediately after death reminders; b) distal but not proximal defenses are activated when death reminders are presented subliminally or outside of conscious awareness; c) distal defenses emerge immediately after MS when participants are under cognitive load, and thus prevented from suppressing such thoughts (Arndt et al., 1997); and d) bolstering or defending one's worldview, self-esteem, or attachments reduces DTA.

Additional evidence for the dual process model comes from studies testing the terror management health model (Goldenberg & Arndt, 2008), which is an application of these ideas to health-related behavior. These studies show that people respond in health-promoting ways (proximal defenses) immediately after death reminders but in self-esteem and worldview bolstering ways (distal defense) after being distracted from them. For example, MS participants chose a more protective sunscreen than controls immediately after a death reminder (presumably to protect themselves from skin cancer), but MS led participants who value tanned skin as a source of self-esteem to choose a less protective one if there was a delay between the MS

induction and their tanning choice. Because thoughts of death primarily affect worldview, self-esteem, and relationship striving when they are on the fringes of consciousness, it is impossible to introspectively observe these responses. This explains why people are largely unaware of this influence. It also explains how behavior with no obvious connection to the problem of death could serve a terror management function.

Threats and Pathways to Significance

From the perspective of TMT, human significance is acquired by finding meaning in one's cultural worldview, by living up to the standards that are part of that worldview, and through close relationships that affirm one's worldview and self-esteem, as well as hark back to the relief from distress provided by the attachment figures in one's childhood. This analysis has been empirically assessed within the context of various domains of human behavior. In the following sections we briefly discuss a few of the more distinctive applications of the terror management conceptualization of the human quest for significance.

The human body as an existential problem. The human body is an ever-present reminder of our finite mortal nature. Bodies ache, bleed, deteriorate, and eventually die and decay. Indeed, many aspects of the human body are sources of disgust and shame. Blood, saliva, urine, feces, mucous, semen, and internal bodily organs elicit disgust in many if not most people (Rozin & Fallon, 1987). TMT suggests that the body provokes disgust because of the close association between its finite corporeal nature and death. Support for this proposition comes from studies showing that death reminders increase disgust sensitivity in general and negative responses to breast-feeding and pregnant women (Cox et al., 2007a). Conversely, exposure to disgust eliciting stimuli increase DTA (Cox et al., 2007b).

One of the most ubiquitous strategies for denying death is to distance oneself from the animal nature of one's physical body and instead focus on one's mind, spirit, or soul as the essence of one's being. Despite knowing that we humans are animals that have much in common with all other living things, most (but not all) people and cultures make sharp distinctions between human and animal life. This distinction between mind and body and the elevation of human life over that of other animals, has a long history in religion, philosophy, and science (e.g. the biblical teaching that God gave man dominion over all living things; Cartesian dualism; (mis)conceptions of evolution in which humankind is seen as "more evolved" than other animals). These are all more formal instances of widely held assumptions about life that bolster human significance, and thereby manage existential anxiety. Consistent with this analysis, research has shown that reminders of death increase the tendency to distance from our physical bodies and see ourselves as distinct from other animals, and that reminders of our animal nature increase DTA (for a review, see Goldenberg, 2005).

This analysis has implications for understanding ambivalence and distress regarding sexuality. Whereas Freud viewed sexual anxiety as rooted in societal restriction of sexuality, TMT explains why societies, including even those more open and accepting of sexual expression, proscribe regulations and rituals surrounding sexuality. As Becker (1973) argued, sex is of the body, and bodies die. Cultures manage anxiety stemming from the corporeal nature of sex by embedding sex in a meaning system that elevates sex from a mere manifestation of animal nature to a significant marker of transcendent love relationships, a source of spiritual enlightenment, or a form of athleticism. Research has shown that MS reduces the appeal of the physical but not emotional aspects of sex, but that priming thoughts of romantic love eliminates this effect (Goldenberg et al, 1999). Other studies have shown that reminders of the physical but

not romantic aspects of sex increase DTA and that observing a female confederate dropping a tampon led participants to increase the importance they put on physical beauty for women (Roberts et al., 2002). From this perspective, the physical nature of sex is the existential problem underlying the distress that often surrounds it, and imbuing sex with transcendent meaning and significance is the human solution to this problem, which often further complicates the problem.

Romantic Love. Romantic love is among humankind's most powerful weapons in its arsenal for managing anxiety. As noted above, the common (though far from universal) cultural strategy of imbuing sexual relationships with love is a way of deflecting the potential for anxiety stemming from the animalistic aspects of sex. Romantic relationships are often idealized as an eternal connection between people that gives meaning and purpose to life and value to the lovers. Becker referred to this as the "romantic solution" to the problem of existential terror. Indeed, the essence of Bowlby's (1969) conceptualization of attachment relationships is that they function to manage distress. This begins in the earliest days of life for helpless infants who rely on their parents or primary caregivers for need fulfillment and continues throughout childhood as attachment figures become safe havens from distress, which makes exploration and growth possible. Schemas formed throughout this process become the template for romantic and other close relationships for the rest of one's life. Though these relationships provide a wide range of rewards, relief from distress is the defining feature of attachment.

Consistent with these ideas, MS has been shown to increase attraction to an opposite-sex confederate in a speed-dating simulation among those low but not high in attachment avoidance (Śmieja et al., 2006). Similarly, MS increased interest in meeting an attractive potential dating partner among men but not women; interestingly, MS increased neural indicators of approach motivation regardless of participants' sex (Silveira et al., 2013). Research has also shown that

MS increases the desire for casual unromantic sex among men but not women but increased the desire for casual sex with romantic overtones for both sexes (Birnbaum et al., 2011). There is also evidence that MS increases intimacy striving within established romantic relationships, though this seems to occur primarily among securely attached individuals (Mikulincer & Florian, 2002).

Other research highlights the role of romantic relationships in self-esteem. For example, MS increases perceived regard from one's romantic partner and the anxiety-buffering function of perceived regard is greater when it comes from a romantic partner than a stranger (Cox & Arndt, 2012). Other studies show that MS increases the appeal of self-esteem enhancing partners for short-term sexual encounters but worldview affirming partners for long-term relationships (Kosloff et al., 2010). Plusnin et al.'s (2018) recent review of the broad literature on the terror management function of close relationships underscores the ways in which relationships are a central source of self-esteem and protection from death-related anxiety.

Religion and ideology. Though cultural worldviews are multi-faceted, religion and political ideology appear to be especially important sources of security for many people. Religions assuage death anxiety by providing hope of both literal immortality, in the form of an afterlife, and symbolic immortality, by connecting individuals to a community of believers that extends both backwards and forward in time. Belief that one is loved by an all-powerful deity who cares deeply about one's behavior and welfare is also an important source of anxiety-buffering self-esteem and significance for believers. Support for the terror management function of religion comes from studies showing that MS increases belief in supernatural beings (Norenzayan & Hansen, 2006) and increases confidence in life after death (Batson & Stocks, 2004). Research has also shown that challenges to one's religious beliefs increase DTA (Schimmel

et al., 2007) and that affirming one's religious beliefs eliminates the effect of MS on other forms of worldview defense (Jonas & Fischer, 2006).

Political ideologies are another important component of worldviews that seem to have become increasingly important in recent years. Research has shown that MS can increase physical aggression toward people with political ideologies different from one's own (McGregor et al., 1998) and support for various forms of political violence, including terrorism and extreme military action against terrorists (e.g., Pyszczynski et al., 2006). Studies have also shown that MS increased support for US presidents George W. Bush and Donald Trump (Cohen et al., 2017; Landau et al., 2004). Other research has shown that MS increases support for charismatic leaders who proclaim the greatness of one's nation or state (Cohen et al., 2005) and that this occurs primarily for leaders who share one's political orientation (Kosloff et al., 2010). A meta-analysis of studies assessing the effects of MS on political attitudes suggested that MS can both increase support for conservative leaders and increase support for leaders who share one's political ideology, though the conditions that determine which of these effects will occur is not yet clear (Burke et al., 2013).

Terror Management and Significance

From the perspective of TMT, people manage the anxiety inherent in their knowledge of the inevitability of death by construing themselves as valuable and significant contributors to a meaningful universe. This entails maintaining faith in a cultural worldview that imbues life with meaning, acquiring self-esteem by believing that one is living up to the values embedded in one's worldview, and maintaining close relationships that validate one's worldview and self-esteem. TMT suggests that the underlying motive for the pursuit of personal and collective significance is the protection this provides against existential anxiety.

Other theorists posit that the motive for significance primarily serves a social function and evolved because it provides the adaptive advantage of acceptance by and mattering to one's group. Kruglanski et al. (2022) view the significance motive as rooted in a desire for social worth, that evolved because 'significance 'questors' were likely to contribute to the welfare of their group and were therefore accorded status and prestige," which, "likely contributed to individuals' survival and reproductive success (p. 1051)." From this perspective, awareness of death motivates the pursuit of meaning, self-esteem, and relationships primarily because it threatens one's significance – death raises the prospect of being "a speck of dust in an uncaring universe" (p. 1061).

In some ways, the question of whether death is troubling because it threatens significance or people pursue significance to manage their fear of death is a "chicken or egg" question. We agree with Kruglanski et al. that death can, in some ways, undermine one's sense of significance. Awareness of the brevity of one's own life and human life in general can indeed imply that one doesn't really matter in the cosmic scheme of things. But we doubt this is the only or most important reason that death is frightening or at the root of its motivational power. Rather than a response to implications of insignificance, we view the fear of death as a primal emotion, that results from death clashing with the many evolved biological and psychological systems that function to keep people alive. Death entails the frustration of the most basic of all human motives.

For those with firm belief in an afterlife, death is often viewed as a transition to an even more significant realm of being, which is often viewed as a reward for being a good person. For such individuals, death should not be a threat to significance, but research has shown they do show typical defensive responses to MS (e.g., Jonas & Fischer, 2006). Of course, from the

perspective of TMT, afterlife beliefs are one particularly transparent way that cultures help people manage their death anxiety. Findings that reminders of death increase belief in afterlife (Batson & Stocks, 2004) and that affirming one's religious beliefs or reading information supporting afterlife beliefs eliminates the effects of MS on worldview defense and self-esteem striving (Dechesne et al., 2003; Jonas & Fischer, 2006) are consistent with a terror management function of such beliefs.

TMT posits that emergence of awareness of the inevitability of death had a seismic effect on human functioning. This awareness emerged in response to rapidly increasing cognitive capacities and spoken language that vastly increased the flexibility of human responses to adaptive challenges. Though we doubt that threatened insignificance is the major reason death is motivating, we do find it likely that "solutions" to the problem of death built on earlier pre-linguistic adaptations. Clearly, mechanisms to regulate behavior within groups had evolved and were online before the cognitive capacities emerged that led to death awareness and the need to manage existential terror. It may be that motivation for social approval and proving one's significance to others to attain this approval was a building block upon which the need for self-esteem (or significance) was scaffolded. Perhaps even before awareness of death emerged, fear and anxiety about possible ostracism (which might itself lead to death) was a proximal emotional impetus to behavior aimed at staying in the good graces of one's group. Though a thorough discussion of the interplay between evolved tendencies and responses to existential challenges is beyond the scope of this chapter, some ideas regarding these issues can be found in Pyszczynski (2019).

To be clear, we are not saying managing death anxiety is the *only* function that worldviews, self-esteem, and close relationships serve. Meaning systems also serve a more

pragmatic function by providing a cognitive map used to direct and manage one's behavior. Self-esteem also provides confidence people need to act effectively and take action. And close relationships provide resources essential for daily life, mating, and survival itself. However, a large body of research reviewed in this chapter has shown that: a) anxiety is increased when these entities are threatened, b) the pursuit of these entities is increased when thoughts of death are on the fringes of consciousness, and c) death-related thoughts become more accessible when these entities are threatened and less accessible when they are bolstered. These findings converge to suggest that the problem of death plays an essential role in the human quest for significance through the pursuit of meaning in life, self-esteem, and close relationships.

References

- Arndt, J., Greenberg, J., Pyszczynski, T., Solomon, S., & Simon, L. (1997). Suppression, accessibility of death-related thoughts, and cultural worldview defense: Exploring the psychodynamics of terror management. *Journal of Personality and Social Psychology*, 73(1), 5–18. <https://doi.org/10.1037/0022-3514.73.1.5>
- Aronson, E. (1969). The theory of cognitive dissonance: A current perspective. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (Vol. 4, pp. 1–34). Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)60075-1](https://doi.org/10.1016/S0065-2601(08)60075-1)
- Batson, C. D., & Stocks, E. L. (2004). Religion: Its core psychological functions. In J. Greenberg, S. L. Koole, & T. Pyszczynski (Eds.), *Handbook of experimental existential psychology* (pp. 141–155).
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529. <https://doi.org/10.1037/0033-2909.117.3.497>
- Becker, E. (1962). *The birth and death of meaning: A perspective in psychiatry and anthropology*. Free Press.
- Becker, E. (1973). *The denial of death*. Free Press.
- Becker, E. (1975). *Escape from evil*. Free Press.
- Birnbaum, G., Hirschberger, G., & Goldenberg, J. (2011). Desire in the face of death: Terror management, attachment, and sexual motivation. *Personal Relationships*, 18, 1-19. doi:10.1111/j.1475-6811.2010.01298.x
- Bowlby, J. (1969). *Attachment: Attachment and loss* (Vol. 1). Basic Books.

- Burke, B. L., Kosloff, S., & Landau, M. J. (2013). Death goes to the polls: A meta-analysis of mortality salience effects on political attitudes. *Political Psychology, 34*(2), 183–200. <https://doi.org/10.1111/pops.12005>
- Carver, C. S., & Scheier, M. F. (1981). *Attention and self-regulation: A control theory approach to human behavior*. Springer Verlag. <http://www.springer.com/us/book/9781461258896>
- Castano, E., & Dechesne, M. (2005). On defeating death: Group reification and social identification as immortality strategies. *European Review of Social Psychology, 16*(1), 221–255. <https://doi.org/10.1080/10463280500436024>
- Castano, E., Yzerbyt, V., Paladino, M.-P., & Sacchi, S. (2002). I belong, therefore, I exist: Ingroup identification, ingroup entitativity, and ingroup bias. *Personality and Social Psychology Bulletin, 28*(2), 135–143. <https://doi.org/10.1177/0146167202282001>
- Cohen, F., Ogilvie, D. M., Solomon, S., Greenberg, J., & Pyszczynski, T. (2005). American roulette: The effect of reminders of death on support for George W. Bush in the 2004 presidential election. *Analyses of Social Issues and Public Policy, 5*(1), 177–187. <https://doi.org/10.1111/j.1530-2415.2005.00063.x>
- Cohen, F., Solomon, S., & Kaplin, D. (2017). You're hired! Mortality salience increases Americans' support for Donald Trump. *Analyses of Social Issues and Public Policy, 17*(1), 339–357. <https://doi.org/10.1111/asap.12143>
- Cox, C. R., & Arndt, J. (2012). How sweet it is to be loved by you: The role of perceived regard in the terror management of close relationships. *Journal of Personality and Social Psychology, 102*(3), 616–632. <https://doi.org/10.1037/a0025947>
- Cox, C. R., Arndt, J., Pyszczynski, T., Greenberg, J., Abdollahi, A., & Solomon, S. (2008). Terror management and adults' attachment to their parents: The safe haven remains. *Journal of*

Personality and Social Psychology, 94(4), 696–717. <https://doi.org/10.1037/0022-3514.94.4.696>

- Cox, C. R., Goldenberg, J. L., Arndt, J., & Pyszczynski, T. (2007). Mother's milk: An existential perspective on negative reactions to breast-feeding. *Personality and Social Psychology Bulletin*, 33(1), 110–122. <https://doi.org/10.1177/0146167206294202>
- Cox, C. R., Goldenberg, J. L., Pyszczynski, T., & Weise, D. (2007). Disgust, creatureliness and the accessibility of death-related thoughts. *European Journal of Social Psychology*, 37(3), 494–507. <https://doi.org/10.1002/ejsp.370>
- Das, E., Bushman, B. J., Bezemer, M. D., Kerkhof, P., & Vermeulen, I. E. (2009). How terrorism news reports increase prejudice against outgroups: A terror management account. *Journal of Experimental Social Psychology*, 45(3), 453–459. <https://doi.org/10.1016/j.jesp.2008.12.001>
- Dechesne, M., Pyszczynski, T., Arndt, J., Ransom, S., Sheldon, K. M., Van Knippenberg, A., & Janssen, J. (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(4), 722–737. <https://doi.org/10.1037/0022-3514.84.4.722>
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7(2), 117–140. <https://doi.org/10.1177/001872675400700202>
- Florian, V., & Mikulincer, M. (1997). Fear of death and the judgment of social transgressions: A multidimensional test of terror management theory. *Journal of Personality and Social Psychology*, 73(2), 369–378.

- Goldenberg, J. L. (2005). The body stripped downs: An existential account of the threat posed by the physical body. *Current Directions in Psychological Science*, *14*(4), 224–228.
<https://doi.org/10.1111/j.0963-7214.2005.00369.x>
- Goldenberg, J. L., & Arndt, J. (2008). The implications of death for health: A terror management health model for behavioral health promotion. *Psychological Review*, *115*(4), 1032–1053.
<https://doi.org/10.1037/a0013326>
- Goldenberg, J. L., Pyszczynski, T., McCoy, S. K., Greenberg, J., & Solomon, S. (1999). Death, sex, love, and neuroticism: Why is sex such a problem? *Journal of Personality and Social Psychology*, *77*(6), 1173–1187. <https://doi.org/10.1037/0022-3514.77.6.1173>
- Greenberg, J., Kosloff, S., Solomon, S., Cohen, F., & Landau, M. (2010). Toward understanding the fame game: The effect of mortality salience on the appeal of fame. *Self and Identity*, *9*(1), 1–18. <https://doi.org/10.1080/15298860802391546>
- Greenberg, J., Pyszczynski, T., & Solomon, S. (1986). The causes and consequences of a need for self-esteem: A terror management theory. In R. F. Baumeister (Ed.), *Public self and private self* (pp. 189–212). Springer, New York, NY. https://doi.org/10.1007/978-1-4613-9564-5_10
- Greenberg, J., Pyszczynski, T., Solomon, S., Pinel, E., Simon, L., & Jordan, K. (1993). Effects of self-esteem on vulnerability-denying defensive distortions: Further evidence of an anxiety-buffering function of self-esteem. *Journal of Experimental Social Psychology*, *29*(3), 229–251. <https://doi.org/10.1006/jesp.1993.1010>
- Greenberg, J., Pyszczynski, T., Solomon, S., Rosenblatt, A., Veeder, M., Kirkland, S., & Lyon, D. (1990). Evidence for terror management theory II: The effects of mortality salience on

- reactions to those who threaten or bolster the cultural worldview. *Journal of Personality and Social Psychology*, 58(2), 308–318. <https://doi.org/10.1037/0022-3514.58.2.308>
- Greenberg, J., Simon, L., Harmon-Jones, E., Solomon, S., Pyszczynski, T., & Lyon, D. (1995). Testing alternative explanations for mortality salience effects: Terror management, value accessibility, or worrisome thoughts? *European Journal of Social Psychology*, 25(4), 417–433. <https://doi.org/10.1002/ejsp.2420250406>
- Greenberg, J., Solomon, S., Pyszczynski, T., Rosenblatt, A., Burling, J., Lyon, D., Simon, L., & Pinel, E. (1992). Why do people need self-esteem? Converging evidence that self-esteem serves an anxiety-buffering function. *Journal of Personality and Social Psychology*, 63(6), 913–922. <https://doi.org/10.1037//0022-3514.63.6.913>
- Harmon-Jones, E., Simon, L., Greenberg, J., Solomon, S., Pyszczynski, T., & 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(1), 24–36. <https://doi.org/10.1037/0022-3514.72.1.24>
- Hayes, J., Schimel, J., Arndt, J., & Faucher, E. H. (2010). A theoretical and empirical review of the death-thought accessibility concept in terror management research. *Psychological Bulletin*, 136(5), 699–739. <https://doi.org/10.1037/a0020524>
- Hirschberger, G., Florian, V., & Mikulincer, M. (2003). Strivings for romantic intimacy following partner complaint or partner criticism: A terror management perspective. *Journal of Social and Personal Relationships*, 20(5), 675–687. <https://doi.org/10.1177/02654075030205006>
- James, W. (1981). *The Principles of Psychology*. Harvard University Press. ([Original work published 1890](#))

[James, W. \(1896, April\). Letter from William James to his students at Radcliffe College.](#)

[Unpublished letter.](#)

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*(3), 553–567. <https://doi.org/10.1037/0022-3514.91.3.553>

Kelley, H. H. (1967). Attribution theory in social psychology. In D. Levine (Ed.), *Nebraska symposium on motivation*. University of Nebraska Press.

Kosloff, S., Greenberg, J., Sullivan, D., & Weise, D. (2010). Of trophies and pillars: Exploring the terror management functions of short-term and long-term relationship partners. *Personality and Social Psychology Bulletin*, *36*(8), 1037–1051.

<https://doi.org/10.1177/0146167210374602>

Kruglanski, A. W., Molinario, E., Jasko, K., Webber, D., Leander, N. P., & Pierro, A. (2022). Significance-quest theory. *Perspectives on Psychological Science*, *17*(4), 1050–1071.

<https://doi.org/10.1177/17456916211034825>

Landau, M. J., Solomon, S., Greenberg, J., Cohen, F., Pyszczynski, T., Arndt, J., Miller, C. H., Ogilvie, D. M., & Cook, A. (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*(9), 1136–1150. <https://doi.org/10.1177/0146167204267988>

McGregor, H. A., Lieberman, J. D., Greenberg, J., Solomon, S., Arndt, J., Simon, L., & Pyszczynski, T. (1998). Terror management and aggression: Evidence that mortality salience motivates aggression against worldview-threatening others. *Journal of Personality and Social Psychology*, *74*(3), 590–605.

- Mikulincer, M., & Florian, V. (2002). The effects of mortality salience on self-serving attributions: Evidence for the function of self-esteem as a terror management mechanism. *Basic and Applied Social Psychology*, 24(4), 261–271.
https://doi.org/10.1207/S15324834BASP2404_2
- 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(1), 20–40. https://doi.org/10.1207/S15327957PSPR0701_2
- Norenzayan, A., & Hansen, I. G. (2006). Belief in supernatural agents in the face of death. *Personality and Social Psychology Bulletin*, 32(2), 174–187.
<https://doi.org/10.1177/0146167205280251>
- Park, Y. C., & Pyszczynski, T. (2019). Reducing defensive responses to thoughts of death: Meditation, mindfulness, and Buddhism. *Journal of Personality and Social Psychology*, 116(1), 101.
- Peters, H. J., Greenberg, J., Williams, J. M., & Schneider, N. R. (2005). Applying terror management theory to performance: Can reminding individuals of their mortality increase strength output? *Journal of Sport and Exercise Psychology*, 27(1), 111–116.
<https://doi.org/10.1123/jsep.27.1.111>
- Plusnin, N., Pepping, C. A., & Kashima, E. S. (2018). The role of close relationships in terror management: A systematic review and research agenda. *Personality and Social Psychology Review*, 22(4), 307–346. <https://doi.org/10.1177/1088868317753505>
- Prilleltensky, I., & Prilleltensky, O. (2021). *How people matter: Why it affects health, happiness, love, work, and society*. Cambridge University Press.
<https://doi.org/10.1017/9781108979405>

- Pyszczynski, T. (2019). The role of death in life: Exploring the interface between terror management theory and evolutionary psychology. In V. Zeigler-Hill & T. Shackelford (Eds.), *Evolutionary perspectives on death*. NY: Springer Nature.
- 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(4), 525–537.
<https://doi.org/10.1177/0146167205282157>
- Pyszczynski, T., Solomon, S., & Greenberg, J. (1999). A dual-process model of defense against conscious and unconscious death-related thoughts: An extension of terror management theory. *Psychological Review*, 106(4), 835–845. <https://doi.org/10.1037/0033-295X.106.4.835>
- Pyszczynski, T., Solomon, S., & Greenberg, S. (2015). Thirty years of terror management theory: From Genesis to Revelation. In M. Zanna & J. Olson (eds.), *Advances in experimental social psychology*. New York: Academic Press. DOI: <http://dx.doi.org/10.1016/bs.aesp.2015.03.001>
- Roberts, T.-A., Goldenberg, J. L., Power, C., & Pyszczynski, T. (2002). “Feminine protection”: The effects of menstruation on attitudes towards women. *Psychology of Women Quarterly*, 26(2), 131–139. <https://doi.org/10.1111/1471-6402.00051>
- Rothschild, Z. K., Abdollahi, A., & Pyszczynski, T. (2009). Does peace have a prayer? The effect of mortality salience, compassionate values, and religious fundamentalism on hostility toward out-groups. *Journal of Experimental Social Psychology*, 45(4), 816–827.
<https://doi.org/10.1016/j.jesp.2009.05.016>
- Rozin, P., & Fallon, A. E. (1987). A perspective on disgust. *Psychological Review*, 94(1), 23.

- Schimmel, 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(5), 789–803. <https://doi.org/10.1037/0022-3514.92.5.789>
- Silveira, S., Graupmann, V., Agthe, M., Gutyrcsik, E., Blautzik, J., Demirçapa, I., Berndt, A., Pöppel, E., Frey, D., Reiser, M., & Hennig-Fast, K. (2013). Existential neuroscience: Effects of mortality salience on the neurocognitive processing of attractive opposite-sex faces. *Social Cognitive and Affective Neuroscience*, 9(10), 1601–1607. <https://doi.org/10.1093/scan/nst157>
- Śmieja, M., Kałaska, M., & Adamczyk, M. (2006). Scared to death or scared to love? Terror management theory and close relationships seeking. *European Journal of Social Psychology*, 36(2), 279–296. <https://doi.org/10.1002/ejsp.301>
- Solomon, S., Greenberg, J., & Pyszczynski, T. (1991). A terror management theory of social behavior: The psychological functions of self-esteem and cultural worldviews. *Advances in Experimental Social Psychology*, 24(C), 93–159. [https://doi.org/10.1016/S0065-2601\(08\)60328-7](https://doi.org/10.1016/S0065-2601(08)60328-7)
- Tajfel, H., Billig, M. G., Bundy, R. P., & Flament, C. (1971). Social categorization and intergroup behaviour. *European Journal of Social Psychology*, 1(2), 149–178.
- Taubman Ben-Ari, O., Florian, V., & Mikulincer, M. (1999). The impact of mortality salience on reckless driving: A test of terror management mechanisms. *Journal of Personality and Social Psychology*, 76(1), 35–45. <https://doi.org/10.1037/0022-3514.76.1.35>

Wegner, D. M., Shortt, J. W., Blake, A. W., & Page, M. S. (1990). The suppression of exciting thoughts. *Journal of Personality and Social Psychology*, *58*(3), 409–418.

<https://doi.org/10.1037/0022-3514.58.3.409>

Zeigler-Hill, V. (2011). The connections between self-esteem and psychopathology. *Journal of Contemporary Psychotherapy*, *41*(3), 157–164. <https://doi.org/10.1007/s10879-010-9167-8>

Zilboorg, G. (1943). Fear of death. *The Psychoanalytic Quarterly*, *12*, 465–475.