

# The Psychology of **Meaning**

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American Psychological Association • Washington, DC

(2013)

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## AN EDIFICE FOR ENDURING PERSONAL VALUE: A TERROR MANAGEMENT PERSPECTIVE ON THE HUMAN QUEST FOR MULTILEVEL MEANING

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Jon Anderson and Steve Howe of the British progressive rock band Yes developed the idea that would grow into their 1973 concept album, *Tales from Topographic Oceans*, on the basis of ancient Indian Shastric scriptures about the essential elements of existence, and in effect, the meaning of life. But like any work of art, *Tales* is composed of more basic structural elements, in this case an intricately complex series of notes, rhythms, and lyrics. While the album, of course, can be enjoyed in many different ways, each approach requires the individual to parse, categorize, and organize the composition's elements at a basic perceptual level. Yet imposing such perceptual order provides no guarantee that the composition will afford a broad sense of meaning—perhaps the music makes sense and can even be experienced as enthralling, but the emergent Shastric themes may fail to speak to the person's “big picture” questions about the world and his or her place within it.

We use this example to illustrate how the meaning-making process takes place at multiple levels. The multileveled nature of meaning making is

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DOI: 10.1037/14040-003

*The Psychology of Meaning*, Keith D. Markman, Travis Proulx, and Matthew J. Lindberg (Editors)  
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apparent across many domains. People may derive a profound sense of life's meaning and purpose from close relationships, momentous life events, valued accomplishments, or spiritual encounters. We conceptualize such meanings as existing on a "macro" level, as they pertain to a broader and more encompassing view of what is important in life. But these sources of meaning are predicated on more basic conceptions of the world and one's life as orderly and predictable rather than incoherent and chaotic. People expect, for example, that when the traffic light turns red, cars will stop and they can safely cross the street (unless one is in New York City, where such assumptions are more risky). Meanings such as these reside at a more "micro" level.

Therefore, an important goal for understanding human meaning-making is to explain how (and why) meaning-making processes at both the macro and micro levels interrelate, as well as the underlying motivations they serve. With this broad goal in mind, the current chapter addresses the following questions: (a) What is meaning, and what is the connection between macro- and micro-level meanings? (b) Why do people need (these different types of) meaning? (c) How do people maintain meaning across these different levels? and (d) How does the pursuit of meaning interact with other psychological needs to influence people's social behavior? To address these questions, we adopt an existential perspective (see Chapter 23, this volume) grounded in terror management theory (TMT; Greenberg, Pyszczynski, & Solomon 1986).

## MEANING AS THE INFRASTRUCTURE FOR SUSTAINING PERSONAL VALUE

We begin with a broad definition of *meaning* as the organism's perception that its environment affords clearly defined and reliable contingencies for effective action. Any organism that actively navigates its environment relies on at least some meaning to obtain desired outcomes and to avoid undesired outcomes. For a squirrel to effectively gather food, find mates, and avoid predators, it has to perceive that trees, cats, and other environmental stimuli operate in expected ways. A definition of meaning that rests solely on expected relations, however, misses that which renders the human quest for meaning so profound and intricate. Whereas humans share the squirrel's reliance on meaning for the biological goals of survival and reproduction, they are also motivated to navigate their environment in the hopes of establishing a broader sense of effective action: to know that their identity and actions have *value*. With this psychological imperative, humans create and invest in systems of meaning that no squirrel or salamander could recognize or appreciate, namely, reliable contingencies for attaining symbolic value. Note that we are not suggesting that providing a foundation for symbolic value is the

only reason that people need or want meaning. Rather, we propose that this is one important (distal) impetus behind humans' creation of meaning systems.

We can categorize uniquely human meaning systems into macro and micro levels. At a macro level, humans create a *cultural worldview*—that is, a set of socially constructed beliefs about reality that provides an account of the origin and nature of existence. The worldview not only provides a canopy under which one makes sense of life on a grand scale, often for some higher purpose, but importantly, it also prescribes principles to live by and standards of value to attain. The individual internalizes the worldview through an immersive socialization process that reinforces prevailing norms, values, and ideals through lifelong participation in collective ceremonies, rituals, and rites of passage, and through constant engagement with cultural products that embody those ideologies. This immersion endows normally socialized individuals with a global picture of which roles, statuses, group affiliations, and accomplishments qualify them for value (and which of these have the opposite effect).

At a more micro level, people seek out well-structured perceptions of their everyday social environment. Using basic social-cognitive tendencies to process information in simple and coherent ways, people can perceive other people, events, and their own experiences as well-defined and predictable. We argue that maintaining these structured perceptions is a necessary precondition for people's efforts to maintain adequate faith in the validity of their worldview, and from there, to live up to the worldview's standards of value. For example, as Goffman (1959) so well articulated, to dependably negotiate social interactions and influence how others regard them, people have to perceive others' characteristics and behaviors as being fairly consistent from one moment to the next. Similarly, to anticipate the consequences of actions and feel secure that their life projects will unfold reliably over time, people must believe that favorable and unfavorable outcomes have clear causes and are not arbitrary or random.

Conversely, if people lacked these structured perceptions—if, for example, other people's behavior seemed contradictory or elusory, if the flow of time appeared disordered, or if events seemed haphazard—they would perceive their environment as a chaotic fantasy world in which any attempt to establish personal value (or accomplish any other goals) would be futile. This helps explain why people react defensively when confronted with even relatively minor threats to structured perceptions (e.g., encountering a red four of clubs in a deck of cards; Proulx & Heine, 2009; see also Chapter 4, this volume). Expectations about even mundane aspects of reality serve at a distal level to buttress the person's confidence that the world is a structured place where goal pursuit, and ultimately the securing of personal value, can be attained.

At a more subjective level, the more people can feel confident that their cultural worldview captures a social environment that is orderly and predictable and prescribes legitimate routes to attain value, the more they can view life as meaningful. Of course, the sense that life is meaningful need not be a radical epiphany. Much of the time people take their cultural worldview and structured social perceptions for granted. They "ride along," accepting the identities and long-term projects which are offered to them by virtue of their membership in certain social groups, and they commit themselves to the arrangements and routines of everyday life, secure in the knowledge that they are doing something significant (Berger & Luckmann, 1967).

However, because these meaning systems are essentially fictional accounts of reality built out of abstract symbols (e.g., rules) that escape empirical verification, they can be threatened by social experiences and environmental conditions, thereby putting people at risk for feelings of *meaninglessness*. For example, when people encounter followers of an alternative worldview, they may question the validity of their own worldview and its prescriptions for value ("If *others* have it right, what happens to *me*?"). Additionally, people run the risk of witnessing or falling victim to randomly occurring hazards that negate all strivings for value, or witnessing the incomprehensible prosperity of those who don't believe in or conform to one's worldview. When the environment seems to allot favorable and unfavorable outcomes to people regardless of their adherence to the worldview's prescriptions for valued action, people may have serious difficulty sustaining confidence that following those prescriptions will secure lasting value.

This brings us to an important question: If people seek meaning from the cultural worldview and their structured social perceptions for the purpose of promoting a sense of personal value (at least in part), then why, at the core, are people motivated to view themselves as valuable?

#### THE EXISTENTIAL IMPORTANCE OF FEELING VALUED

To understand why people, unlike other creatures, need to obtain symbolic perceptions of personal value—and why they create and adhere to macro- and microlevel meanings that support those perceptions—it is useful to consider the developmental trajectories by which these perceptions—and their importance—emerge. As many have noted (e.g., Becker, 1971; Bowlby, 1969; Mead, 1934), humans are thrust into a most unsettling situation at birth. They can experience tremendous amounts of distress in the presence of threats yet are profoundly defenseless against them. This condition renders the infant almost completely dependent upon primary caregivers to assuage anxiety by providing affection and protection from threats. The caregivers

also become the critical conveyors of meaning, delineating those parts of the developing child's perceptual experience that should be welcomed, anticipated, avoided, or ignored. Over the course of socialization, the child begins to form expected relationships between specific ways of behaving and the responsiveness of the care-giver to the child's needs. The result is an understanding that security and anxiety-reduction are contingent upon behaving in accord with parental standards. Thus, from very early on, the child's understanding of what things *mean* is gleaned from a conditional sense of safety and protection from harm.

This early dependency on primary caregivers for physical and psychological security sets the stage for a lifelong commitment to meaning systems and the pursuit of personal value as defined by those systems. However, with the emergence of self-awareness and other sophisticated cognitive capacities comes the distressing recognition that parental protection can do nothing to change the terrorizing fact that death is inevitable (Becker, 1973), introducing a need for a new form of psychological protection. People "solve" the problem of mortality by adhering to a cultural worldview that allows them to view their life as embedded in a symbolic reality transcending the biological reality of death. By living up to the particular standards of value prescribed by the worldview, an individual can acquire a sense of enduring significance (i.e., self-esteem) that signals that they will "live on" in either a literal sense (e.g., by means of an afterlife) or a symbolic sense (e.g., by means of remembrance of one's children, accomplishments, or group affiliations on the statues, monuments, park benches, or tombstones that pervade the cultural landscape). From this view, the lifelong struggle to attain self-esteem stems in part from the need to transcend death and thus mitigate death-related anxiety. The human quest for meaning is fundamentally influenced by a desire for clearly defined, seemingly "real" routes for obtaining lasting personal value. Thus, meaning at both a macro and micro level is, as Becker (1973) put it, "more than merely an outlook on life: it is an immortality formula" (p. 255).

Before turning to some of the many macro- and micro-level strategies through which these processes unfold, let us quickly consider the basic prediction that this analysis generates: that those without a secure investment in a worldview, a strong sense of self-esteem, or well-structured knowledge of the world will be especially vulnerable to feelings of meaninglessness when death-related thought is heightened. In support of this prediction, studies have indeed found that reminders of death decrease perceptions of life's meaningfulness among those low in self-esteem (Routledge, Ostafin, et al., 2010; Taubman-Ben-Ari, 2011) and among those lacking well-structured conceptions of the world (Vess, Routledge, Landau, & Arndt, 2009). These findings illustrate the importance of both macro- (culturally derived perceptions of value) and micro- (epistemic structure) level forms of meaning and

thus support the view that multilevel perceptions of meaning contribute to protection from the awareness of death. We turn next to research examining the connections between awareness of mortality and specific macro- and micro-level strategies for seeking and maintaining meaning.

### MACRO-LEVEL STRATEGIES FOR MAINTAINING MEANING IN THE SHADOW OF DEATH

So far we have claimed that individuals can hold thoughts of death at bay via confident perceptions that one's life is meaningful and valuable. This analysis yields several hypotheses in addition to the prediction just mentioned. One is that threats to meaning and self-esteem will increase the accessibility of death-related thought. This hypothesis has been examined in a growing set of studies that have targeted worldview-relevant beliefs pertaining to such domains as religion, nationalism, close relationships, and sexuality, as well as other social perceptions that support a sense of value or esteem (see Hayes, Schimel, Arndt, & Faucher, 2010, for a review). Using converging methods, these studies show that threatening these aspects of the worldview elevates the accessibility of death-related thought but not the accessibility of other negative cognitions, suggesting that one function of faith in the worldview is to allay concerns about death in particular.

This work then points to a second hypothesis: If faith in a cultural worldview and self-esteem buffer individuals' concerns with personal mortality, then reminding them of their own death (*mortality salience* [MS]) should increase their identification with, and propensity to defend, their cultural beliefs as well as their efforts to obtain self-worth. Hundreds of studies have tested variants on this broad hypothesis and have shown that MS indeed increases investment in multiple aspects of the cultural worldview, including one's nationality, religion, norms, and leaders (see Burke, Martens, & Faucher, 2010; Greenberg, Solomon, & Arndt, 2008, for more comprehensive coverage). For example, in the first such demonstration, Rosenblatt, Greenberg, Solomon, Pyszczynski, and Lyon (1989) showed that MS increased Christians' positivity toward fellow Christians and negativity toward Jews. The effects of MS have been conceptually replicated cross-culturally and have been shown to differ from the effects of making salient other aversive topics (e.g., intense pain) and uncertain future events. Reminders of death have also been found to instigate various forms of self-esteem striving, leading people to try to do (or at least perceive that they are doing) that which provides them with a sense of self-worth (see Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004).

The assumption of the research just discussed is that cultural systems of meaning are defended (and hold death cognitions at bay) in part because

they facilitate the perception that we live in an enduring and meaningful reality. This assumption points to an additional hypothesis that critically connects these effects more directly to perceptions of meaning: Defending or affirming one's cultural worldview after reminders of mortality should carry the existential benefit of bolstering life's perceived meaningfulness, perhaps primarily for those who suffer deficits in meaning, as well as dampening the motivation to further search for meaning.

Simon, Arndt, Greenberg, Solomon, and Pyszczynski (1998) found support for the first facet of this reasoning by exposing those with deficits in meaning, the mildly depressed, to a reminder of mortality (vs. a control topic) and an opportunity (vs. no opportunity) to defend their nationalistic worldview. Depressed individuals not only defended their worldview with particular vigor after MS, but if they were given an opportunity to do so, they reported increased perceptions of meaning in life, suggesting that such defense helped to reengage them in a worldview that provides a canopy of meaning. More recently, Vess, Arndt, Routledge, and Goldenberg (2009) explored the second facet of the reasoning noted above. They showed that giving religious fundamentalists the opportunity to affirm their faith after MS, in this case by advocating for the efficacy of prayer in place of medical intervention for illness, subsequently led to decreased motivation to search for meaning. This suggests that the affirmation of their worldview had sated their thirst for meaning.

#### MICRO-LEVEL STRATEGIES FOR MAINTAINING MEANING IN THE SHADOW OF DEATH

The studies reviewed in the previous section point to the connection between awareness of death and macro-level meanings defined by one's cultural worldview, such as cultural norms and religious beliefs, which provide the scaffolding for attaining personal value. If, as we claim, faith in the worldview rests on more basic or nonspecific conceptions that the world is a structured place, then MS should also increase people's preference for well-structured interpretations of the people, events, and experiences that make up their social world. Accordingly, a large body of experimental research shows that MS increases the use of social-cognitive processes oriented toward simplicity, clarity, and order.

Consider terror management research on basic dissonance-reducing strategies. As Heider (1958) and Festinger (1957) observed, making sense of other people and the self requires the person to resolve mental conflicts and preserve consistency between cognitions. According to TMT, the penchant for cognitive consistency is not simply a built-in feature of our cognitive



system. Rather, it is motivated in part by the underlying need to mitigate mortality concerns. A world in which people and the self act in consistent ways is a world that can be reliably negotiated in an effort to make one's lasting mark, whereas an ambiguous world of conflicting information affords few reliable opportunities for establishing a sense of personal value.

This general line of reasoning led researchers to test whether MS motivates people to maintain consistency between their cognitions and behaviors (Friedman & Arndt, 2005; Jonas, Greenberg, & Frey, 2003). Friedman and Arndt (2005), for example, replicated a traditional dissonance effect in finding that participants who freely chose to write a counterattitudinal statement reported more positive attitudes toward a boring passage compared with participants who were forced to write the statement, presumably bringing their attitudes in line with their behavior. Importantly, participants who had been previously primed with mortality reported even stronger liking for the passage, suggesting that they were especially motivated to reduce dissonance. These findings illustrate how terror management motivation drives people to maintain consistency in even non-specific ways because stating that a boring passage was interesting did not pose an explicit threat to any specific aspect of the participants' cultural worldview.

Of course, some people have a high dispositional preference for well-structured knowledge. Individuals high in *need for closure* (NFC; Kruglanski, Webster, & Klem, 1993) and *personal need for structure* (PNS; Thompson, Naccarato, Parker, & Moskowitz, 2001) are particularly inclined to seek simple and clear interpretations of social information and to respond aversely to complexity and ambiguity. Individuals low in dispositional structure-seeking are, on the other hand, more comfortable with ambiguous, complex, or inconsistent information. How can we account for individual differences in structure-seeking from a TMT perspective? Solomon, Greenberg, and Pyszczynski (1991) argued that each person clings to an individualized worldview for psychological security, and differences in personality traits can reflect different sources of security-providing meaning. Thus, certain people may be especially likely to invest in well-structured conceptions of the world as a preferred means of managing terror, whereas others (i.e., low structure-seeking individuals) may be more comfortable with, and perhaps derive meaning from, epistemic openness and novelty (we revisit this latter possibility below). This suggests that individual difference constructs like NFC and PNS can be useful for predicting the types of people who are especially likely to respond to MS with increased preference for well-structured interpretations of social information.

Accordingly, research shows that MS leads individuals high in PNS, but not those low in PNS, to do the following: seek simple and consistent interpretations of other people; view social events as following a just and

benevolent order; prefer order over chaos in visual stimuli; clearly define their personal characteristics and coherently organize their personal experiences, activities, and goals (e.g., Landau, Greenberg, Solomon, Pyszczynski, and Martens, 2006; Landau, Greenberg, Sullivan, Routledge, & Arndt, 2009; Landau et al., 2004). A full review of this work is beyond this chapter's scope (for a more complete presentation, see Greenberg, Landau, Arndt, in press), but let's take look at one line of research.

As noted earlier, the belief that social events follow a just and benevolent order constitutes a fundamental building block of terror-assuaging meaning. If people perceived that randomly occurring hazards could negate all their strivings for value, then they would have difficulty sustaining confidence that following the worldview's prescriptions for value will facilitate their death transcendence. This suggests that MS will increase people's tendency to construe social events as following a just and benevolent order, especially if they are dispositionally inclined to prefer structured knowledge. As one manifestation of this tendency, when people encounter information implying that the world is not just, they often restore justice by convincing themselves that the victims of misfortune deserved what happened to them (Lerner, 1980). Landau et al. (2004) showed that MS increased this victim-blaming tendency, especially among high structure-seeking individuals. For example, in one study, participants who had been reminded of death showed an increased preference for negative over positive information about a victim of a senseless tragedy, presumably in an effort to restore just world beliefs, but this effect held only for high-PNS participants.

In a follow-up study, Landau et al. (2004) tested whether presenting participants with information suggesting that victims of tragedy are actually good people would weaken participants' secure conception of events and therefore unleash mortality concerns. This hypothesis was based on the large body of research, noted earlier, showing that threatening meaning structures increases death-thought accessibility. As predicted, high-PNS participants who read positive (but not negative) information about the victim of a tragedy exhibited heightened death-thought accessibility, whereas low-PNS participants did not (see also Hirschberger, 2006).

## PERCEPTUAL SHIFTS AND THE EXTRACTION OF MEANING

Seeing events as connected to a just and benevolent order is one example of a process that involves perceiving events not as isolated acts but rather as connected to the broader scheme of how the world operates. This suggests that mortality reminders will motivate people to adjust their view of even mundane actions and objects because the opportunity for death-transcending

value rests on the ability to view these objects and events in terms of how they fit into the bigger picture.

Emerging research has begun to demonstrate how mortality awareness can lead people to shift from viewing the world in local, detail-oriented ways to viewing it in more global or abstract ways (e.g., Landau, Kosloff, & Schmeichel, 2011; Vail, Vess, & Arndt, 2011). To preface an example of this work, keep in mind that extensive research shows that conscious thoughts of death instigate efforts to remove those thoughts from focal awareness and that terror management motives to seek meaning and self-esteem occur when death thought is cognitively accessible but outside of conscious awareness (see, e.g., Goldenberg & Arndt, 2008). Indeed, in all the previously noted effects, death reminders affected meaning-seeking strategies after a distracting exercise designed to remove death thought from focal awareness. As such, Vail, Vess, and Arndt (2011) also reasoned that the shift in perceptual construal from local to global would occur when death-related thought is active but outside of focal awareness.

Thus, Vail, Vess, and Arndt (2011) reminded participants of death or a control topic and then, either immediately or after a delay, presented them with a series of everyday behaviors that were taken from Vallacher and Wegner's (1989) measure of action identification. Participants were asked to decide whether a detail-oriented or an abstract description best fit each behavior (e.g., do they view "locking a door" as inserting a key in a lock [detail oriented] or as securing one's house [abstract]?). The results indicated that, immediately after MS, there was no difference in participants' preferred level of construal. After a delay, however, MS led participants to make more abstract (vs. detail-oriented) descriptions of the behaviors. This research helps demonstrate the role of cognitive construals in the perception of one's actions as meaningful. Even mundane behaviors, such as caring for one's houseplants, would be existentially meaningless if merely viewed as the physical act of pouring water in some soil. But when such actions are identified as an opportunity to make one's home look nice and inviting to others, the individual becomes perceptually ready to pursue a death-denying sense of value according to his or her broader, more abstract system of meaning.

In addition to abstract construals of actions, the perception of our surroundings as composed of purpose-oriented items reinforces micro-level meaning by perceptually organizing otherwise unrelated aspects of one's environment. Consider, for example, teleological reasoning—the belief that things exist for an ultimate purpose. The present analysis predicts that reminders of mortality should intensify such beliefs, and indeed, Davis, Juhl, and Routledge (2011) showed that MS increased belief in teleological statements, even when those teleological statements were scientifically unfounded (e.g., that the earth developed an ozone layer *in order to* protect life from harmful ultraviolet radiation).

Similar efforts to maintain abstract and purposeful construals appear to drive people to seek out more integrative conceptions of how their past experiences relate to their current self as a means of clarifying what they have become in time. In one recent study exploring this idea (Landau et al., 2011), when participants contemplated ways that their own important past experiences (vs. those of others) could have turned out differently, MS increased the perception that they would be very different people, suggesting that they perceived their past experiences as significantly shaping who they are. By a similar token, people who are more prone to nostalgic reflection tend to view the past as more significant rather than pointless, which helps them stave off death-related cognition and anxiety, and preserves their sense of meaning in life (Juhl, Routledge, Arndt, Sedikides, & Wildschut, 2010; Routledge, Arndt, Sedikides, & Wildschut, 2008).

This analysis extends to inform people's perceptions of their futures as well. Clearly, people's ability to perceive themselves, and their way of life, as progressing toward collective ambitions and personal goals bears a significant consequence for their opportunity to maintain a satisfactory sense of worth. If they are *not* able to see a meaningful way to progress toward these aspirations, then they would essentially be left to wallow in a sea of meaningless action with little hope to achieve future success. Consistent with this reasoning, MS makes people more likely to perceive that their daily activities are substantively performed in the service of their long-term life goals (Landau et al., 2011). Related findings show that, at least among Westerners (though possibly others), heightened faith in the continued trajectory of human progress and improvement into the indefinite future—a view that fundamentally rests upon the expectation that people are capable of meaningfully impacting their futures—helped buffer mortality concerns (Rutjens, van der Pligt, & van Harreveld, 2009).

Together, this research suggests that existential concerns motivate people to construe the world in meaningful ways, from reorienting themselves toward more abstract or purposeful construals of basic actions, objects, and phenomena, to enhancing the perception that one's personal past, present, and future experiences are substantively connected across time. But more broadly, this suggests that people maintain a basic perception of meaning to help manage the awareness of death.

## IMPLICATIONS FOR THE INTERPLAY BETWEEN THE STRIVINGS FOR MEANING AND SELF-ESTEEM

This analysis allows for a nuanced and generative consideration of the dynamics that exist between people's strivings for meaning and self-esteem. Again, we argue that security in the face of awareness of mortality is based

on the perception that one is satisfying the prescriptions of value which are designated by the worldview. This suggests that for self-esteem to effectively serve an anxiety-buffering function, the standards from which it is derived must be perceived as legitimate and important.

Arndt and Greenberg (1999) directly assessed this possibility. They reasoned that if the power of a self-esteem boost to buffer mortality concerns rests on the perception that the relevant standards are legitimate, then a self-esteem boost based on dubious standards will be less effective at buffering mortality concerns and therefore will not reduce MS-induced worldview defense. Supporting this reasoning, after MS, American participants who received neutral feedback about their personality derogated a target who criticized the United States, but not if they had received positive feedback about either their relationship skills or their academic performance within their academic major (thus conceptually replicating Harmon-Jones et al., 1997). However, if the target criticized the academic major itself, participants who received positive feedback about their academic performance continued to derogate the anti-major target. This suggests that even positive feedback on one's performance in a domain loses its capacity to buffer against mortality concerns if the standards on which that feedback is based are discredited.

The current analysis is also relevant for understanding how people react when their strivings for meaning and self-esteem pull them in opposing directions. While meaning and self-esteem normally act in concert to assuage mortality concerns, there are interesting situations in which enhancing self-esteem threatens to undermine faith in the worldview. We can imagine, for example, a scientist on the verge of a breakthrough discovery, or a young adult who makes an apple pie that rivals the one her extended family has made for generations. These individuals might feel ambivalent about, on the one hand, gaining validation for their talent and creativity and, on the other, discrediting the very belief systems that formally kept their world intact. Will they choose to self-enhance regardless of its consequences for the worldview, or will they put the brakes on their self-enhancement?

Our analysis suggests that the worldview is generally the more fundamental basis of security because self-esteem is predicated on meeting the worldview's standards of personal value. A threat to the worldview necessarily entails a threat to the standards of value upon which people stake their self-esteem (Arndt & Greenberg, 1999). However, discounting self-esteem-bolstering accomplishments does not reciprocally entail a worldview threat. This suggests that when faced with a conflict, people will typically opt to preserve faith in the worldview and temper their self-esteem strivings.

Supporting this reasoning, Landau, Greenberg, and Sullivan (2008) showed that MS led people to forego opportunities to bolster or defend self-esteem when doing so would threaten the status or credibility of revered,

worldview-representative authorities. Specifically, mortality salient participants discounted the validity of self-esteem bolstering feedback when they were led to believe that institutional authorities dismissed the feedback as bogus, while, conversely, they were reluctant to discount the validity of self-esteem threatening feedback that was ostensibly sanctioned by institutional experts. MS also led participants to rate themselves higher on a valued dimension after rating a close friend who excels on that dimension, but not if people first rated a parent who excels on that dimension. Similarly, MS led participants to judge feedback that they surpassed a current political figure as more valid but feedback that they surpassed a canonical cultural figure as less valid. These findings suggest that heightening mortality concerns generally increases self-enhancement but also increases reluctance to self-enhance when doing so would challenge important aspects of the individual's meaning-providing worldview.

#### MANAGING TERROR AND FINDING MEANING IN A LESS RIGID FASHION

As the foregoing review has shown, the need to quell existentially distressing concerns about mortality can ultimately give rise to an intensely rigid reliance on existing knowledge about the world. This reliance can manifest itself in a variety of ways, unfortunately often implicating socially maladaptive outcomes ranging from intergroup prejudice (Rosenblatt et al., 1989) to victim derogation (Landau et al., 2004). At the same time, affirming the integrity of macrolevel sources of meaning (i.e., cultural worldview) and possessing coherently structured microlevel foundations of meaning (i.e., basic structure) both contribute to elevated meaning perceptions in the face of mortality concerns (e.g., Vess, Arndt, et al., 2009). This brings us to a crossroad, both in terms of this chapter and the current state of terror management research. Is it the case that all terror management efforts to maintain a sense of meaning require rigidity and must foster socially and individually adverse consequences? We propose this need not be the case. Although sustaining identification with less rigid beliefs may be quite challenging in light of the tolerance for ambiguity they require, embracing cultural diversity, novelty, and growth-oriented engagements with the world has the potential to contribute to perceptions of meaning and help alleviate existential distress. An exciting direction for the next generation of terror management research is to examine the factors that make it possible for people to manage mortality concerns in a less rigid and dogmatic fashion.

Initial insights in this vein come from examining links between mortality concerns, need for simple structure, and reliance on clear interpretations

of the world. Given the openness to novelty and tolerance for ambiguity that is characteristic of low-PNS individuals (e.g., Neuberg & Newsom, 1993), Vess, Routledge, et al. (2009) hypothesized that these individuals will show a marked willingness to engage in novel exploration as a way of dealing with mortality concerns. Accordingly, low-PNS participants scored higher on an exploration scale and expressed more interest in countercultural information following reminders of death (see also, Routledge, Juhl, & Vess, 2010). Critically, Vess, Routledge, et al. (2009) also found that these explorative responses did in fact restore meaning for low-PNS individuals when death was salient. Thus, while considerable work has revealed many dogmatic responses to death-related thought, there is optimistic evidence that low levels of dispositional structure-seeking predict more growth-oriented ways of maintaining a buffer of meaning against the threat of death.

Open-mindedness or exploration might also stem, in part, from one's degree of faith in salient sets of beliefs. In this respect, the religious domain offers an occasion to examine how death awareness might influence dogmatic responses when the opportunity for worldview-consistent terror management is available (e.g., among the religious) but also how it might encourage the exploration or contemplation of other meaning structures when such available beliefs are not applicable for terror management purposes (e.g., among atheists). For many, belief in supernatural agents and afterlife can be quite a handy, and potent, defense against existential concerns (Norenzayan & Hansen, 2006). For the religious, then, MS should inspire greater faith and ideological rigidity. For atheists, however, the inapplicability of such beliefs may result in the need to seek out and explore other potential avenues for extracting meaning after death reminders. Indeed, in a recent series of studies, Vail, Arndt, and Abdollahi (in press) found that after being reminded of death, Christians and Muslims each boosted faith in their worldview-consistent deity (i.e., God and Allah, respectively) and reduced faith in their respective worldview-inconsistent deities, but atheists showed a floor effect on all supernatural beliefs. Importantly, in another series of studies, death reminders increased Christians' faith in religion, which in turn led to an increase in dogmatic belief style and decrease in need for cognition (Vail, Arndt, Sheldon, & Ferguson, 2011). In contrast, death reminders reduced atheists' faith in religion, leading to a decrease in their dogmatic belief style and an increase in their need for cognition.

These studies suggest that although firm adherence to a particular ideology can protect against mortality concerns, a willingness to explore ideas may serve a similar function when that particular ideology is less applicable to the individual's worldview. The capacity of a given belief to provide a sense of existential meaning may be what renders that belief more appealing when faced with awareness of death. This may help to explain why Tracy, Hart, and

Martens (2011) recently found that although reminders of death generally increased people's acceptance of intelligent design theory and decreased their acceptance of evolutionary theory, these effects were reversed when naturalism was portrayed as a source of existential meaning.

More broadly, it is critical for future research to continue to explore strategies that facilitate a more open-minded and less defensive orientation to viewing life as meaningful in light of the human existential predicament. Said differently, how can meaning be achieved while, as Becker (1971) questioned, imposing the least harm on those outside the culture and future generations? Although this is an important research agenda to occupy the next generation of inquiry, there already exist some promising lines of work.

One possibility stems from the capacity for creative integration of new information and experiences with existing psychological structures and, in so doing, fashioning a more self-determined sense of meaning. Although often eschewed for dogmatic reliance on what is expected, the possibility of departing from the known makes it possible to create a relatively autonomous constellation of meaning structures that would share many of the features so well articulated in self-determination theory research (e.g., Ryan & Deci, 2000). Perhaps such a constitution could provide expectations and standards that control anxiety and provide for a more open-minded approach to extracting meaning from life. There are a few encouraging findings in this vein. When the cultural value of creativity was primed, participants reminded of mortality expressed more interest in novel social, cultural, and environmental experiences (Routledge & Arndt, 2009). Further, as noted, Vess, Routledge, et al. (2009) demonstrated that giving low-PNS individuals the opportunity to explore alternative cultural perspectives boosted their perceived meaning in life after MS. And finally, Vail, Arndt, and Pope (2011) demonstrated that people can use the basic nutrients of self-determination (needs for autonomy, competence, and relatedness) as a resource for managing the awareness of mortality and facilitating less defensive responses (see also Niemiec et al., 2010).

This possibility of using open-minded thinking to maintain meaning and thus alleviate existential fear is further bolstered by findings concerning the flexibility of the terror management system to rely on situationally salient values and norms (e.g., Jonas et al., 2008). Many belief systems contain prescriptions that encourage tolerance of deviant others, for example, as values to enrich a meaningful life. It may be useful to bring these tenets to the fore as a way of fostering less dogmatic and harmful responses to those outside the conventional belief system. The promise of such an approach can be seen in studies where people encouraged to reconceptualize the nature of ingroup identifications to emphasize their common humanity with different others respond to reminders of mortality with less outgroup derogation (see Pyszczynski, Rothschild, & Abdollah, 2008). Yet another potential



direction stems from work suggesting that deeper conscious recognition of mortality can foster greater attention to intrinsic values, which have been found to be a potent contributor to eudemonic well-being. Drawing from the posttraumatic growth literature, studies indicate that a more open and in-depth confrontation with the idea of life's finality can inspire greater attention to self-transcendent values and goals (e.g., Cozzolino, Staples, Meyers, & Samboceti, 2004; Lykins, Segerstrom, Averill, Evans, & Kemeny, 2007). Of course, it is probably difficult to maintain this perspective. Maintaining focus on thoughts of death—particularly in the depth required to foster this orientation—would likely interfere with other endeavors, the business of living as it were, that allows us to experience the routine events and momentous occasions that help to produce a sense of meaning and purpose. And what happens when such ideation fades from conscious attention? Research shows that whereas conscious thoughts of death engender immediate derogation of extrinsic goals, the delayed effect of nonconscious thoughts of death is an inflation of the importance of extrinsic goals (Kosloff & Greenberg, 2009). Still, the possible benefits of a more honest acknowledgement of life's transience are worth exploring.

## CONCLUSION: DEATH AS A CATALYST TOWARD MEANING

The available research on manipulating thoughts of death relative to other threats, and the research measuring patterns of death-thought accessibility, as well as the historical record, suggest that death awareness plays a unique role in the development and maintenance of meaning structures. Of course, a number of other threats can, and obviously do, lead to a greater need for meaning as well. The issue, therefore, is not to examine which threat underlies all defensive meaning preferences, but rather to explore and understand the differential influences of these various threats—when and how might they alter individuals' efforts to bolster and defend meaning—and what the influence of those threats ultimately tells us about what people really need. To the extent that meaning reflects, in part, the perception of a network of expected relations that guide one's value-seeking efforts, TMT is able to offer unique and coherent insights into the need for meaning as ultimately reflecting the perception of a clear path toward securing personal value and, thus, symbolically transcending death. This explanation can help us understand why some meanings are more central to guiding one's efforts to accrue value than others, and when.

In this light, it makes sense that departures toward the absurd motivate efforts to reinstate one's sense of meaning (e.g., Proulx & Heine, 2009). A person with an apple as a face, or a red card that was expected to have

appeared black, clearly signals a violation of one's broad rule-based system of meaning, but demonstrating such tells us little about why, at a deeper level, people need to see meaning in their lives. Even a child playing a board game knows that without at least some basic rules, there is no way to earn the glory of victory; and by the same token, she also knows that when she is not playing the game, the rules of the game are completely irrelevant. That is, meaning structures are not important for their own sake. Rather, life's basic rules help map out the consequences of our thoughts and behaviors in predictable ways, allowing us to *meaningfully* direct our attitudes and actions in ways that will help us transcend death (i.e., "beat the game"). Transcending death means being good, and ways of being good cannot even be imagined without a stable, structured system of meaning.

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