Three studies examined the hypothesis that mortality salience (MS) will increase prosocial behaviors when the prosocial cause promotes terror management processes. However, when the prosocial cause interferes with these processes, MS will reduce prosocial behavior. In Study 1, following a MS procedure, participants indicated their willingness to donate money to charity or to donate to an organ donation organization. In Study 2, a research assistant randomly distributed fliers with reminders of death or back pain, and another research assistant solicited participants' assistance from either a charitable fund booth or an organ donation booth. Study 3 examined the impact of MS on helping a wheelchair-bound confederate or a walking confederate. The results indicated that MS increased charitable donations and increased help to a walking confederate. However, MS significantly decreased organ donation card signings and decreased help to a wheelchair-bound confederate. The discussion examines the tension between personal fear and worldview validation.

Keywords: mortality salience; prosocial behavior; donations; help

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rosocial, compassionate, and benevolent behaviors constitute the foundations of most, if not all, cultural worldviews. Those who behave in a manner that benefits others especially when it seems that such behaviors come at the expense of the self are honored and revered by their culture. However, recent research has suggested that self-interest plays a prominent role in such seemingly altruistic behavior. On the basis of terror management theory (TMT; e.g., Greenberg, Pyszczynski, & Solomon, 1997), Jonas, Schimel, Greenberg, and Pyszczynski (2002) have argued that generous and compassionate behaviors restore the belief that one is a valuable member in a meaningful world—a belief that defends the self from the threatening awareness of personal mortality. Thus, by behaving in a prosocial manner one benefits by successfully suppressing anxiety-provoking cognitions about death.

However, other research has shown that at times the awareness of death does not promote prosocial motivations and may in fact diminish prosocial tendencies. This line of research has shown that reminders of death may lead to compassion withdrawal from people with disabilities (Hirschberger, Florian, & Mikulincer, 2005) and to greater motivations to blame or derogate innocent victims (Hirschberger, 2006; Landau et al., 2004, Studies 5 & 6). According to Hirschberger (2006), prosocial behavior is often characterized by emotional and attitudinal ambivalence reflecting the tension between social values and defensive needs. The current research set out to clarify the conditions that promote or impede prosocial attitudes and behavior when death is salient. To do so, we revisit the research conducted by Jonas et al. (2002) and compare several types of prosocial behavior such as charitable donations, posthumous organ donations, and responses to requests for help. We contend that donations to charity and helping a person in need satisfy important cultural values, increase self-esteem, and thereby bolster terror management mechanisms. However, posthumous organ donations and helping a

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PSPB, Vol. 34 No. 5, May 2008 666-678
DOI: 10.1177/0146167207313933
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person with a physical disability expose potential helpers to reminders of their physical, mortal nature and disrupt the terror management process. Consequently, when death is salient, prosocial behavior under these conditions will be reduced.

Prosocial Ambivalence

On the surface level, prosocial behavior may appear to be straightforward and simple. There is one side that needs assistance, another side that can provide it, and when helping occurs it seems to reflect the personality, altruistic values, and good intentions of the helper. However, for several decades research has demonstrated the complexity and ambivalent nature of prosocial behavior. Classic studies such as Darley and Latané’s (1968) bystander effect and Darley and Batson’s (1973) Good Samaritan research indicate that seemingly trivial reasons impede prosocial behavior. If acting prosocially reinforces important social norms and values, and increases the helper’s positive emotions and self-esteem, it may seem odd that factors such as the presence of other people or time constraints should stand in the way of achieving such valued benefits.

Recent research has shed light on the reasons people might disengage from prosocial behavior and has suggested that egotistical concerns may sometimes override prosocial inclinations. For example, in a study of the norm of self-interest, participants were reluctant to behave prosocially when they could not justify their behavior as being consistent with their self-interest (Holmes, Miller, & Lerner, 2002). In other cases the egotistical disengagement from prosocial behavior takes the form of a defensive maneuver carried out to protect the self from threat. In a study of the effects of social exclusion, Twenge, Baumeister, DeWall, Ciarocco, and Bartels (2007) found that manipulations of social exclusion significantly reduced prosocial behavior in a wide variety of domains. This effect was mediated by empathy but not by general mood, implying that when the focus shifts from the plight of the other to self-focused threats, the capacity for an empathic understanding of others is severely impaired.

At other times egotistical and self-protective concerns may have an opposite effect and may increase prosocial behavior. Such is the case when prosocial behavior serves as a means of repairing self-esteem after failure (e.g., Brown & Smart, 1991) or regulating negative affect (Cialdini, Brown, Lewis, Luce, & Neuberg, 1997; Piliavin, Dovidio, Gaertner, & Clark, 1981), or when prosocial behavior enables one group to maintain its superiority over another group while appearing to be benevolent (e.g., Nadler & Halabi, 2006). Thus, prosocial behavior may serve a myriad of human needs and may be inhibited by various factors—at times it seems to reflect selfish reasons, and at times it may reflect genuine empathy (e.g., Batson, 2002).

Because of the large variety of behaviors that fall under the category of prosocial, it is not surprising that critics have noted that variables that predict prosocial behavior in one setting are unable to predict other types of prosocial behavior in other settings (see Batson, 1998). The current research focuses on two subsets of prosocial activities: short-term helping behaviors that are highly valued by one’s culture, and come at a small cost to the self, and comparable behaviors that have one additional, critical component—in them the helper encounters reminders of his or her physical vulnerability. Specifically, the first category includes donations to charitable organizations and responses to trivial requests for help. The second category includes posthumous organ donations and responses to trivial requests for help by a person with a physical disability.

The reluctance to posthumously donate organs is one illustrative example of the ambivalent nature of prosocial behavior. Studies and surveys have consistently revealed a curious discrepancy between the general positive attitude people hold toward organ donations, their understanding of the importance of these donations, and their reluctance to donate organs themselves (e.g., Besser, Amir, & Barkan, 2004; Gallup Organization, 1987, 1994; Kedem-Friedrich & Rachmani, 1998; Kittur, Hogan, Thukral, McGaw, & Alexander, 1991; Nolan & Spanos, 1989; Parisi & Katz, 1986). From a rational perspective, the reluctance to donate organs, in spite of positive attitudes toward such behavior, is perplexing because posthumous organ donations seem to exert no cost, unlike other charitable behaviors that carry a tangible, monetary cost. Even if the consent to donate organs is obtained during one’s life, the actual donation takes place only after death—when one no longer exists. Thus, it may be argued that one does not incur any cost or damage from posthumous organ donations. This reasoning is in line with the views of the Greek philosopher Epicurus who stated, “[Death] does not concern either the living or the dead, since the former it is not, and the latter are no more” (cited from Choron, 1963, p. 60). Thus, the willingness to donate organs posthumously should exceed that of any type of prosocial behavior that exerts a real, tangible cost, as it seems to present an opportunity to benefit others at no personal cost. The current research revisits this rational perspective and examines the psychological implications of organ donations.

People with disabilities constitute another social cause that elicits considerable ambivalence and discomfort among their nondisabled peers. This ambivalence is reflected in the sentiment shared by most nondisabled people that people with disabilities deserve to be treated...
equally. Moreover, nondisabled people also prefer to think of themselves as egalitarian and fair (e.g., Jones et al., 1984; Katz, 1981). However, research has indicated that sympathetic and caring responses are often tainted with aversion and repulsion (Carver, Glass, & Katz, 1978; Katz, 1981; Livneh, 1985; Wright, 1983). As in the case of organ donations, there seems to be a discrepancy between the values most people ascribe to, and their actual emotions and behaviors when encountering a person with a disability (e.g., Wright, 1983).

The current research uses a terror management framework to examine the underlying psychological factors that promote or impede prosocial behavior. We experimentally investigate the reasons some causes elicit prosocial responses more readily and others elicit ambivalence and discomfort that may result in withdrawal.

**TMT**

TMT is based on the assumption that to achieve psychological equanimity humans are continuously propelled to drive thoughts of death out of conscious awareness (e.g., Greenberg et al., 1997; Pyszczynski, Greenberg, & Solomon, 1999). Based on the theoretical assertions of Becker (1973, 1975), TMT posits that humans share with all living organisms a biological propensity for survival in the service of reproduction (Solomon, Greenberg, & Pyszczynski, 1991). However, unlike all other beings, humans are poignantly aware that they are alive and that one day they must die. This combination of a propensity for life coupled with an awareness of death places humans in an irresolvable paradox. To cope with this threat, TMT suggests that people have developed elaborate defensive mechanisms that enable them to shield themselves from death awareness.

According to TMT, two primary defense mechanisms function to ward off the awareness of personal mortality: cultural worldview validation and self-esteem enhancement. Cultural worldviews are symbolic belief systems that imbue the world with meaning and structure. They offer answers to basic existential questions, such as the meaning and purpose of life and what happens after death. Investing in a cultural worldview enables adherents to expand their self onto a structure that is greater and more enduring than the physical self. The second defense mechanism, self-esteem, reflects the feeling that one is successfully living up to cultural prescriptions, and by doing so one feels that he or she is an exemplar upholding the culture’s ideals. Together these defenses offer the solace of literal immortality in the form of belief in an afterlife, as well as the possibility of symbolic immortality by ensuring that certain aspects of the self will persevere after physical death.

To test these theoretical propositions, terror management studies have primed thoughts of death (mortality salience) and examined cultural worldview defenses. These studies have found that making mortality salient increases the motivation to invest in one’s worldview, as well as avoid, derogate, punish, and even aggress against worldview-threatening others (e.g., Florian & Mikulincer, 1997; Greenberg et al., 1990; Hirschberger & Ein-Dor, 2006; McGregor et al., 1998; Pyszczynski et al., 2006).

For example, studies have found that making mortality salient leads people to support punishment of social and moral transgressors (Florian & Mikulincer, 1997; Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989), exhibit positive reactions toward the ingroup and negative reactions toward the outgroup (e.g., Castano, 2004; Greenberg et al., 1990), and react aggressively against those who threaten the worldview (Hirschberger & Ein-Dor, 2006; McGregor et al., 1998; Pyszczynski et al., 2006).

**Terror Management and Prosocial Behavior**

Prosocial behavior is considered to be a primary means of worldview validation and self-esteem attainment, and as such bolsters terror management defenses. As stated in one of the early summaries of the theory: “Providing help to those in need, especially those who are deemed praiseworthy of help within the culture, is one example of how meeting cultural standards of value provides individuals with a sense of personal value” (Solomon et al., 1991, p. 120).

This notion of prosocial behavior as a means of defending against death is also rooted in many cultural and religious beliefs. For example, at the entrance to every Jewish graveyard a charity box stands inscribed with King Solomon’s ancient proclamation: “Charity saves from death” (Proverbs 11:4). Whereas the evidence that charity saves from actual death may seem less than compelling, recent research has indicated that prosocial attitudes and behavior function as an effective terror management mechanism (Jonas et al., 2002). Specifically, Jonas et al. (2002) conducted two studies to determine whether subtle reminders of death will induce greater prosocial attitudes and behaviors. In Study 1, pedestrians were stopped and interviewed either in front of a funeral parlor (mortality salience condition) or three blocks away (control condition) and were asked several questions referring to attitudes toward charitable organizations. The results indicated that in the death salient condition participants exhibited more positive attitudes toward charitable causes than in the control condition. Study 2 replicated the findings of Study 1 on actual charitable behaviors by asking participants to choose a charitable cause and donate money.
to this cause. The findings indicated that participants primed with death donated more money to a charitable cause but only to an ingroup (American) cause and not an international one.

Although the preceding findings support the contention that primes of death induce prosocial behavior, there seems to be an inconsistency in the terror management literature with regard to the influence of death primes on prosocial behavior. Whereas studies such as Jonas et al. (2002); Schimel, Wohl, and Williams (2006); and Joireman and Duell (2005) indicate that primes of death increase prosocial or benevolent inclinations, other research suggests that there are instances wherein the awareness of death itself stands as an impediment to prosocial behavior. Recent research has shown that mortality salience induces less compassion toward a person with a physical disability among men (Hirschberger et al., 2005). Similarly, primes of death induced greater blaming of innocent victims (Hirschberger, 2006) and increased the motivation to search for disparaging information about victims among participants high in personal need for structure (Landau et al., 2004). In all of these studies participants did not display a consistent negative attitude toward suffering others but rather exhibited attitudinal and emotional ambivalence as a function of the salience of personal death. For example, in Hirschberger (2006), participants generally reported a compassionate attitude toward severely injured victims and assigned less blame to them compared to mildly injured victims in the control condition. However, under death salient conditions, attributions of blame increased toward severely injured victims. Thus, the awareness of personal death seems to stand in the way of a normative compassionate response and leads to rejection and derogation. This response constitutes a defensive maneuver against others who may threaten terror management mechanisms, primarily when death is salient.

The preceding findings may be explained by a large body of terror management research that indicates that human physicality poses a threat to terror management defenses. Studies have shown that reminders of the human body (e.g., the physical aspects of sex, breastfeeding, tactile sensation) become extremely aversive under mortality salient conditions (Cox, Goldenberg, Arndt, & Pyszczynski, 2007; Goldenberg et al., 2006; Goldenberg, McCoy, Pyszczynski, Greenberg, & Solomon, 2000; Goldenberg, Pyszczynski, McCoy, Greenberg, & Solomon, 1999). In addition, reminders of death lead to stronger feelings of disgust toward body products or animals and strengthen the belief that humans are distinct from animals (Goldenberg et al., 2001). On this basis, people with physical disabilities and the request to donate organs draw attention to the physical and vulnerable nature of human life and as such become aversive when personal death is salient.

Because of the inconsistency in the terror management literature with regard to the impact of death primes on prosocial behavior, the current research revisits the findings of Jonas et al. (2002) and examines whether death awareness always promotes charitable behavior toward worldview-validating causes or whether under certain conditions charitable behavior turns aversive. We contend that when the charitable cause does not interfere with the terror management process by introducing reminders of mortality, death primes will increase charitable attitudes and behavior. However, when the charitable cause itself compels the individual to confront his or her mortality, primes of death will decrease charitable behavior. To examine these hypotheses we conducted a series of three studies employing both self-report and behavioral methodologies. In these studies we compared the impact of mortality salience on two categories of charitable behaviors: (a) monetary donations to a charitable fund and responses to trivial requests for help, and (b) the posthumous donation of organs and responses to trivial requests for help by people with physical disabilities.

**STUDY 1**

Study 1 employed a self-report methodology to examine whether primes of death differentially impact the motivation to behave prosocially. Specifically, we examined whether the motivation to donate to charity would increase and whether the motivation to donate to an organ donation organization would decrease when death was salient. For this purpose a 2 × 2 factorial design was employed with mortality salience (death, control) and prosocial cause (charity, organ donation) as the factors. Willingness to donate served as the dependent variable.

To bolster our argument that organ donations evoke greater concerns about personal death compared to charity for the poor, and to account for the alternative possibility that the two organizations may differ in the levels of positive and negative affect they elicit, a pretest was conducted. A sample of 27 participants (16 women, 11 men) who did not participate in other parts of this research were randomly assigned to read either a brief description and request to donate to the Caring Heart organization—a nonprofit organization that offers aid to the poor—or to Adi—a nonprofit organization for
and a word stem completion task to assess levels of death-thought accessibility (e.g., Florian, Mikulincer, & Hirschberger, 2002; Greenberg, Pyszczynski, Solomon, Simon, & Breus, 1994). To examine whether the two organizations elicited different levels of affect or death-thought accessibility, we conducted independent samples t tests, which revealed that Caring Heart and Adi did not elicit significantly different levels of positive (Ms = 2.54 and 2.81, SDs = 0.70 and 0.62, respectively), t(25) = 1.06, p = .3, or negative (Ms = 2.49 and 2.16, SDs = 0.43 and 0.63, respectively), t(25) = −1.57, p = .13, affect. However, the description of the Adi organization elicited significantly higher levels of death-thought accessibility (M = 1.54, SD = 1.12) than did the description of the Caring Heart organization (M = 0.64, SD = 0.63), t(25) = 2.57, p < .05. The results of the pretest confirm our contention that the two organizations elicit different levels of death-related cognitions and rule out the possibility that reactions to these organizations may be a function of the level of positive or negative affect they elicit. These results provide a basis for the main analysis of this study examining whether primes of death have a differential effect on the willingness to contribute to an organ donation organization or to a charitable organization.

Method

Participants. Eighty undergraduate students (27 men, 53 women), ranging in age from 21 to 47 (Md = 24) from Bar-Ilan University participated in the study for course credit.

Materials and procedure. The study was presented as a study of personality and social attitudes and was conducted in small groups (5-10 participants). In each group participants were randomly assigned to experimental conditions. Participants were given a packet of questionnaires and were asked to complete them at their own pace while making sure to follow the order of the questionnaires. The first questionnaire was a bogus personality inventory intended to disguise the goal of the study.

Next, participants were randomly assigned to one of two experimental conditions. In the mortality salience condition participants answered the following open-ended questions: “What do you think happens to you as you physically die and once you are physically dead?” and “Please briefly describe the emotions that the thought of your own death arouse in you.” In the pain salience condition participants received the same open-ended questions with all references to death replaced with “severe dental pain.” This procedure has been successfully used in numerous terror management studies (e.g., Florian et al., 2002; Greenberg et al., 1990). Following the mortality salience induction, all participants completed a word-search puzzle that was included as a distractor because previous studies have shown that mortality salience effects occur after people have been distracted from thoughts of their own death (Greenberg et al., 1994). Next, participants were asked to indicate their willingness to volunteer or donate to either the Caring Heart organization or to Adi.

Participants read a brief description of their randomly assigned organization (identical to that used in the pretest) and answered five questions on their willingness to contribute to the organization (e.g., “Would you like to donate to this organization?” “Would you be interested in volunteering to this organization?”) on a 7-point Likert scale ranging from 1 (not at all interested) to 7 (very interested). A total score was computed by averaging the responses to the five questions (Cronbach’s alpha = .89). Higher scores indicated a greater willingness to contribute. Finally, participants completed a demographic sheet and were debriefed and thanked for their participation.

Results and Discussion

To examine the impact of death primes and type of organization on the willingness to contribute, a 2 × 2 ANOVA was conducted with mortality salience (death, pain) and type of organization (Caring Heart, Adi) as the factors. Willingness to contribute served as the dependent variable. The analysis revealed a marginally significant main effect of mortality salience, F(1, 76) = 3.27, p = .08, with death primes leading to a slightly lower motivation to contribute (M = 4.20, SD = 1.84) compared to the control condition (M = 4.79, SD = 1.27). However, this main effect was moderated by the expected Mortality Salience × Organization interaction, F(1, 76) = 28.58, p < .001. Tests for simple main effects revealed that in the mortality salience condition the willingness to contribute to the Caring Heart organization was significantly greater (M = 5.31, SD = 1.54) compared to the control condition (M = 4.20, SD = 1.22), F(1, 76) = 6.43, p < .05. However, the analysis also revealed that participants in the mortality salience condition reported a significantly lower willingness to donate to Adi (M = 3.26, SD = 1.53) compared to participants in the control condition (M = 5.51, SD = .94), F(1, 76) = 24.91, p < .001 (see Table 1). The results of Study 1 replicate the findings of previous research that has shown that primes of death increase contributions to culturally valued causes (Jonas et al., 2002). However, the findings of the current study also indicate, in keeping with our hypothesis, that when the prosocial cause requires participants to face the fact that they are mortal and may prematurely die, primes of death have the opposite effect and significantly reduce the motivation to...
The results of Study 2 further establish that these findings are specific to terror management processes and not to general affect.

**STUDY 2**

The results of Study 1 lend support to the hypotheses of the current research and indicate that primes of death have a differential effect on prosocial motivations such that when the prosocial cause was culturally sanctioned, yet nonthreatening, primes of death increased prosocial attitudes. However, when the social cause involved the unsettling exposure to one’s physical, mortal nature, primes of death decreased the willingness to donate. Although promising, the results of Study 1 are limited to attitudes and intents alone, which may not reflect actual prosocial behavior. To address this limitation, Study 2 was designed as an experimental field study that examined the influence of an inconspicuous death prime on actual donations to a social charity or to an organ donation organization.

Study 2 used a novel method of priming death using fliers. The fliers displayed the logo of the Kalima Institute, a fictional organization created for the purpose of the study, and in the mortality salience condition the fliers read: “Are you concerned about death? We can help! Call us and we can ease your suffering both physically and spiritually.” In the control condition the fliers read: “Are you dealing with back or muscle pain? We can help! Call us and we can ease your suffering both physically and spiritually.” The words “death” and “back or muscle pain” were printed in bold letters. Following the text were a phone number and name of a contact person.

To examine whether this novel method of priming death increases death-related cognitions but does not increase general negative affect, we conducted a pretest. A sample of 40 participants who did not participate in any other parts of this research were handed either the mortality salience flier or the pain salience flier. The flier was followed by the PANAS scales (Watson et al., 1988) to examine positive and negative affect and by a word stem completion task (Florian et al., 2002; Greenberg et al., 1994) to examine the accessibility of death-related cognitions. Independent samples $t$ tests revealed that there were no significant differences between the pain salience flier and the death salience flier in positive ($M$s = 2.55 and 2.62, $SD$s = 0.80 and 0.69, respectively), $t(38) = .29, p = ns$, or negative ($M$s = 1.77 and 1.89, $SD$s = 0.51 and 0.66, respectively), $t(38) = .59, p = ns$, affect. However, the death salience flier inducted significantly higher death-thought accessibility ($M$ = 1.65, $SD$ = 1.22) than did the pain salience flier ($M$ = 0.85, $SD$ = 0.93), $t(38) = 2.32, p < .05$. The results of this pretest confirm that the flier efficiently elicits mortality salience but does not significantly influence positive or negative affect. This result rules out the possibility that the findings of this research may be explained by changes in affect rather than by terror management processes. Therefore, we can proceed with confidence to examine the impact of this novel mortality salience prime in the main analysis of Study 2.

**Method**

Participants. Three hundred and sixty-five pedestrians were randomly approached by a research assistant who gave them a flier as they were walking through the Bar-Ilan campus. Then, another research assistant seated at one of two donation booths solicited these participants to donate. Twenty-two potential participants either refused to take a flier or disposed of the flier before looking at it, leaving us with a sample of 343 participants (165 men, 178 women), ranging in age from 22 to 64 ($Mdn = 25$).

Materials and procedure. The study was conducted in a central location on the Bar-Ilan campus where many student activities take place. A research assistant handed out the mortality salience and pain salience fliers in random order. Fifteen meters away from the first research assistant, a second research assistant sat at a booth and solicited those who received fliers to come and make a donation. Each flier had either a red sticker or a green sticker on it corresponding to the mortality salience and control conditions, respectively. However, the research assistants were blind to experimental conditions and recorded only the sticker color for each participant. In half of the cases, the booth belonged to the Caring Heart organization and participants were asked to make a monetary donation of 10 NIS (approximately US$2.5). In the other half, the booth belonged to the Adi organization and participants were asked to sign an organ donation card. The research assistant handing out the fliers recorded sticker colors and the other research assistant...
recorded whether the participant donated. To facilitate coordination, both research assistants were equipped with cellular phones. At the end of this procedure a third research assistant debriefed participants and asked several demographic questions (many of those who refused to donate did not wish to be debriefed).

Results and Discussion

A $2 \times 2 \times 2$ log-linear analysis was conducted to systematically examine patterns of association among the manipulated variables, mortality salience (death, pain), and organization (Caring Heart, Adi) on the outcome variable, donation (yes, no). The analysis revealed a significant three-way interaction among mortality salience, organization, and donation, $G^2(4, N = 343) = 20.72, p < .001$. Further examination of this effect for each organization revealed two two-way interactions such that for participants solicited to donate to Caring Heart, mortality salience led to a larger percentage of donations compared to the control condition, $G^2(1, N = 102) = 4.65, p < .05$ (31.4% donated in the mortality salience condition, compared to 13.7% in the control condition). However, for participants solicited to sign an organ donation card at the Adi booth, mortality salience had the opposite effect and led to a smaller percentage of donations compared to the control condition, $G^2(1, N = 241) = 9.61, p < .005$ (5.2% signed a card in the mortality salience condition, compared to 17.6% in the control condition; see Figure 1). These findings replicate the self-report data obtained in Study 1 and provide behavioral evidence that reminders of death increase prosocial behavior toward a charity fund but decrease prosocial behavior involving posthumous organ donations. It is noteworthy that this study was conducted as an experimental field experiment such that unlike Study 1, participants were unaware of the fact that they were being studied. Thus, the ecological validity of these findings is higher than in Study 1, as the research design closely simulates natural conditions under which prosocial behavior occurs. Moreover, the death prime used in Study 2 is a novel method of inconspicuously priming death. The convergence of the findings of Studies 1 and 2 support our contention that terror management processes are driving these effects, and not a specific method of priming.

STUDY 3

Studies 1 and 2 demonstrate that mortality salience concerns underlie both approach and avoidance motivations toward prosocial activities. Specifically, we found that primes of death increased positive attitudes towards charitable causes and increased actual charity donations. However, in keeping with our predictions, we also found that primes of death decreased the willingness to contribute to an organ donation organization and decreased the actual signing of organ donation cards. To ensure that the findings of Studies 1 and 2 reflect the difference between prosocial causes that promote or compromise terror management defenses, and are not specific only to charitable donations and organ donations, we expanded our research in Study 3 to other prosocial behaviors.

Study 3 was designed along the lines of the experimental field methodology of Study 2, and a similar procedure was employed. This time we examined responses to trivial requests for help. The design of the current study was inspired by previous research that had demonstrated the impact of subtle, unobtrusive affective cues on responses to trivial requests for help (Forgas, 1998). In Forgas’s (1998) study, participants were primed with an affective cue and then a confederate approached them with a trivial request for help. The current research follows a similar design. We employed the mortality salience procedure of Study 2, but unlike Forgas we also manipulated the characteristics of the confederate requesting help. In half the cases, the student (our confederate) was seated in a wheelchair when she approached participants, and in the other half she was walking when she approached participants. We chose to focus this study on physical disability because previous research has indicated that people with physical disabilities elicit greater accessibility of death-related cognitions compared to nondisabled individuals (Hirschberger, 2006; Hirschberger et al., 2005). Thus, a request for help from a person without a physical disability offers a chance to promote terror management defenses by responding in a prosocial manner. However, a request for help from a person with a physical disability is likely to rekindle death awareness, thereby disrupting the terror management process and leading to reduced helping behavior.
The current study also addresses a limitation in the first two studies. In Studies 1 and 2 the prosocial causes were organizations, not individuals. One may argue that primes of death may decrease prosocial tendencies toward anxiety-provoking organizations (such as Adi) because these may not elicit the affective response an individual in need elicits. Individuals may evoke more compassion than organizations; then, perhaps, the link between death and withdrawal from prosocial behavior will not be found.

Thus, in Study 3 a research assistant handed out the death-priming fliers outside of a main university library. Then, another research assistant approached the participant, either walking or using a wheelchair, and asked for a small favor. In Study 3 all of the research assistants and participants were female because of the different connotations of same-gender help and cross-gender help (e.g., Eagly & Crowley, 1986; George, Carrol, Kersnick, & Calderon, 1998).

**Method**

**Participants.** Eighty-five female participants were approached on the Tel-Aviv University campus and were handed a flier by a research assistant. Ten participants either refused to take a flier or disposed of the flier before looking at it, and 1 participant was suspicious of the confederate’s disability status, leaving us with a sample of 74 participants, ranging in age from 19 to 42 (Mdn = 23).3

**Materials and procedure.** A female research assistant randomly handed out mortality salience or pain salience fliers, as in Study 2, to female students several meters from the entrance to the Tel-Aviv University central library. Then, when the participant entered the library another research assistant approached her. In half of the cases this research assistant was seated in a wheelchair, and in the other half she approached the participant walking. When she reached the participant she said, “Hello, my name is Yael and I am a psychology student conducting a survey for a class assignment. Would you be willing to complete this questionnaire for me?” The dependent measure was whether the participant consented or declined. As in Study 2, research assistants were blind to experimental conditions, and the fliers were color coded with stickers. At the end of this procedure participants were thanked, debriefed, and asked several demographic questions.

**Results and Discussion**

A 2 × 2 × 2 log-linear analysis was conducted to systematically examine patterns of association among the manipulated variables, mortality salience (death, pain), and target condition (walking, wheelchair) on the outcome variable—responding to a request for help (yes, no). The analysis revealed the expected three-way interaction, G²(4, N = 74) = 12.24, p < .05. Further analyses on each target type revealed 2 two-way interactions between mortality salience and helping such that when the target was walking, mortality salience led to a significantly greater percentage of help, G²(1, N = 37) = 4.54, p < .05 (70% helped in the mortality salience condition, compared to 35.3% in the control condition). However, when the target was seated in a wheelchair, mortality salience led to a significantly lower percentage of help, G²(1, N = 37) = 4.76, p < .05 (57.9% helped in the mortality salience condition, compared to 88.9% in the control condition; see Figure 2). Thus, the results of Study 3 follow the same pattern of findings as in Studies 1 and 2, and further support our contention that primes of death increase prosocial behavior toward nonthreatening worldview-consistent causes. However, death primes decrease prosocial behavior when the prosocial cause compromises terror management defenses. Study 3 indicates that this pattern of results does not pertain specifically to charitable donations and organ donations but may be generalized to other types of prosocial behavior, as well.

**GENERAL DISCUSSION**

Prosocial behavior is a realm of human behavior characterized by the frequent need to balance conflicting motivations. Humans are a social animal and are naturally inclined to attend to, care, and respond to the needs of others in their group. However, there are also egotistical aspects to human motivation, primarily reflected in concerns for self-protection and self-promotion. Often, these two motivations are in agreement—responding to the
need of another group member reinforces the social contract that all group members should help one another. Such reciprocal altruism, in turn, indirectly promotes personal safety. However, at times prosocial behavior may come at the expense of other cherished needs, and then ambivalence is experienced.

The current research set out to disambiguate some of the ambivalence surrounding prosocial behavior and explain from a terror management perspective when people will tend to respond prosocially and when they will opt to avoid prosocial behavior. We hypothesized that death primes would increase the motivation to behave prosocially and would increase actual prosocial behavior. However, we hypothesized that when the prosocial cause itself rekindles death awareness, the terror management process would be disrupted and prosocial behavior would be reduced.

Three experiments support these hypotheses and indicate that primes of death increased self-reported willingness to donate to charity (Study 1), increased actual donations to a charitable organization (Study 2), and increased the percentage of people positively responding to a trivial request for help (Study 3). These findings are consistent with previous research demonstrating the positive effects of death primes on prosocial attitudes and behavior (Jonas et al., 2002; Schimel et al., 2006). However, our findings also indicate that primes of death decreased self-reported willingness to contribute or volunteer to an organ donation organization (Study 1), decreased the percentage of people signing an organ donation card (Study 2), and decreased the percentage of people positively responding to a trivial request for help by a person seated in a wheelchair (Study 3). The pretests conducted before Studies 1 and 2 verify that the prosocial organizations and fliers used to prime death differed only in levels of death-related cognitions they elicited and not in levels of positive or negative affect. Thus, we can conclude with confidence that terror management processes, and not mood, are responsible for the findings of this research.

Note that in Study 3 the wheelchair-bound confederate elicited the highest percentage of help in the pain salience condition. This compassion effect has been found in previous research examining the impact of death primes on reactions to people with physical disabilities. For example, in Hirschberger (2006, Studies 2 & 3) severely injured victims elicited lower attributions of blame than mildly injured victims in the pain salience condition. However primes of death increased attributions of blame toward severely injured victims and not toward mildly injured victims. The current study yielded a similar pattern of results indicating that when death was not salient, persons in a wheelchair elicited more help, reflecting the normative value of helping those in need. However, when death was salient, self-protective concerns overrode other-oriented concerns, and helping was reduced when the person asking for help was seated in a wheelchair and not when she was walking.

Prosocial Behavior: A Terror Management Dilemma

The findings of the current research contribute to a growing literature on the tension between prosocial values and self-protective needs. Previous research has suggested that although people embrace values of compassion and kindness, they sometimes abandon these values when faced with actual or symbolic threats to the self. The common denominator of all of the studies that have found that primes of death decrease prosocial tendencies is that the prosocial cause involved a confrontation with one’s physical, mortal nature. People with severe physical injuries and disabilities are a stark reminder of the fragility and vulnerability of the human body, and of the susceptibility to severe injury and death. Organ donations force one to contemplate the prospect of premature death as a realistic possibility. In all of these cases the prosocial cause seemed to disrupt the terror management process. This conclusion is in keeping with the results of previous research indicating that primes of death lead to compassion withdrawal from people with disabilities (Hirschberger et al., 2005, Studies 1 & 2) and to greater attributions of blame toward physically injured innocent victims (Hirschberger, 2006, Studies 1-3). Moreover, these studies have also found that the exposure to prosocial causes that disrupt the terror management process induces an upsurge in death-related cognitions (Hirschberger, 2006, Study 4; Hirschberger et al., 2005, Studies 3 & 4; Landau et al., 2004, Study 6).

Terror management research has revealed that the defense against death awareness is a two-stage process wherein proximal and distal defenses take place along a temporal sequence (Pyszczynski et al., 1999). The initial form of defense, the proximal defenses, constitutes a concrete attempt to remove conscious death-related thoughts from awareness. Proximal defenses involve active attempts to suppress death concerns (Arndt, Greenberg, Solomon, Pyszczynski, & Simon, 1997) and efforts to distract oneself from thoughts of death or to avoid the deleterious stimuli responsible for activating death concerns (Greenberg, Arndt, Simon, Pyszczynski, & Solomon, 2000; Greenberg et al., 1994). The second line of defense, the distal defenses, emerges only after participants are distracted from death-related thoughts and when these thoughts start to resurface but are not in focal attention (Arndt et al., 1997; Greenberg et al., 2000). Distal defenses are symbolic in nature and involve adherence to a symbolic construct of meaning.
that offers death transcendence through literal and symbolic immortality (Pyszczynski et al., 1999).

The results of the current research illustrate a modification of the typical terror management process when encountering requests to donate organs or assist people with physical disabilities: First, primes of death temporarily increase the level of death awareness and activate proximal defenses. In the case of charitable donations and help to a person without a disability, the normal terror management sequence takes place and distal defenses (i.e., compassion, social justice) are then successfully employed when death awareness begins to reemerge. However, in the case of posthumous organ donations and help to a person with a physical disability, the target of help itself rekindles death awareness, rather than buffering against it, and the typical terror management process is thwarted. Consequently, the individual stripped of the ability to rely on distal, symbolic defenses must rely solely on proximal defense mechanisms that consist of concrete attempts to remove the threat of death awareness. The current research suggests that the reduced willingness to donate to organ donation organizations (Study 1), walking away from an organ donation booth without signing a donor card (Study 2), and refusing to help a person in a wheelchair (Study 3) are cognitive and behavioral manifestations of proximal defense mechanisms designed to distance oneself from reminders of personal vulnerability to death.

**Contributions to the Prosocial Literature**

The current research contributes to the prosocial literature by identifying terror management concerns as a significant determinant of prosocial motivation and behavior and demonstrating that the decision to behave prosocially depends on whether the prosocial cause bolsters the terror management process or disrupts it. In three studies examining a variety of prosocial causes we have provided self-reported and behavioral support for our hypotheses. However, as the variety of prosocial activities extends well beyond the scope of this research, future research should expand our analysis to other prosocial activities.

Beyond the more general contribution to the prosocial literature, the current research delineates the psychodynamics underlying the reluctance to donate organs or assist people with physical disabilities. Much of the literature on the motivation to donate organs has provided information on who donates organs but not on why people donate (e.g., Amir & Haskell, 1997; Cleveland, 1975; Parisi & Katz, 1986). The idea that mortality concerns may be a causal factor in organ donation decisions has been mentioned in the literature (e.g., Cacioppo & Gardner, 1993; Skowronski, 1997) but has been tested only in correlational research. These studies have found negative correlations between self-reported fear of death and self-reported willingness to donate organs (e.g., Amir & Haskell, 1997; Besser et al., 2004; Cleveland & Johnson, 1970). However, none of these studies established a causal link between death concerns and organ donations. The current research demonstrates for the first time, using experimental paradigms and behavioral methodologies, that the reluctance to donate organs is driven by terror management concerns.

Similarly, the attitudes toward disability literature has identified various correlates of negative attitudes toward disability, including fear of death (e.g., Livneh, 1985). However, only recently have experimental studies been conducted to show that mortality concerns underlie attitudes toward disability (Hirschberger, 2006; Hirschberger et al., 2005). The current research extends this literature to the field of prosocial behavior and demonstrates that the impact of death on reactions to people with disabilities is found not only in self-report research, as previous studies have shown, but also in behavioral paradigms.

**Strengths and Limitations**

The current research represents a significant development in an ongoing research program designed to better understand the underlying dynamics of prosocial ambivalence. From a theoretical standpoint this research proposes a framework for understanding inconsistencies in prosocial attitudes and behaviors, suggesting that terror management processes may underlie the decision to engage or refrain from prosocial activity. Although prosocial behaviors are valued and cherished by cultural worldviews, some function as effective terror management mechanisms as they offer the opportunity to validate the worldview at a small cost (i.e., a small sum of money, trivial help). However, when the prosocial cause contains reminders of human vulnerability to physical harm and death, the cost exceeds the benefit as these reminders interfere in the terror management process and reawaken the awareness of personal death.

The current research also offers a methodological contribution by (a) introducing a novel inconspicuous death prime that has not been used in previous research, indicating that the effects found in this research are not the result of priming death and the result of any specific methodology; (b) employing an experimental field methodology that offers high ecological validity, as participants were unaware of the fact that they were being studied, but also employs stringent experimental procedures; and (c) using both self-report and behavioral measures, thus providing convergent validity. Because the behavior measured in this research entailed a real
cost (participants’ donations and signed cards were forwarded to the relevant organizations), it provides a strong demonstration of the price people are—and are not—willing to pay when faced with an opportunity to act prosocially.

However, this research also has several limitations that should be acknowledged. First, this research was conducted on a certain cultural and age group. Future research should attempt to replicate these findings on other populations. Second, in Study 2, participants in the charitable donation condition were asked to donate a sum of money, whereas participants in the organ donation condition were asked to sign a card (and provide their name). These differences may raise concern that the two conditions are not comparable. The results of Study 1 may alleviate some of these concerns by indicating that the same pattern of results was obtained when conditions were equal and participants were asked about their willingness to donate to these different causes. Third, in Study 3 we used a nondisabled confederate to pose as a person with a disability in half of the conditions and as a nondisabled person in the other half. The advantage of this procedure is that we can conclude with a high degree of certainty that sitting in a wheelchair, and not any other characteristic of the confederate, is responsible for the effects we found. Nevertheless, we cannot be sure that the same reactions would be found toward a person with a real disability. Fourth, Study 3 was conducted with female confederates and female participants. Future research should attempt to replicate these findings on a male population, as well. Finally, the current research focused on the motivational and behavioral manifestation of the disruption of terror management processes, whereas previous research focused on the affective and cognitive implications of this disruption. Future research should attempt to tie together these different responses in a single study design.

Aside from the preceding limitations, some alternative explanations should be considered before fully embracing the conclusions of this research. One possible explanation for the findings we obtained is that organ donations and help to people with disabilities may not be causes that are highly valued by the worldview of our research participants. However, surveys have clearly indicated that the Israeli public displays a general positive attitude toward persons with physical disabilities, reflected in attitudes toward legislation, if not always reflected in actual behavior (Wilchinsky & Findler, 2004). Similarly, the Israeli public highly values organ donations, even if it is reluctant to sign organ donation cards (Kedem-Friedrich & Rachmani, 1998). Moreover, the Jewish religious establishment has clearly approved and promoted organ donations under certain restrictions (see Besser et al., 2004). Thus, it appears that organ donations and help to people with disabilities are consistent with the worldview of our participants, and we can safely conclude that the results of this research illustrate the threat certain prosocial causes pose to terror management mechanisms and do not merely reflect the devaluation of these prosocial causes.

Conclusions

The results of the current research contribute to the understanding of human indifference and callousness in the face of suffering. Intuition, powered by the fundamental attribution error (e.g., Jones & Harris, 1967), often directs attention to personality traits, morals, and values that seem to lie at the foundations of prosocial, compassionate behaviors. Although these variables have been shown to relate to prosocial activity, social research has demonstrated time and again that banal reasons such as the presence of an authority figure (Milgram, 1963), time constraints (Darley & Batson, 1973), or the diffusion of responsibility (Darley & Latané, 1963) may turn otherwise compassionate people into passive bystanders or even accomplices in the victimization of others. The current research adds to the understanding of this phenomenon by attempting to better understand the psychodynamics underlying the tension between responding with compassion or rejection to the need and suffering of another.

Our analysis indicates that although prosocial behavior is highly valued in most, if not all, societies, self-protective concerns may at times override the general positive feeling one has toward helping others in need and lead to defensive withdrawal. The current research suggests that self-protective altruism, which may seem to be a contradiction of terms, characterizes the dilemma underlying the decision to engage or withdraw from prosocial behavior.

NOTES

1. Age data are based on 80% of the sample who provided this information.
2. We would like to thank the Caring Heart organization and Adi for providing us with the donation booths and relevant materials. All of the funds collected and all of the cards signed were given to the respective organizations.
3. Age data are based on 65% of the sample who provided this information.

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Received July 24, 2007
Revision accepted November 1, 2007