

## Fleeing the Body: A Terror Management Perspective on the Problem of Human Corporeality

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*From the perspective of terror management theory, the human body is problematic because it serves as a perpetual reminder of the inevitability of death. Human beings confront this problem through the development of cultural worldviews that imbue reality—and the body as part of that reality—with abstract symbolic meaning. This fanciful flight from death is in turn the psychological impetus for distancing from other animals and the need to regulate behaviors that remind us of our physical nature. This analysis is applied to questions concerning why people are embarrassed and disgusted by their bodies' functions; why sex is such a common source of problems, difficulties, regulations, and ritualizations; why sex tends to be associated with romantic love; and why cultures value physical attractiveness and objectify women. This article then briefly considers implications of this analysis for understanding psychological problems related to the physical body and cultural variations in the need to separate oneself from the natural world.*

When the woman saw that the fruit of the tree was good for food and pleasing to the eye, and also desirable for gaining wisdom, she took some and ate it. She also gave some to her husband, who was with her, and he ate it. Then the eyes of both of them were opened, and they realized they were naked; so they sewed fig leaves together and made covering for themselves.

—Gen. 3:6–7 (New International Version)

Why is the human body so often a source of shame, anxiety, disgust, and other difficulties? Why do we work so hard to transform our bodies into something other than what they are? Our bodies are almost always subject to rules prescribing proper ways of hiding and decorating them, such as wearing a fig leaf, brightly colored feathers, or the latest designer fashions. Radical alteration of the body is popular around the globe, whether this involves piercing one's ear or tongue, removal of

some portion of the male or female genitalia, or plastic surgery to change the shape of one's nose or the size of one's breasts. Restrictions are placed on where and how certain bodily functions, such as sexual and bathroom behavior, should be performed, and in most "civilized" cultures, these acts are a source of shame and embarrassment as well as humor. Those who do not conform to societal standards and rules for the body are subject to anxiety, shame, derogation, and ridicule.

In this article, we present a theoretical perspective on the problem of the human body rooted in terror management theory (TMT; Greenberg, Pyszczynski, & Solomon, 1986). TMT was developed not to fully explain any particular type of human behavior but rather to contribute to a full understanding of a wide range of human behaviors that are influenced by the uniquely human knowledge of mortality. Although behavior regarding the body has not been the focus of research on terror management until recently, such behavior seems particularly likely to be affected by terror management needs. Indeed, we suggest that a wide range of both normal and abnormal human behavior can be better understood by recognizing that body-related problems stem in part from the anxiety engen-

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dered by the human knowledge that the body is the vehicle through which life passes unto death.

Although it is eminently reasonable for a concern with death to lead people to engage in behavior aimed at preserving their bodies' physical health, and people certainly do often strive to maintain their health, they typically seem more preoccupied with concerns about how their bodies look, smell, perform, and compare with cultural standards. Following theorists such as Freud (1920/1989), Rank (1930/1998), Brown (1959), and Becker (1973, 1975), we argue that meeting cultural standards concerning the body separates humankind from the rest of the animal kingdom, to elevate our bodies from their flesh and bones reality to a higher plane as objects of beauty, dignity, and even spirituality.

Based on this analysis, we offer answers to the following questions: (a) Why is the body so often a source of distress and disgust but also self-esteem and pride?; (b) Why is human sexuality so often associated with anxiety, romanticism, and spirituality, not to mention its more bizarre manifestations?; (c) Why do all cultures place great value on physical appearance, especially the physical appearance of women?; and (d) In general, why are all cultures compelled to regulate the human body? We review empirical evidence relevant to each question and then suggest directions for further theoretical development and research.

### TMT

TMT is based on cultural anthropologist Ernest Becker's (1971, 1973, 1975) analysis of culture and self-esteem, which was a synthesis of the theorizing of many scholars, most notably Soren Kierkegaard (1849/1954), Otto Rank (1930/1998), Gregory Zilboorg (1943), and Norman Brown (1959). According to Becker (1973), our species faces a unique existential dilemma: On one hand, we are animals with a deeply rooted instinct for self-preservation; on the other, we are intelligent beings with sophisticated cognitive abilities that are immensely adaptive but also render us aware of the inevitability of our own death. Not only is death certain, it can come at any time and can result from any number of unpleasant causes; at any moment we may crash our car, fall victim to violence, or discover that fatal tumor. Thus, we humans are aware that our most basic desire for continued life inevitably will be thwarted. Becker (1973) argued that individual members of our species would be paralyzed with terror unless we developed some means of managing this problem.

TMT posits that humankind uses the same unique cognitive capacities that give rise to the potential for terror to construct means of managing this terror through the development of death-denying cultural belief systems. Cultures provide a shared conception of reality

that gives structure and meaning to the lives of its constituents (Berger & Luckmann, 1967). Cultural worldviews assuage the terror associated with the fear of death by providing answers to fundamental cosmological questions such as How did I get here?, How should I live my life?, and What happens after I die?, structuring perceptions of reality (e.g., clocks, calendars, tarot cards, and horoscopes), and providing standards through which individuals and their behavior can be evaluated and perceived as meaningful and valuable.

Individuals are rewarded for meeting cultural standards of value with a sense of symbolic immortality, that is, the feeling that they are valuable members of something meaningful, important, and longer lasting than their individual lives. In most cultures, living up to the prescribed standards also carries the promise of literal immortality through concepts such as heaven, reincarnation, or nirvana. Self-esteem, according to this analysis, is the sense that one is a valuable participant in a meaningful and eternal reality, and self-esteem is attained to the extent that one believes that one is successfully meeting the standards of value of one's culture. According to TMT, cultural worldviews and self-esteem provide an anxiety buffer that protects us from deeply rooted existential fears surrounding our vulnerability and mortality.

Because self-esteem is based on the standards of value espoused by one's culture, it can buffer anxiety only if faith in a meaningful cultural worldview is sustained. Because all worldviews are, to some extent, arbitrary humanly created social constructions, their perceived validity is tenuous and requires continuous validation from others (e.g., Berger & Luckmann, 1967). Consequently, people are highly vested in getting feedback from others that validates their belief in the absolute validity of their cultural worldviews and their belief that they are living up to the standards of value that are part of their worldviews.

The terror management defenses of maintaining faith in one's cultural worldview and the belief that one is successfully meeting the standards of that worldview bear no obvious semantic or logical connection to the problem of death. Death is an inescapable reality, regardless of how correct our conception of reality is or how valuable we are either as individuals or as members of groups. Self-esteem and cultural worldviews serve their anxiety-buffering function by virtue of experiential linkages established very early in life between meaning and value on the one hand and safety and security on the other. In short, as children, we learn to control our distress and anxieties by embedding ourselves in the symbolic reality conveyed by our parents and other cultural agents and by meeting standards of value that garner love, support, and protection from them (for a more elaborate depiction of this process, see Solomon, Greenberg, & Pyszczynski, 1991).

People also employ a variety of more rational, threat-focused defenses to protect themselves against their death-related fears by either pushing the problem of death into the distant future through various rationalizing strategies (e.g., I do not smoke all that much or I am quitting smoking next week) or simply avoiding or suppressing death-related thoughts. We refer to these threat-focused defenses as *proximal defenses* because they bear a close logical relation to the problem of death. In contrast, we refer to the terror management defenses of self-esteem and faith in one's cultural worldview as *distal defenses* because their connection to the problem of death is more remote and less rational.

### **Empirical Support for TMT**

The majority of the empirical research supporting TMT has been focused on two central hypotheses. The mortality salience hypothesis states that if a psychological structure (i.e., worldview or self-esteem) provides protection from mortality concerns, then reminding people of death should increase their need for that structure. In support of this reasoning, empirical research conducted in seven countries and consisting of more than 75 studies has shown that reminding people of their own death leads them to cling more tenaciously to, and increases their defense of, their cultural worldviews.<sup>1</sup> Mortality salience has been shown to have several outcomes: more positive evaluations of in-group members and those who praise one's culture, and more negative evaluations of out-group members and those who criticize one's culture (e.g., Greenberg et al., 1990); behavioral approach of in-group members and avoidance of out-group members (Ochsmann & Mathy, 1994); increased estimates of social consensus for one's attitudes (Pyszczynski et al., 1996; Simon et al., 1997); harsher punishment for moral transgressors (Florian & Mikulincer, 1997; Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989); and increased aggression against those who challenge one's beliefs (McGregor et al., 1998). Research has also shown that after exposure to mortality salience, participants conform more to recently primed cultural standards (Greenberg, Simon, Pyszczynski, Solomon, & Chatel, 1992) and are more reluctant to violate cultural standards and experience greater distress when

they do so (Greenberg, Porteus, Simon, Pyszczynski, & Solomon, 1995).

Mortality salience has been operationalized with paper and pencil manipulations, usually two open-ended questions asking participants to contemplate their own mortality (e.g., Rosenblatt et al., 1989), but also with fear of death scales (e.g., Greenberg, Simon, et al., 1995), filmed footage of fatal accidents (Nelson, Moore, Olivetti, & Scott, 1997), proximity to a funeral home (Pyszczynski et al., 1996), and subliminal death primes (Arndt, Greenberg, Pyszczynski, & Solomon, 1997). Moreover, research on terror management processes has shown that the effects of mortality salience are unique to thoughts about death. Thoughts of intense physical pain, social exclusion, meaninglessness, failing an important exam, giving a speech in front of a large audience, paralysis, the death of a loved one, and even an actual failure experience do not produce defensive reactions parallel to reminders of one's own death (e.g., Baldwin & Wesley, 1996; Greenberg, Pyszczynski, Solomon, Simon, & Breus, 1994; Greenberg, Simon, et al., 1995; Rosenblatt et al., 1989). Overall, the mortality salience research strongly supports the notion that concerns about death influence a wide range of behaviors directed toward sustaining faith in one's worldview and belief in one's worth in the context of that worldview.

The second central terror management hypothesis, the anxiety buffer, states that if a psychological structure (i.e., worldview or self-esteem) provides protection from mortality concerns, then strengthening that structure should reduce anxiety in response to stress and specific reminders of death. In support of this hypothesis, momentarily enhanced or dispositionally high self-esteem has been shown to reduce self-reported anxiety after watching a gory video (see Study 1 of Greenberg, Solomon, et al., 1992), physiological arousal while anticipating electrical shocks (see Study 2 and Study 3 of Greenberg, Solomon, et al., 1992), and defensive distortions to deny one's likelihood of early death (Greenberg et al., 1993). In addition, Harmon-Jones et al. (1997) found that high self-esteem reduced the effects of mortality salience on defense of the cultural worldview. These studies demonstrate the general anxiety-buffering function of self-esteem, as well as the specific role of high self-esteem in quelling concerns about death.

Pyszczynski, Greenberg, and Solomon (1999) recently reviewed a broad range of evidence showing that whereas proximal defenses, involving suppression of death-related thoughts and relatively rational denial of one's vulnerability, are employed when thoughts of death are in current focal attention, distal defenses, involving strivings for self-esteem and faith in one's worldview, are employed when the problem of death is on the fringes of consciousness, that is, when death-related thoughts are highly accessible but outside of current consciousness. Consistent with this view, research

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<sup>1</sup>In a typical mortality salience study, participants fill out an open-ended questionnaire asking them to "briefly describe the thoughts and feelings that the thought of your own death arouses in you" and to "jot down, as specifically as possible, what you think will happen to you as you physically die and once you are physically dead"; control participants respond to parallel questions about a neutral topic or an anxiety-provoking topic unrelated to death. After a short delay, participants are then exposed to information that either supports or challenges some aspect of their cultural worldview, and their response to this information is assessed.

shows that proximal defenses emerge immediately after reminders of mortality and are eliminated by delays or distractions (Greenberg, Arndt, Simon, Pyszczynski, & Solomon, 2000) and that distal defenses emerge when there is a delay between reminders of mortality and assessment of defense, after subliminal reminders of death, and whenever death-related thought is highly accessible but outside current focal attention (e.g., Arndt, Greenberg, Pyszczynski, et al., 1997; Arndt, Greenberg, Solomon, Pyszczynski, & Simon, 1997; Greenberg et al., 1994, 2000).

### The Body Problem

Because it is subject to death and decay, the human body plays a central role in TMT as well as in the existential psychoanalytic writings from which TMT was derived. The terror management solution to the problem of death is to live our lives on an abstract symbolic plane: We cope with the threat of death by embedding ourselves in a meaningful culture and living up to the culture's standards. In this way, we elevate ourselves above the rest of the animal kingdom. But how do we cope with our physical bodies, the part of ourselves that is absolutely certain to die and decay?

The relation between the mind and the body, the soul and the flesh, is an ancient topic in philosophy, dating back at least to Plato (trans. 1952). René Descartes's (trans. 1973) well-known *dualism*, which posited that mind and body are distinct entities that operate according to distinct principles, followed in the time-honored tradition of separating our mental and physical natures. The problem of our corporeality was certainly of concern to Soren Kierkegaard (1849/1954), who, by positing that the fundamental human paradox is that we are finite (i.e., embodied) creatures able to (by virtue of consciousness) fathom the infinite (necessarily sans ourselves at some point), set the stage for the development of modern existential philosophy.

Biologists also have long focused on the human body and its relation to the bodies of other animals. Without doubt, one of the most important and controversial aspects of Darwin's (1859) theory of evolution by natural selection was his plausible explanation for how humans evolved as a species of animals from primate ancestors. The devastating implication of Darwin's theory is fathomed readily even by those with little or no understanding of the theory itself: If we are animals, with origins similar to the origins of all other animals, then there is no more reason to posit a soul, spirit, or divine origin and destiny for us than there is to posit such things for the barnacles so assiduously studied by Darwin, or for the single-celled organism that presumably was the ancient ancestor of all life.

Within the field of psychology, Sigmund Freud (1920/1989) built his psychoanalytic theory on the

foundation provided by Darwin. Freud (1927/1962) recognized that humans were animals and that their fundamental psychological concerns, therefore, were derived from the basic needs of an animal: "The ego is first and foremost a body-ego" (p. 16). For Freud (1930/1961), the fundamental psychological dynamic was the individual's struggle to develop a workable compromise between these animal needs and the restraints placed on the individual by the culture and its agents.<sup>2</sup> According to Freud (1920/1989), the fear of castration by the father motivates the male child's most crucial repression of natural animal urges and the internalization of cultural mores. These animal drives are then displaced onto appropriate objects and sublimated into culturally acceptable activities. From Freud's perspective (1920/1989), then, the ascension of the symbolic over the material and the internalization of cultural rules over the body are motivated by fear of retribution for those natural urges by agents of the culture.

Otto Rank (1930/1998) viewed the fears motivating socialization as a natural inherent consequence of the realities of existence rather than a consequence of culturally imposed threats. With this departure as a starting point, Rank was the disciple of Freud who took psychoanalytic thought in an existential direction—and provided the foundation for Brown (1959), Becker (1973), and TMT. Rank proposed that the cultural efforts to transform our animal needs into symbolic concerns stemmed not from a need for social order but from a need to cope with the fear of death. Rank argued that the evolution of consciousness and symbolic thought afforded our ancestors a linear, temporal framework for conceptualizing reality, which, in conjunction with a capacity for self-awareness, led to the awareness of our own mortality. The human capacity for symbolic, temporal thought was used to develop cultural worldviews that would, at least in part, enable people to deny this terrifying prospect.

However, although our symbolic identity assures us that we somehow stand above the crude natural world, our bodies constantly remind us of our physical limitations. As Becker (1973) so boldly summated, we are "gods with anuses" (p. 51), and it is this paradox that makes the body such a problem. Our central thesis in this article, then, is that the body is a problem for humans because it reminds us of our similarity to other animals, which is threatening because it makes apparent our vulnerability to death.

Just as beliefs about life after death play an important role in setting guidelines for the attainment of lit-

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<sup>2</sup>Brown (1959) argued that in his later writings, Freud moved to a position closer to the existential one advocated in this article; thus, the description of Freud's analysis is based on his early work, which set the foundation for orthodox Freudian psychoanalysis.

eral immortality, rules regulating the human body provide one set of standards through which one may attain symbolic immortality. In fact, we suggest that it is because the body is so inextricably tied to life and death that regulation of the body is so critical to cultures and meeting standards of value concerning the body is so important to individuals. In addition to answering basic cosmological questions, structuring experience, and setting standards of value for self-esteem, cultural worldviews must minimize the threat of the body as a reminder of our animality and creatureliness. We suggest that this is why cultures provide beliefs and rules that elevate the body from the status of an animal to that of a cultural symbol. Among these are beliefs concerning how humans differ from animals and standards that specify what is worthy of disgust, what is physically attractive, and norms concerning proper hygiene, dress, and sexual behavior.

### Cognitive Distancing From Animals

Because of the threat inherent in our physical and, therefore, mortal bodies, we go to great lengths to distinguish ourselves from “mere animals.” We think of ourselves as special, unique, and superior to all other living things. We are “God’s special creatures,” the crown of creation, certainly deserving of dominion over all animals. Even those who acknowledge our animal origins typically view the human species as the top of the food chain, the most advanced species, or the endpoint of a long process of evolution. Human culture and religion elevate our species above other animals; for example, we maintain the sanctity and dignity of places of worship and study (and fine dining) with signs warning “no animals allowed.” Of course, if we faced up to our true animal nature, these places would be very lonely indeed.

This human propensity to cognitively distance ourselves from animals also has played an important role in the derogation of others. According to TMT, humans need to maintain faith that their cultural worldview is the one correct and valid worldview; therefore, others who disagree with that view pose a psychological threat. A broad range of research has shown that people are especially likely to derogate those who are different when death-related thoughts are accessible (for a review, see Greenberg, Solomon, & Pyszczynski, 1997). It is interesting to note that this derogation has often taken the form of casting such others as animals and using them as scapegoats (see Becker, 1975). For example, in *Mein Kampf*, Adolf Hitler (1925/1999) tried to elevate the Aryan race above the animal kingdom by claiming that, “in him the instinct of self-preservation has reached the noblest form” (p. 297), whereas the Jewish people “without any culture of their own” (p. 302) were analogous to “vipers” (p. 246) and “rats” (p. 302). Indeed, research suggests that this dehumanization of people can

play a role in reducing dissonance (cf. Aronson, 1969) and thus legitimizing violent atrocities such as those in Nazi Germany, Vietnam, and the former Yugoslavia (e.g., Struch & Schwartz, 1989).

We (see Study 2 of Goldenberg et al., *in press*) recently provided preliminary empirical support for our contention that mortality concerns motivate efforts to distinguish ourselves from animals. College students participated in a research session in which they first completed a personality and attitudes questionnaire composed of a mortality salience manipulation (two open-ended questions about either death or experiencing dental pain) embedded in a packet of filler personality measures. Under the guise of a second, independent study, participants were asked to read one of two essays supposedly written by senior honors students. The essays argued that humans are either quite similar to or different from animals.

The results of the study showed that although dental pain control participants evaluated the two essays equally, mortality salient participants exhibited a significant preference for the author who argued that humans are unique over the author who argued that humans were similar to animals. Furthermore, in the mortality salient condition, the essay depicting humans as distinct from animals was preferred to a greater extent than in the control condition. This supports the idea that concerns about death play a role in beliefs that help us deny our similarities to other animals. Along with such cognitive preferences, emotional reactions to reminders of such similarities may serve a similar function.

### Disgust

Since Charles Darwin first wrote about disgust in 1859, a large body of work on the emotion (e.g., Angyal, 1941; Haidt, Rozin, McCauley, & Imada, 1997; Miller, 1997; Rozin, Haidt, & McCauley, 1993) has shown that disgust is unique to humans. Rozin, Haidt, McCauley, and Imada (1997) suggested that disgust probably evolved out of an evolutionary advantage associated with distaste for certain food products that posed a danger in our evolutionary past (e.g., bitter fruits, rancid meat). However, whereas many animals respond with distaste to certain foods, humans respond with disgust to a much wider range of stimuli deemed offensive to the self (e.g., Fallon & Rozin, 1983; Rozin & Fallon, 1987). For humans, *disgust* seems to be an expression of one’s disdain for or superiority to everything from foods and body products to political ideologies and immoral actions. Research has shown that although there is no inherent danger in eating a sterilized cockroach (Rozin & Fallon), eating a bowl of soup stirred with a never-used flyswatter (Rozin, Fallon, & Mandell,

1984), or even having intercourse with a dead chicken (Haidt, Koller, & Dias; 1993), most people find these actions rather disgusting.

Consistent with our perspective, research conducted by Rozin, Haidt, and colleagues (e.g., Haidt et al., 1997) revealed that the disgust reaction is generally exhibited in response to stimuli that remind us of our animal nature. Accordingly, the body, its functions, and its by-products are among the category of items that Rozin and Fallon (1987) referred to as *core disgust*. Revulsion to feces, urine, vomit, and blood (especially menstrual blood) is found across a wide range of cultures (Angyal, 1941). It is interesting to note that Ortner (1973) pointed out that tears differ from other bodily secretions in that they are unique to humans and therefore not disgusting.

As discussed by Haidt et al. (1997), the disgust reaction also plays a constructive role in creating culturally specific moral standards and guidelines for behavior. In particular, salient overlaps between humans and animals are likely to be subject to dictates of one's cultural rules. Cultures provide guidelines for what kind of behavior is appropriate (e.g., proper manners, Elias, 1939/1978; customs surrounding eating, Kass, 1994) and what is disgusting (e.g., eating your pet after it has been hit by a car, Haidt et al., 1993). Because cultures provide the rules and standards that distinguish us from other animals, any violation of a cultural standard that serves this purpose may arouse a secondary form of disgust.

In congruence with the propositions of TMT, Rozin and Fallon (1987) acknowledged that the need to see oneself as distinct from animals may be understood as a defense against the human fear of death. A French social philosopher, George Bataille (1957), also recognized a relation between disgust and death when he wrote, "The horror we feel at the thought of the human corpse is akin to the feeling we have at human excreta" (p. 57), and "the sight of blood, the stink of vomit, evoke the horror of death in us" (p. 267). In sum, disgust can be viewed as an emotional response that distances us from any reminder of our own creatureliness and ultimate mortality or any transgression of taboos meant to protect us from such awareness.

Research on disgust has provided indirect support for the association between disgust and the fear of death. Haidt, McCauley, and Rozin (1994) showed that, in their disgust sensitivity measure, the death-related items were most predictive of total disgust sensitivity scores and that total disgust scores (even with all death-related items removed) were positively correlated with fear of death. Furthermore, findings revealing that infants show no aversion to body products such as feces and sometimes joyfully play in their own excrement (e.g., Rozin, Fallon, & Augustoni-Ziskind, 1985; Siegal, 1988) are consistent with both a cultural

role in such reactions and a role of death concerns as well, because concerns about death begin to emerge around the same time as these disgust reactions (Yalom, 1980). Of course, more systematic developmental research is needed to assess directly whether repulsion to feces and other bodily by-products does indeed emerge with the dawning awareness of death.

If disgust is a response to reminders of animality and this is threatening because of mortality concerns, then reminders of death should intensify the disgust reaction to that which blurs the human-animal boundary, such as the body and its by-products. In a recent study, Goldenberg et al. (in press, see Study 1) experimentally tested this hypothesis by reminding people of their death and then measuring disgust sensitivity using the measure developed by Haidt et al. (1994).<sup>3</sup> The results revealed that, relative to a control condition, mortality salience increased scores on the subscale that assessed body product disgust (e.g., "You see a bowel movement left unflushed in a public toilet"), as well as the animal subscale (e.g., "You see maggots on a piece of meat in an outdoor garbage pail"). Consistent with previous mortality salience research (e.g., Greenberg et al., 1994), this effect was limited to thoughts of death followed by a delay and distraction; when mortality salience was followed immediately by the disgust measure, expression of disgust was similar to the control condition. This suggests that thoughts of death increase disgust when they are on the fringes of consciousness but not when they are in current focal attention. Based on the analysis and research we reviewed earlier (e.g., Pyszczynski et al., 1999), this finding supports the idea that disgust responses can serve as a symbolic, distal defense against death by asserting how distinct one is from animals.

## Human Sexuality

One particularly important type of behavior that may be especially likely to be threatening because of its creaturely aspects is sexual behavior. Children often respond with disgust when they first learn about sex (Abramson, 1980; Harris, 1994). They typically can not believe that their parents would do such a thing and insist that they themselves could never find such activities appealing. The Marquis de Sade (1797/1968) came to a similar conclusion when he declared, "I have never believed that from the junction of two bodies could arise the junction of two hearts: I can see great reason for

<sup>3</sup>The disgust sensitivity measure (Haidt et al., 1994) consists of eight subscales: Animals, Body Products, Food, Sex, Envelope Violations, Hygiene, Sympathetic Magic, and Death. Because we were interested in assessing the effects of mortality salience on disgust sensitivity, we discarded the Death subscale and the Sympathetic Magic scale (which contained a death-related item) to avoid confounding the manipulation.

scorn and disgust in this physical junction, but not a single reason for love" (p. 148).

Given the vast potential for pleasure that sexuality provides and its utter necessity for the propagation of our species, why is sex so often a problem for humankind and such a focus of cultural norms, mores, and restrictions? Although the evolutionary perspective on human sexuality suggests a number of difficulties and complexities in the human pursuit of sex, thus far proponents of this perspective have not explained adequately the sheer magnitude of the problems associated with sex for our species. Our thesis suggests that for self-aware creatures who must defend against existential terror, sex poses a unique set of problems that contributed substantially to the development of particular cultural regulations and attitudes about sex.

### **Sexual Regulations**

We propose that the connection of sex with anxiety and the consequent regulation of sexuality stems, at least in part, from the anxiety associated with the fear of death. In Becker's (1973) words, "Sex is of the body, and the body is of death" (p. 162). Because the human species has intercourse and reproduces just as other animals do, the physical aspects of sex make apparent our animalistic creaturely nature. The fact that we are so strongly attracted to sexual behavior (presumably because a desire for the pleasure of sex is an exceedingly useful evolutionary adaptation) makes sexuality's creaturely features all the more threatening to cultural beings who live in a world of abstract symbols. Michel Foucault (1985) argued that, since the beginning of civilization, men and women have found being a "desiring man" (or woman) disconcerting and consequently have sought to control such desire by ascribing aesthetic value to the act and making sex the target of moralization.

From the perspective of TMT, the cultural solution to this problem is to imbue sex with meaning and significance that elevates it from the world of the creaturely and animalistic into the realm of the sacred and sublime. Cultures elevate human sexuality from a simple animal activity to a uniquely human expression of abstract meaning in many ways. The multitude of restrictions on who can do what with whom, where, and when, which vary widely from culture to culture, are all ways in which cultural norms are used to give sex its uniquely human meaning. Regulations can range from abstinence for some members, to confinement of sex to marriage or for procreation, to restrictions on sexual position, appropriate sex partners, and pleasure derived from the sexual act. Indeed, most religions condemn the pleasure "of the flesh" in favor of spiritual pursuits.

Even the most permissive cultures have elaborate prescriptions for sexual behavior, such as sex manuals

(e.g., the Indian *Kama Sutra*) and seemingly arbitrary and trivial rules. For example, the Lesu of the South Pacific accept female masturbation any time a woman becomes aroused, as long as it is done with the heel of her right foot and never her hand (Powdermaker, 1933). On the more repressive end of the spectrum, in the culture known as *Inis Beag*, both partners wear their undergarments during sexual intercourse and women never have orgasms (Messenger, 1993). In contemporary American culture, sodomy and sex toys are outlawed in numerous states, homosexuals are the victims of hate crimes, sex education in the schools is the subject of much debate, and both the news media and legislative branch of the federal government recently spent a full year arguing the fine points of a president's sexual liaison with a young White House intern.

### **From Sex to Love**

Perhaps the most common cultural strategy for elevating sex to a uniquely human plane is to view it as an expression of romantic love or other strong emotional connection between two people. Human sexuality represents not only our utter creatureliness but also our ultimate capacity for symbolic relations and interpersonal connectedness. Whether this entails a lifelong commitment (e.g., marriage) or an openly acknowledged fleeting emotional state, construing sexual relations as the ultimate expression of deep interpersonal feelings moves human sexuality from an animalistic act to an expression of something noble and uniquely human. Dermer and Pyszczynski (1978) found that inducing sexual arousal in men caused them to report greater love for their romantic partner, which is generally consistent with this analysis, as are findings that sex and love often accompany one another (e.g., Aron & Aron, 1991; Berscheid, 1988; Buss, 1988; Hatfield & Rapson; 1996; Hendrick & Hendrick, 1998).

Our analysis is similar in some ways to Freud's (1930/1961) concept of sublimation. We suggest that love ameliorates the anxiety surrounding sex by transforming our sexual urges into a highly abstract, uniquely human connection with another individual. However, in contrast to Freud's (1930/1961) analysis, but consistent with Rank (1930/1998) and Becker (1973), we view the anxiety surrounding sexuality as an inherent consequence of the creaturely aspects of the sexual experience, which are threatening because of their connection to the problem of death and vulnerability. This perspective helps explain why romantic love is such a powerful emotion, why problems in love often seem so similar to neurotic symptoms (i.e., depressive and obsessive-compulsive tendencies), why a frustrated Romeo and Juliet could take their own lives, and why people are sometimes willing to die (or kill) for love's honor. Romantic love, like religion, is a vi-

tally important human motive because it elevates us beyond our animal nature to an abstract spiritual plane of existence; we become soul mates with our beloved. Perhaps it is no coincidence, then, that both romantic love and religion have led to so much bloodshed.

Of course, romantic love no doubt serves many other important functions besides sublimation of anxiety surrounding our animal nature. Following Rank (1930/1998) and Becker (1973), TMT views romantic love not only as a disguise for sexuality but as a solution to the problem of seeing life as meaningful and the self as valuable. From this perspective, romantic love is a powerful source of self-esteem, both for the lover and the beloved. Being loved implies that one is lovable, thus providing much-needed consensual validation for a view of oneself as valuable (cf. Walster, 1965). Monogamous love implies that another person views us as having such great value to be worth “forsaking all others” and committing himself or herself entirely to us. The more valuable the one who loves us, the greater the impact of his or her love on our self-worth. This may help explain the common tendency to idealize the beloved, exaggerating his or her positive qualities and denying negative ones (e.g., Murray, 1999).

Love also can be viewed as a way of regulating the exchange of both tangible commodities and abstract psychological entities (cf. Kelley & Thibaut, 1978), as a way to regulate sexual relations toward gene perpetuation (Trivers, 1972), as a label we put on confusing physiological symptoms (cf. Walster & Berscheid, 1971), as a continuation of attachment tendencies that developed early in life (Hazan & Shaver, 1987), or as an intrinsically motivated process of expanding the self by including the beloved as part of the self (cf. Aron & Aron, 1986). Although we acknowledge the multiple functions that romantic love serves, viewing love as a way of elevating our animalistic sexual urges to a uniquely human plane illuminates one important factor in cultural conceptions and regulations regarding sex and love.

### **Sexuality as a Basis of Self-Worth and Meaning**

Although romantic love is probably the most common way of elevating animal sexuality to a uniquely human plane, it is certainly not the only way to do so. Indeed, both classic and contemporary cultures often glamorize sexual exploits in literature, movies, sitcoms, pop songs, and talk shows. To the extent that one's cultural worldview eschews restraints on sexuality and places positive value on sexual behavior, sexual conquests, performance, and attractiveness can be powerful means of attaining self-esteem. People use sexual relationships to affirm their attractiveness, sex appeal, and virility, all of which can be central components of one's self-esteem.

In addition, contrary to popular opinion, most variations in sexuality are in the direction of being less animalistic and more symbolic than so-called normal sexual behavior. For example, sadomasochism is usually not wild and uncontrolled but rather highly ritualized, making use of scripts and props, much like the theater, thereby turning sex into an art form. Similarly, most fetishes consist of sexual arousal associated with an object that is closely associated with the body, but not the body itself, such as a shoe, leather, or silk panties. When a fetishist fixates on the body itself, a particular part of the body is objectified. By fixating on an inanimate object, or objectifying and idealizing specific body parts, the fetishist escapes the threat associated with a mortal, animal body (see Becker, 1973).

Furthermore, in contrast to most religions that condemn the pleasure of the flesh, some religious perspectives view sex as a medium through which one can transcend the physical body and attain spirituality or enlightenment. For example, some Hindus practice Tantric rituals aimed at attaining the highest possible level of ecstasy, so that one may merge with the gods (Bishop, 1996).

### **Sex, Death, and Neurosis**

It is clear that the terror management perspective provides plausible explanations for aspects of sexual regulation and variation and the elevation of sex to an act of love and a basis of self-worth. The theory may also shed light on individual problems with sexuality, problems that seem particularly prevalent among people high in neuroticism. A multitude of theorists, beginning with Freud (1920/1989; e.g., Adler, 1954; Costa & McCrae, 1995; Eysenck, 1976; Horney, 1964), despite clear differences among perspectives, viewed neurosis as stemming from difficulty controlling anxiety or arousal. From the perspective of TMT, the neurotic's difficulty in controlling anxiety results from an inability to sustain self-esteem or faith in the validity of a meaningful worldview. Because both self-esteem and the worldview are fragile social constructions that constantly need validation, it is impossible to go through life without encountering threats to these psychological structures; who has not asked “What is the meaning of all this?” or “What am I doing here?” at least once in his or her life, if not once a day? TMT maintains that individuals manage their potential for terror by tenaciously clinging to various aspects of their worldviews. However, the neurotic has difficulty remaining imbedded within the culture's view of reality or fulfilling the requirements of value prescribed by that worldview.

Empirical research shows that individuals who are labeled *neurotic* differ in a number of important ways from individuals who do not earn this label. Following Eysenck (1976), we see neuroticism as existing on a

continuum, with individuals high in this trait having more problems than most people maintaining faith in the validity of a meaningful worldview and a worthwhile place for themselves within the context of that worldview. Findings revealing that individuals with neurosis are chronically more anxious and have lower self-esteem are consistent with this analysis (e.g., Lester, 1990). Viewing all people on a continuum of neurosis highlights the defensive nature of the normal human pursuit of self-esteem and faith in the cultural worldview and helps illustrate the continuity between the core forces that drive us all and the difficulties in controlling these forces faced by individuals who suffer from clinically significant anxiety disorders.

Because the cultural worldview serves the important function of transforming humans from mere physical creatures into unique individuals with symbolic identities, it follows that people with neurosis, who we view as having difficulties maintaining the integrity of their worldviews, would be particularly troubled by physical activities that have the potential to remind them of their mortality. Support for this idea is found in the literature on disgust; strong positive correlations have consistently been found between disgust sensitivity and neuroticism (Haidt et al., 1994; Templer, King, Brooner, & Corgiat, 1984; Wronski, 1990).

It also follows that sex, an activity inextricably linked to the physical body and animal-like in essence, would be particularly problematic for neurotics. Of course, Freud's (1930/1961) entire theory of neurosis was based on the conflict between sexual instincts and repressing factors, such as civilization and the super-ego. Eysenck (1971, 1976) summarized a large body of evidence by suggesting that individuals with neurosis exhibit an approach-avoidance conflict toward sex, stemming from an overactive sex drive in conjunction with high levels of guilt and worry about sex. Consequently, people with neurosis report low sexual satisfaction and perceptions of sex as disgusting (Eysenck, 1971). Similarly, Mosher and Greenberg (1969) found that individuals high in sex guilt exhibited distress in response to erotic literature. Furthermore, neuroticism and anxiety have long been viewed as playing a role in sexual disorders such as impotence and premature ejaculation (e.g., Johnson, 1965).

In what we believe to be the first experimental investigation of the relation between sex, death, and neuroticism, we (Goldenberg, Pyszczynski, McCoy, Greenberg, & Solomon, 1999) conducted a series of converging tests of our proposition that sex is threatening to neurotics because of its connection to death. For a person with a secure cultural anxiety buffer, one may predict that reminders of death would heighten one's desire for sex because sex provides a pleasant distraction, self-esteem, life affirmation, or a way to pass on one's genes. However, if people with neurosis are conflicted

about sexuality, and this conflict stems from the connection of the creatureliness of sex with mortality concerns, the physical aspects of sex should be especially aversive to people high in neuroticism after reminders of death.

In Study 1 (Goldenberg, Pyszczynski, & McCoy, et al., 1999), we manipulated mortality salience as in several previous studies (e.g., Greenberg, Porteus, et al., 1995) by having participants respond to a series of true-false questions about either death or TV. Questions were embedded in a packet of personality measures that included Eysenck's neuroticism inventory (Eysenck & Eysenck, 1967). Following completion of a puzzle that provided a delay and distraction between mortality salience and assessment of the dependent measure (cf. Greenberg et al., 1994), participants were given a measure that assessed the appeal of the physical and romantic aspects of sex. Physical items included, for example, "feeling my partner's sweat on my body," whereas romantic items included "the romantic feelings surrounding sex." We were interested in the effect of mortality salience on the appeal of the physical items because these items are creaturely and therefore should be especially threatening to individuals high in neuroticism after reminders of death. The results supported the hypotheses. Individuals high in neuroticism found physical sex to be less appealing after being reminded of their own death. Those low in neuroticism exhibited a trend in the opposite direction, which suggested that reminders of death increased the appeal of physical sex.

A follow-up study (see Study 2 of Goldenberg, Pyszczynski, McCoy, et al., 1999) more directly assessed whether physical sex is threatening to people high in neuroticism because of its connection to death. In this study, we manipulated the salience of physical sex by having participants complete either the physical sex or romantic sex subscale and then we measured the accessibility of death-related thoughts. We reasoned that if physical, but not romantic, sex is threatening to people with neurosis because of its connection with death, then reminders of physical sex should make thoughts of death more highly accessible than reminders of romantic sex. Death thought accessibility was assessed, as in previous studies (e.g., Arndt, Greenberg, Solomon, Pyszczynski, & Simon, 1997; Greenberg et al., 1994), with a word-fragment completion task in which participants filled in the missing letters for word fragments, some of which could be completed with either neutral words or death-related words (cf. Gilbert & Hixon, 1991). For example, *COFF\_* could be completed as either *coffee* or *coffin*. In support of the hypotheses, participants high in neuroticism reported more death-related words after the creaturely sex prime, whereas the low-neuroticism group did not. These findings further support our contention that neurotic individuals' problems with sex are rooted in anxiety surrounding fears associated with death.

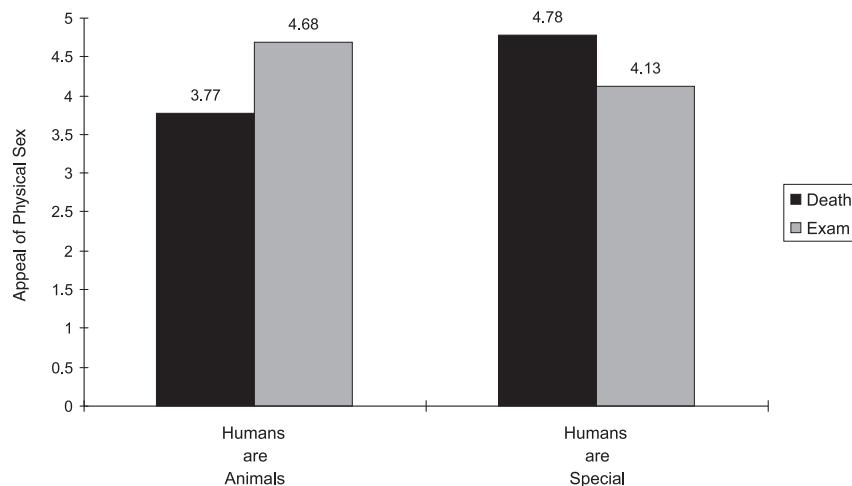
The foregoing analysis and research suggest that the neurotic's inability to view sex within a secure meaning system increases the accessibility of death-related thoughts for such people. If so, then perhaps making a romantic view of sex highly salient for neurotic individuals would temporarily obscure their linkage of the physical aspects of sex with death. We (Goldenberg, Pyszczynski, McCoy, et al., 1999) investigated this possibility in a third study in which we replicated Study 2 but added a condition in which participants were asked to write about either being in love or a control topic (having a good meal) after the physical–romantic sex manipulation. We hypothesized that when we explicitly attached meaning to the sexual experience by asking participants to think about being in love, high-neuroticism individuals would not respond any differently than individuals low in neuroticism. The results of Study 3 supported this hypothesis. Whereas in the control condition, high neurotics responded to reminders of physical sex with increased death-thought accessibility (replicating Study 2), when being in love was made salient, this effect disappeared. These findings suggest that the neurotic's difficulty with sex is in fact a problem with meaning and that, by providing transcendent meaning, love reduces the connection between physical sex and thoughts of creatureliness and death.

### **Concerns About Creatureliness Moderate the Sex–Death Association**

The three studies reported by Goldenberg, Pyszczynski, McCoy, et al. (1999) support our proposition that sex is a problem because of its connection to death, but only among individuals high in neuroticism. Our theoretical position, however, suggests that sex, stripped of meaning, is problematic because of its creaturely connotations regardless of level of neuroticism. We have argued that, for people with neurosis,

reminders of death make physical sex aversive and reminders of physical sex bring death-related thoughts to mind because such individuals suffer from difficulty sustaining the symbolic meaning necessary to transform sex from an animal act to a symbolic human experience. Study 3, which showed that providing meaning for people with neurosis by explicitly associating sex with love reduced death-thought accessibility, further supports this reasoning. However, if this is correct, then reminding individuals of their similarity to other animals, thereby undermining their sense of symbolic meaning, should produce effects in the general population similar to those found among people with neurosis.

Therefore, we (Goldenberg, Cox, Pyszczynski, Greenberg, & Solomon, 1999) recently conducted a pair of studies in which we replicated the findings reported in Studies 1 and 2 of Goldenberg, Pyszczynski, McCoy et al. (1999) in participants regardless of level of neuroticism when sex was stripped of meaning and when concerns about creatureliness were particularly salient. In Study 1 of this series, before being reminded of either their own death or failing an important exam, individuals high and low in neuroticism were randomly assigned to read an essay that discussed either the relative similarity or dissimilarity between humans and the rest of the animal kingdom (Goldenberg et al., in press). After the mortality salience manipulation, we measured the appeal of the physical aspects of sex. We hypothesized that when participants were reminded of their similarity to other animals, mortality salience would decrease the appeal of the physical but not romantic aspects of sex, regardless of participants' level of neuroticism. When participants were made to feel special compared to other animals, we did not expect mortality salience to lessen the appeal of physical sex. As can be seen in Figure 1, the results supported our hypotheses.



**Figure 1. Appeal of physical sex scores as a function of creatureliness prime and mortality salience.**

Study 1 (Goldenberg, Cox, et al., 1999) demonstrated that, after participants were reminded of their own creatureliness, mortality salience caused them, regardless of their level of neuroticism, to find the physical aspects of sex less appealing. This suggests that a concern about creatureliness is responsible for the reduced interest in physical sex in response to mortality that was found among neurotic individuals by Goldenberg, Pyszczynski, McCoy, et al. (1999) and among participants regardless of level of neuroticism in our research. Study 2 (Goldenberg, Cox, et al., 1999) more directly assessed the proposition that the physical aspects of sex are threatening because they remind us of death. To this end, we assessed the impact of thoughts of physical sex on the accessibility of death-related thoughts after creatureliness has been primed. As in Study 1, participants were primed with creatureliness reminders via essays that discussed the similarity or dissimilarity between humans and other animals. Participants were then asked to fill out the physical or romantic aspects of sex subscales. As hypothesized, the results revealed that when participants were reminded of their similarity to other animals, death-thought accessibility was greater after the physical sex prime than after the romantic sex prime. However, when the special position of humans in the animal kingdom was fortified, the physical sex prime did not increase death-thought accessibility (Figure 2). As in Study 1, presumably because of the impact of the creatureliness prime manipulation, neuroticism did not moderate our effects.

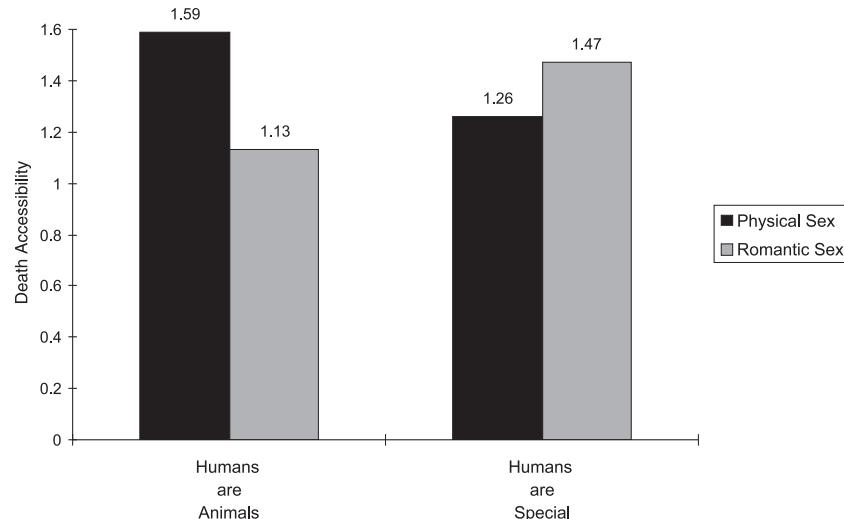
In sum, the work on sexual behavior indicates that mortality concerns motivate an idealization of sexual behavior that elevates such behavior above mere animal activity. In the next section, we consider the possibility that mortality concerns also contribute to a similar ideal-

ization of the vehicle of creaturely behavior itself, the human body, especially the female body.

### The Body Beautiful

Perhaps the broadest and most pervasive component of the cultural solution to the body problem is to strip the body of its creatureliness by transforming the body itself into an object of beauty. Although the precise features that particular cultures deem beautiful vary, all cultures value beauty and reinforce its members who meet its standards of attractiveness (e.g., Fallon, 1990). Extending the ideas we have discussed about disgust and sexuality to the realm of cultural standards for physical appearance provides some unique insights into why beauty is so highly valued and into the nature of standards of beauty. We suggest that physical appearance is so important because it allows humans to transform the most threatening aspect of the self, the animal body, into a symbol through which one can acquire value by living up to cultural standards and thereby ward off our fear of death.

Although most of the research on the objectification of the body has focused on the negative consequences of cultural standards of beauty for women (Fredrickson & Roberts, 1997; Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998; McKinley & Hyde, 1996), our analysis suggests that objectification of the body also serves a useful function: It transforms the creaturely body into a symbolic object of beauty and value. We certainly agree that the consequences of having a body that serves as a symbol in one's culture can be devastating (and we discuss these consequences later). However, one payoff for these negative consequences is a temporary escape from deeply rooted existential anxiety.



**Figure 2. Death accessibility scores as a function of creatureliness prime and physical versus romantic sex.**

Here, as in many other domains, cultures help people trade mortality concerns for self-esteem concerns. Although self-esteem difficulties provide a host of their own problems, the likelihood of sustaining self-esteem by perceiving oneself as successfully meeting cultural standards is much greater than the odds of escaping death. In other words, people buy into the cultural value system and become absorbed in meeting cultural standards of the body so they do not have to view themselves as mere ambulatory conglomerations of flesh and guts doomed to decay and death. Unfortunately, the nature of the cultural standards in which people invest is largely not a choice of the individual but rather a by-product of the individual's socialization experiences. As Becker (1971) put it, the civilizing process "is one in which we exchange a natural animal sense of our basic worth, for a contrived, symbolic one" (p. 71).

Although evolutionary psychologists have argued for and reported evidence consistent with the idea that judgments of beauty are influenced by certain evolutionary adaptations, a survey of history and culture reveals that the objectified body is also largely a product of the times. For example, although a thin waistline is valued in contemporary Western culture, a much fuller figured body was valued in European cultures of previous centuries. Whereas large breasts and curvaceous hips are viewed as sexually attractive for women in contemporary Western cultures, an elongated labia minora is valued in some African cultures. In our culture's recent history, we have shifted from norms requiring that a woman's body be dressed from ankle to neck, with a restrictive corset in the middle, to tank tops and string bikinis. From this perspective, both puritan and libertine worldviews share the same goal: to deny the body's creatureliness.

It is clear that in contemporary Western culture, the body's appearance is highly valued; individuals go to great lengths to meet cultural standards concerning beauty and attractiveness. Although there are differences in which body parts are deemed especially important, both men and women are concerned with such aspects of physical appearance as weight, the skin's complexion, facial features, and height (e.g., Brumberg, 1997; McCaulay, Mintz, & Glenn, 1988; Mintz & Betz, 1986). Cultures not only value attractiveness but also actively reinforce those who meet the prescribed standards of beauty (e.g., Berscheid, Dion, Walster, & Walster, 1971; Bull & Rumsey, 1988; Dion, Berscheid, & Walster, 1972; Eagly, Ashmore, Makhijana, & Longo, 1991; Sigall, Page, & Brown, 1971).

We suggest that physical attractiveness is so important partly because it facilitates our efforts to deny our links to other animals, which in turn helps quell our existential fears. By transforming our creaturely bodies into cultural symbols, we are able to defend against the fears associated with our vulnerability and ultimate mortal-

ity. Evolutionary (e.g., Buss, 1989, 1990; Symons, 1979; Tooby & Cosmides, 1992; Trivers, 1972) explanations of the importance of physical attractiveness posit that certain characteristics may be desirable as a result of evolutionary advantages associated with them. Sociocultural approaches (e.g., Fallon, 1990; Hesse-Biber, Clayton-Matthews, & Downey, 1987) suggest that because culture is what dignifies humans, specific idiosyncratic cultural values and beliefs determine cultural standards of physical attractiveness. Both perspectives help explain certain aspects of physical attractiveness, but TMT adds another piece to this puzzle by suggesting that by valuing and satisfying cultural standards of attractiveness, people can deny their creaturely animal nature, thereby warding off their fear of death.

### **Empirical Support for the TMT Analysis of the Function of Beauty**

If the symbolic body serves as a buffer against the anxiety surrounding death, it follows that people who believe they are meeting cultural standards for the body would cling to this aspect of self in response to reminders of death. On the surface, this hypothesis seems to fly in the face of common sense; why would people cling to their physical bodies when they have just been reminded of an event that signifies the destruction of the body? Yet, if the body is treated as a cultural symbol rather than a living, dying animal carcass, our hypothesis makes good psychological sense in that it helps elevate the individual above his or her animal nature.

We recently provided support for this hypothesis (Goldenberg, McCoy, Pyszczynski, Greenberg, & Solomon, 2000). In Study 1, college students were divided into low and high body esteem categories, reminded of either their own death or a neutral topic, and then asked to indicate how central to their sense of self were various bodily and nonbodily characteristics. The results revealed that people with high body esteem responded to reminders of death by identifying more highly with their bodily selves.

Study 2 (Goldenberg et al., 2000) explored the possibility that in addition to increasing the tendency of high body esteem individuals to identify with their physical bodies, mortality salience may also increase the appeal of activities that involve the body. We chose the appeal of physical aspects of the sexual experience as our dependent measure because prior research has shown that attitudes toward sex are tied to how people feel about their bodies (e.g., Faith & Schare, 1993; Holmes, Chamberlin, & Young, 1994). The results of Study 2 showed that individuals high in body esteem expressed a greater attraction to the physical aspects of sex after they had been reminded of their own death.

Together, these studies support our premise that the symbolic body may serve a vital anxiety-buffering function and, as is evident in Study 2 (Goldenberg et al., 2000), that sexual relations may also function in a similar way. When confronted with their mortality, people who reported being pleased with their bodies increased their identification with their bodies and their interest in physical sex, which is linked to physical attractiveness. Therefore, it seems that the body, or rather the beautiful body, can serve as an anxiety-buffering source of self-esteem.

### **Gender Differences in Standards of Physical Attractiveness**

Although we have argued that both men and women are concerned with their physical appearance, there is no shortage of evidence that standards for physical attractiveness are more stringent for women than for men (e.g., Archer, Iritani, Kimes, & Barrios, 1983). Both evolutionary and sociocultural theories provide explanations for gender difference in standards of attractiveness. The evolutionary perspective argues that physical attractiveness is more predictive of reproductive health for females than it is for males (e.g., Buss, 1990; Symons, 1979). Sociocultural explanations emphasize differential physical attractiveness stereotypes, social roles, and levels of social power for males and females (e.g., Bar-Tal & Saxe, 1976; Fallon, 1990).

However, these explanations cannot fully account for the specific nature of both standards of attractiveness and the modifications and alterations of bodily appearance so prevalent across cultures. If our analysis is correct—that idealized beauty is an aid to denying our animality (and mortality)—then two other factors may contribute to the greater emphasis on beauty in women. The first is simply that men have virtually always had power in society and so they have had more control over the focus, creation, and enforcement of beauty standards.

The second, less-widely recognized factor results from perceived biological gender differences. We suggest that cultures generally (although not always) have more rigorous standards for the attractiveness of the female body because of the more obvious association of the female body with the very creaturely process of childbirth. Women bear children, lactate, and menstruate. Although men certainly play a role in reproduction, it is a less obvious one. Feminist authors have written about the elaborate rituals in which women must partake to transform their bodies from that of a creature to that of a goddess (Bartky, 1990). Simone de Beauvoir (1952) wrote of all that goes into hiding woman's animalness: "feathers, silk, pearls, and perfumes serve to hide the animal crudity of her flesh" and "make-up and jewelry also further this petrifaction of face and body" (p. 158).

Becker (1973) went so far as to suggest that the gender differences which Freud (1920/1989) sought to explain are best accounted for not out of women's desire for a penis but, rather, by both men's and women's fear of the mother's creatureliness. If these female characteristics are seen as more creaturely or animalistic, it follows that people would be threatened by them and that cultures would consequently impose more restrictions and higher standards for the female body.

Research on attitudes toward childbirth, menstruation, and lactation suggests that people are generally squeamish about these female characteristics (e.g., Paglia, 1990). As Paglia claimed, "Every menstruating woman is a pagan and primitive cast back to those distant ocean shores from which we have never fully evolved" (p. 26). Roberts, Goldenberg, Manly, and Pyszczynski (1999) recently showed that a simple reminder of a woman's creatureliness led to more negative evaluations of her. In this study, a female confederate "accidentally" dropped either a tampon or hairclip out of her purse. Participants (irrespective of sex) not only evaluated her as less competent when she dropped a tampon than when she dropped a hairclip but also liked her less and physically distanced themselves by sitting farther away from her. Furthermore, subsequent to the manipulation, participants were asked to evaluate women in general using the objectification measure developed by Noll and Fredrickson (1998) in which respondents are asked to rank in order of importance appearance- versus competence-related attributes of women's bodies. The findings revealed that, again regardless of participants' sex, being reminded of women's creatureliness led to greater value being placed on women's physical appearance.

### **Consequences of Cultural Standards for Attractiveness**

One unfortunate consequence of the cultural solution to the problem of our animal bodies is that not everyone can be a supermodel or "hunk" or can afford the clothing or personal trainers fashion may require. In fact, with the extensive use of body doubles and advanced photographic techniques, the idealized images portrayed in magazines, TV, and movies may not even be attainable by those celebrities associated with them. Feminist research has targeted unrealistic images of women portrayed in Western culture as a major cause of a variety of physical and psychological health problems that are more prevalent in women. Unfortunately, over the past couple of decades, cultural standards for women's bodies have been getting thinner and more unrealistic (Garner, Garfinkel, Schwartz, & Thompson, 1980).

Chernin (1981) suggested that this unrealistic image of women may play a causal role in the increasing prevalence of body image disturbances in women.

Body image disturbances are associated with chronic dieting (Miller, Coffman, & Linke, 1980) and eating disorders, including anorexia nervosa and bulimia (Cash & Szymanski, 1995). Garfinkel and Garner (1992) also showed that people with anorexia often feel disgusted by their bodies and tend to come from family systems in which members are preoccupied with weight and physical appearance and a reliance on external standards to demonstrate self-worth. If a concern with physical attractiveness functions to deny creatureliness, feelings of disgust seem a likely reaction to one's imperfect body.

Furthermore, there may be consequences of being objectified regardless of whether one perceives oneself as successfully meeting cultural standards for the body. Recent research suggests that a number of differences found between men and women may be attributable, at least in part, to greater societal objectification of women (e.g., Fredrickson & Roberts, 1997). Fredrickson and Roberts's objectification theory argued that the objectification of women diminishes women's ability to concentrate and attain peak emotional experiences because women are taught to see themselves from the perspective of an external viewer or mirror image. In an empirical investigation of this possibility, Fredrickson et al. (1998) recently showed that inducing self-objectification by having women try on swimming suits in front of a mirror led to increased shame and restrained eating as well as impaired performance on a math test.

Another consequence of living in an appearance-oriented culture is that standards for the body become internalized. As a result, the bodily self becomes an important part of one's self-concept and an important contributor to self-esteem (e.g., Rohrbacker, 1973). Among both sexes, dissatisfaction with the body is associated with low self-esteem (e.g., McCaulay et al., 1988), insecurity (e.g., Hurlock, 1967), distress (e.g., Cash & Szymanski, 1995), shame (e.g., McKinley & Hyde, 1996), and depression (e.g., Noles, Cash, & Winstead, 1985). Although satisfaction with one's body has been found to correlate with happiness (Berscheid, Walster, & Bohrnstedt, 1973), at least some researchers have suggested that satisfaction with one's body is not all that common (e.g., Dwyer, Feldman, Seltzer, & Mayer, 1969).

Furthermore, cultures tend to stigmatize and cast out those who do not successfully meet the requirements for the body, such as the obese (e.g., DeJong, 1993) and disfigured (e.g., Bernstein, 1990). Within their cultural context, these individuals are perceived as devalued members and are subject to prejudice and discrimination (Goffman, 1963; Jones et al., 1984). From the perspective of TMT, people respond negatively to such individuals because they threaten the validity of a culture's values by their failure to conform to expectations.

Jones et al., (1984) suggested that people with physical disabilities are stigmatized because they remind us of death. We further suggest that transgression of any cultural norms concerning the body may ultimately lead to a more defensive response to reminders of death. That is, whereas obesity and other physical deformities may elicit a negative response because they are directly associated with the increased likelihood of early death, other problems of the body that are not connected to death in any real or obvious way may pose a similar threat. For example, research has shown that in the United States, stigmatized groups include bald men (Cash, 1990), short men (Berscheid & Walster, 1974), and poorly groomed and sloppily dressed men and women (Raymond & Unger, 1972). Consistent with this analysis, interacting with a stigmatized individual often produces anxiety (e.g., Archer, 1985; Stephan & Stephan, 1985).

### **Disengagement From Standards of Attractiveness**

Are people who do not meet the cultural standards of beauty doomed to the prospect of existential terror until their death? The results of a study conducted by Goldenberg et al. (2000, see Study 3) suggest that this is not necessarily the case. This study was designed to examine the following question: If people with high body esteem respond to mortality salience by clinging attitudinally and behaviorally to their bodies (see Study 1 and Study 2 of Goldenberg et al., 2000), do people low in body esteem respond to mortality salience by defensively distancing from their bodies?

To explore this possibility, we investigated the effects of mortality salience on people who had low body esteem but still viewed physical appearance as important to their self-esteem. We measured investment in standards for physical appearance with the self-objectification questionnaire (Noll & Fredrickson, 1998) that operationalizes appearance focus by asking participants to rank the relative importance of appearance versus competence to their physical self-concept. As the dependent measure, we administered the Surveillance subscale of the Objectified Body Consciousness Scale designed by McKinley and Hyde (1996), which includes items such as, "During the day, I think about how I look many times." The results of this study showed that following mortality salience, individuals who valued physical appearance but felt incapable of meeting these standards decreased their tendency to monitor their appearance. In contrast, people with low body esteem who did not value physical appearance did not decrease body monitoring in response to reminders of death. These findings show that mortality salience leads individuals who value appearance but do not think they meet standards of attractiveness to avoid focusing on their bodies.

However, what do people with low body self-esteem who are low objectifiers do to cope with reminders of their mortality? We suggest that these individuals either do not care about these cultural standards because of the way they were socialized as children or have defensively disengaged from body-related standards that they do not feel capable of meeting (cf. Crocker & Major, 1989; Major, Spencer, Schmader, Wolfe, & Crocker, 1998), or perhaps both. Consistent with the benefits of such a strategy, Major et al. found that when individuals do not identify intelligence as an important aspect of self, they do not respond negatively to negative feedback on an intellectual test. More generally, Crocker and Major proposed that stigmatized groups often sustain self-esteem by rejecting mainstream cultural standards and finding value by meeting alternative standards. In this same way, we suggest that individuals may disengage from high levels of concern with their physical appearance. Consistent with this idea, in Study 1 of Goldenberg et al. (2000), the low body esteem participants responded to mortality salience by more highly identifying with nonbody items.

An example of this phenomenon may be the fairly recent feminist backlash against Western culture's objectified portrayal of women in the media. The women who identify with this movement may obtain a sense of empowerment by contradicting societal expectations for women, such as by not shaving their legs. This type of behavior does not carry with it as great a burden of creatureliness because these women have come together to form a subculture. Their behavior is symbolic and therefore should afford them the same protection as any cultural anxiety buffer. The same argument can be made for any subculture that institutes its own standards for the body. Wearing an earring through one's eyebrow, having a tapestry of tattoos, or even branding the symbol of one's fraternity into one's skin can be perceived as attractive by members of a group. All of these body transformations represent a symbolic elevation of the body through identification with a group or cause. However, it is also clear that for the majority of women and men in our culture, disengaging from cultural standards of physical attractiveness is a daunting task.

### Cultural Variations in the Flight From the Body

We have argued that all cultures help us deny our creatureliness and, thus, manage the terror that results from awareness of our mortality by imbuing the human body with abstract symbolic meaning and value. However, some cultures seem more troubled than others by the animalistic aspects of the human body. Whereas some cultures seem to go to incredible lengths to distance themselves from the body by appearing civilized

and refined, others seem to be closer to nature, imposing much less of a distinction between the animal and the human. Whereas most modern cultures draw sharp distinctions between humans and other animals, aboriginal cultures in Africa, Australia, and the Americas view animals as unique individuals worthy of respect in their own right. One may ask whether our analysis applies to these more traditional cultures that seem to live in closer harmony with nature.

Although the distinctions these close-to-nature cultures draw between the animal and human may be less clear-cut than those found in industrialized nations, such cultures nonetheless do other things to minimize the threat of creatureliness and death. Cultures that construe human life as closely connected to other animals and the natural environment tend to imbue all of nature with supernatural power and significance. Animals, plants, and physical objects like mountains and rivers are seen as sources of great spiritual power. Although humans may be construed as being "one with nature" within the context of these cultural worldviews, the nature they are one with is supernatural rather than natural. Natural entities are anthropomorphized into something far beyond their basic physical qualities, rather than viewed as the consequence of physical and biochemical processes, as in Western culture's scientific worldview. Our point is that it is not nature per se that is embraced, but the abstract spiritual power imbued into nature by these cultures.

Although we argue that all cultures must ultimately solve the same existential problems, there may be important differences between cultures (and individuals within cultures) that construe humanity as separate from versus part of the natural world. This distinction is similar in some ways to the individualistic versus collective (egocentric vs. allocentric) distinction that is often used to categorize cultures in terms of their social relatedness (cf. Markus & Kitayama, 1991; Triandis, 1990). However, rather than distinguishing between whether the individual construes himself or herself as separate from versus part of the social collective, in this article we suggest that it may be useful to distinguish between cultures (and individuals) who construe themselves as separate from versus part of nature.

### The Price of Culture

Our analysis has focused on the various ways in which the body is a problem for humans. We have argued that the body is a problem because it makes evident our similarity to other animals; this similarity is a threat because it reminds us that we are eventually going to die. We have argued that cultural worldviews transform the body from a creaturely flesh and blood biological entity to a cultural symbol. But now the question must be asked, What price do we humans pay for this escape

from existential concerns? We suggest that our flight from our physical nature causes us to lose a bit of what it means to be human. Becker (1973) described the human essence as half symbolic and half animal. In our mad frenzy to deny all that is animal, we may be robbing ourselves of half of our identity. The neurotic denies himself or herself the most because he or she lacks the secure cultural anxiety buffer that we must wear to approach and embrace our animalistic tendencies.

Freud (1927/1960) suggested that these animalistic instincts are the driving force behind our character development and comprise one of the three key components of our personality and, thus, are an essential part of our humanity. We hope that in our discussion of what people find frightening about the body we have not appeared blind to the body's positive aspects. It is the body's creatureliness that makes one feel completely alive. But being completely alive reminds us that inevitably we will die. As Becker (1973) suggested, "The irony of man's condition is that the deepest need is to be free of the anxiety of death and annihilation; but it is life itself which awakens it, and so we must shrink from being fully alive" (p. 66). By embracing the multitude of cultural meanings given to our body, we may be missing out on much of the pleasure that our physical bodies can provide us.

Perhaps one answer is to do all we can to minimize our fear of death. As de Beauvoir (1952) suggested, "if he does not fear death, he will joyfully accept his animality" (p. 166). Similarly, Brown (1959) and Faber (1981) promoted the possibility of full, unrepressed living in the moment. Unfortunately, this abandonment of fear and defense may require evolutionary developments beyond our current capacities. Meanwhile, the typical human strategy for controlling death-related anxieties is immersion in the world of cultural meanings and values. Thus, we may be in a catch-22 in which we must control anxiety to be able to embrace the potential for pleasure that our bodies provide, but we must largely forsake our bodies and cling to the world of cultural symbols and standards to control that anxiety. Alas, like most aspects of the human condition, the problem of the human body is filled with irony and paradox; perhaps the best we can hope for is being wedged between a rock (our bodies) and a hard place (the cultural standards to which we must hold them).

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