

# Symbolic Immortality and the Management of the Terror of Death: The Moderating Role of Attachment Style

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Three studies were designed to examine the contribution of R. J. Lifton's (1979) symbolic immortality construct to the management of the terror of death and to investigate whether attachment style may underlie this contribution. Using a sample of 420 Israeli students, Study 1 revealed an inverse correlation between self-reports of symbolic immortality and fear of personal death. This finding was validated in Study 2 ( $N = 120$ ), which found that high symbolic immortality reduced the effects of a death salience manipulation on the level of punishment given to a social transgressor. Study 3 ( $N = 270$ ) refined the association between symbolic immortality and fear of death. The inverse correlation found in Study 1 was revealed only among securely attached persons. The discussion emphasizes the interconnectedness between personality, symbolic immortality, and the management of the terror of death.

Traditionally, the human encounter with death is expected to arouse negative affect (e.g., uneasiness, terror, and fear) and to activate defense mechanisms (e.g., Kastenbaum, 1992; Neimeyer, 1994; Solomon, Greenberg, & Pyszczynski, 1991). Recently, a new theoretical approach—terror management theory (TMT; Greenberg, Solomon, & Pyszczynski, 1997; Pyszczynski, Greenberg, & Solomon, 1997), based on Becker's (1973) writings—has been proposed to explain the ways these defense mechanisms work. According to this theory, people develop cultural anxiety buffers that function to help them manage the terror that arises from the awareness that they will someday die. These cultural worldviews provide meaningful standards of valued behavior and death transcendence to those who fulfill them. In this way, every time people become aware of their own mortality, they attempt to validate their cultural worldviews in order to manage the impinging terror. This validation is achieved by social consensus: People would react to the salience of their own death by accepting ideas and people who validate their own worldviews and by rejecting ideas and people who hold beliefs dissimilar from their own beliefs.

In support of the above theoretical ideas, Rosenblatt, Greenberg, Solomon, Pyszczynski, and Lyon (1989) found that a moral transgressor (a prostitute) was treated in more negative terms and a heroic individual who upheld cherished values was treated in more positive terms after making mortality salient than in a death nonsalient condition. Accordingly, Greenberg et al. (1990) found that a manipulation of mortality salience among a group of Christian students led to more positive evaluations of a Christian person (in-group member) and more negative evaluations of a Jewish person (out-group member). They also reported that mortality salience led to positive reactions

toward a person who praised undergraduate students' cultural worldviews and to negative reactions toward someone who criticized them. These effects were replicated in several studies, using different manipulations of mortality salience and assessing a wide variety of social judgments and cognitive processes (see Greenberg et al., 1997, for an extensive review).

Although the TMT approach is an innovative conceptual framework for studying human reactions to death and has received robust empirical support, one cannot ignore previous theoretical attempts that delineate alternative intrapsychic, rather than social-cultural, ways for managing the threat of death. In an extensive review of death anxiety theories, Tomer (1994) presented several theoretical propositions that diversify the ways people attempt to cope with their own mortality beyond those mechanisms proposed by TMT. Rogers (1980) and Maslow (1970) proposed that self-actualization and openness to experience may reduce the threat of death. Erickson (1963) suggested that a sense of integrity and a positive and coherent self-perception also contribute to manage this threat. Theories emphasizing the search for meaning (Frankl, 1963; Kelly, 1955; Maddi, 1970) viewed the construction of meaningful schema for life experiences as an attempt to validate life in spite of death. The common core of all these theories seems to be the attempt to develop a sense of personal continuity and transcendence, which helps in reducing the terror of death and allows life to be lived to the fullest.

One important psychological theory that directly deals with the idea of personal continuity and transcendence as a mechanism for managing the threat of mortality has been proposed by Lifton (1973, 1979; Lifton & Olson, 1974). Despite its originality, conceptual coherence, and heuristic value, it seems that this theory has not garnered the empirical attention within academic psychology that it deserves. The present study constitutes a significant step in the empirical investigation of Lifton's (1979) construct of symbolic immortality as a psychological device for transcending the terror of death. Specifically, we examine the affective and cognitive outcomes of this construct as well as its relationship to a person's inner resources.

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The construct of symbolic immortality was initially developed by Lifton (1979), who attempted to provide a better psychological understanding of the ways survivors of the Holocaust, Hiroshima, and Vietnam confronted the terror of death. Lifton suggested that even though human consciousness tends to repress the reality of death, each person knows deep down inside that death is inevitable. This knowledge of one's own finitude underlies a fundamental and universal need to preserve and develop a personal sense of continuity and lastingness. Lifton referred to it as the need for a sense of symbolic immortality, which brings forth a sense of death transcendence and helps people genuinely face their finitude. In Lifton's terms, the sense of symbolic immortality is defined as an adaptive anticipatory response to the frightening reality of death, as well as a natural device based on the psychophysiological process of image formation. This device can help a person deal with the dualistic condition of being potent, but yet finite.

According to Lifton (1979), a sense of symbolic immortality can be attained through five modes of experiencing. The first is called the biological mode, and it refers to the sense that one is the continuation of past generations and that one will continue to live in one's progeny. The second mode, which Lifton calls the creative mode, comes from the sense that one's work, one's teaching, and one's personal influence will live on so that one's creative contribution to culture and society will not cease after one passes away. The third mode, the natural mode, results from the feeling of being a part of a universe that is beyond oneself. As one is part of eternal nature, one can be assured that something of oneself will continue to live on after death.

The fourth mode deals with the possibility of transcending death through spiritual and religious attainments. The main feature of this mode is that it takes the form of a search for a higher plane of existence, in which the self is allowed to transcend its physical finiteness. The fifth mode, called experiential, results from the capacity to lose oneself in other elements of the human flow. This mode is characterized by a psychological state that can take the form of an intense ecstatic peak experience or a more common feeling of being fully alive. The proposed five-mode structure of symbolic immortality was empirically validated in factor analytic studies (Mathews & Kling, 1988; Mathews & Mister, 1987), and positive associations between this construct and other related variables (e.g., sensation seeking and prosocial behavior) were found (Mathews & Kling, 1988; Mathews & Mister, 1987).

One basic implication of Lifton's (1979) theory is that people who possess a high sense of symbolic immortality will be less threatened by the terror of death and therefore will reveal lower levels of fear of death than people who failed to attain such a sense of immortality. This hypothesis was initially supported in only one study conducted by Drolet (1990). However, this study suffers from basic conceptual and methodological problems that limit the validity and generalizability of the findings. First, Drolet used a unidimensional measure of fear of death and therefore did not tap the richness and complexity of this construct. Second, the study relied on only participants' self-reports of their fear of death and did not assess the possible cognitive and behavioral outcomes of the terror of death. Third, it did not incorporate the association between symbolic immortality and fear of death within a broader psychological context. In the current series of

studies, we attempt to overcome these three basic problems and provide a more valid and theoretically sound test of the premise that the sense of symbolic immortality helps people to cope with the fear of death.

In studying individual differences in fear of personal death, one should take into account the well-known fact that this fear is not a unitary, but a multidimensional, concept (Florian & Kravetz, 1983; Hoelter, 1979; Spilka, Stout, Minton, & Sizemore, 1977). Florian and Kravetz proposed a multidimensional model of fear of personal death, which was developed along the lines of the work of Diggory and Rothman (1965), Kastenbaum and Aisenberg (1972), and Minton and Spilka (1976). This model suggests that the overt expressions of fear of death consist of three psychological components: the *intrapersonal*, *interpersonal*, and *transpersonal* consequences of death. Fear of death may be due to the expected impact on mind and body. It may be due to the expected impact on one's own social identity and loved ones. It may also arise from beliefs concerning the transcendental nature of the self and punishment in the hereafter. Florian and Kravetz confirmed the validity of the model in a factor analytic study, Florian and Har-Even (1984) endorsed its discriminant validity, and Florian and Snowden (1989) generalized it across different ethnic and cultural groups in the United States.

Following this multidimensional conceptualization, several studies examined the impact of psychological and sociological factors on the three components of the fear of personal death. For example, these components have been found to vary as a function of gender, religious affiliation, and level of religiosity (Florian & Har-Even, 1984; Florian, Kravetz, & Frankel, 1984; Florian & Snowden, 1989). More recent studies showed that direct exposure to death in medical and military situations, as well as personality and psychopathological variables like attachment style, several traits assessed by Minnesota Multiphasic Personality Inventory subscales, and suicidal tendencies, appear to explain individual differences in the three components of the fear of personal death (Florian & Mikulincer, 1992; Florian, Mikulincer, & Green, 1994; Mikulincer, Florian, & Tolmacz, 1990; Orbach, Kedem, Gorchover, Apter, & Tyano, 1993). To date, there is no published study attempting to use this conceptualization of fear of death in order to examine Lifton's (1979) hypothesis. This is the first purpose of our study.

In order to provide a valid test of Lifton's (1979) hypothesis, one should not limit oneself to the use of self-report scales of fear of death because of the well-known flaws of paper-and-pencil methodology (e.g., social desirability). Therefore, we also attempt to tap other cognitive reactions to the situational awareness of death. Specifically, we adopt TMT's research paradigm, which assumes that the encounter with death leads people to protect cultural worldviews (e.g., reject moral transgressors) in order to reduce the impinging threat. We hypothesize that a sense of symbolic immortality will moderate this effect of the encounter with death. That is, making death salient will not influence reactions to moral transgressions among persons who have high levels of symbolic immortality. Cultural anxiety buffers will be activated, and mortality salience will lead to negative reactions to transgressions only among people who do not have high levels of symbolic immortality. These persons may fail to

transcend their own death and therefore may reveal high levels of fear of death and strong defensive reactions.

In examining Lifton's (1979) hypothesis, one should also ask whether the sense of symbolic immortality is limited to the protection it gives against fear of death or whether it is a part of a much broader self-protective resource. In his writings, Lifton (1973) assumed that the sense of symbolic immortality is related to broader psychological systems, like the relationship between the individual and his or her social environment. Specifically, he suggested that the attainment of what Bowlby (1973) labeled *secure attachment* is one of the core elements in the development of a sense of symbolic immortality in adulthood. In Lifton's terms, a sense of symbolic immortality entails a positive and secure connection to the world. In this study, we attempt to empirically examine this theoretical formulation.

One basic assumption of Bowlby's theory (1969, 1973, 1980) is that early interactions with attachment figures develop inner working models that organize emotional experience and guide people in coping with distress over the life span. On the one hand, there are individuals who experience warm attachment interactions and develop a sense of *secure base*, which acts as an inner resource in dealing with life adversities. These secure individuals have been found in adulthood to exhibit high ability to cope constructively with distress and to exhibit good adjustment (Kobak & Sceery, 1988; Mikulincer, 1995; Mikulincer & Florian, 1995; Mikulincer, Florian, & Weller, 1993; Shaver & Hazan, 1993). On the other hand, there are individuals who experience insecure early attachment interactions and develop maladaptive working models, either avoidant or anxious-ambivalent (Ainsworth, Blehar, Waters, & Wall, 1978; Hazan & Shaver, 1987), which, in turn, impair their ability to manage distress. In adulthood, both avoidant and anxious-ambivalent persons have been found to experience more negative emotions and to rely on less effective coping strategies (Kobak & Sceery, 1988; Mikulincer, 1995; Mikulincer & Florian, 1995; Mikulincer et al., 1993; Mikulincer & Orbach, 1995; Shaver & Hazan, 1993).

Attachment working models have also been found to regulate the person's expressions of fear of personal death (Mikulincer et al., 1990). In keeping with the ability of secure persons to deal with negative affects, findings showed that these persons experienced less fear of death than insecurely attached persons. In addition, one type of insecure persons, anxious-ambivalent, exhibited stronger fear of death than secure persons at both conscious and below-conscious levels of awareness, and they were more likely to fear the loss of social identity in death. Their reasons for fear of death and the expression of such fear in direct and indirect measures may reflect their lack of resources to deal with the threat of death and their hypersensitivity to social rejection (Collins & Read, 1990; Shaver & Hazan, 1993). The other insecure type, avoidant, did not exhibit stronger overt fear of death than secure people but rather evidenced stronger fear of death at a lower level of awareness. It is possible that avoidant persons' habitual reliance on repression and denial (Kobak & Sceery, 1988; Mikulincer & Orbach, 1995; Shaver & Hazan, 1993) might truncate the direct expression of fear of death, but this reliance on repression and denial seems to be ineffective in reducing the fear of death at lower levels of awareness.

In the current study, we hypothesize that attachment working models may also regulate the attainment of a sense of symbolic immortality. Specifically, we predict that securely attached persons will reveal a higher sense of symbolic immortality and therefore may feel more protected against the terror of death than insecurely attached persons, either avoidant or anxious-ambivalent persons. A secure attachment working model seems to lead people to confront life adversities in a constructive manner and to feel confident in their potential and ability to overcome obstacles that impede its fulfillment. This basic positive attitude toward life may also help people in transcending the terror of death by engaging in activities that enhance their sense of symbolic immortality and reduce their fear of death. In contrast, the chronic need to defend the self against distress and the doubts about themselves and the world may lead insecurely attached persons to develop negative attitudes toward life and death. This pervasive attitude will be manifested in both high fear of death and the failure to attain a sense of symbolic immortality.

In examining the above hypotheses, we conducted three different studies. Study 1 is correlational research in which participants filled out self-report scales on symbolic immortality and fear of death. Study 2 used the TMT methodology and asked whether the individual's sense of symbolic immortality moderates the effects of the manipulation of mortality salience on reactions to a social transgression. Study 3 examined whether persons differing in attachment styles differ in their sense of symbolic immortality and fear of death.

### Study 1

In Study 1, we examined the hypothesized inverse association between a sense of symbolic immortality and fear of personal death. For this purpose, we translated into Hebrew, Mathews and Kling's (1988) Symbolic Immortality Scale and assessed fear of death by using a self-report scale that taps the diverse kinds of fears related to death's consequences.

### Method

**Participants.** A total of 420 Israeli Jewish students (173 men and 247 women) from Bar-Ilan and Tel-Aviv Universities volunteered to participate in the present study without any reward. The demographic data of the sample were as follows: Age ranged from 18 to 50 years ( $Mdn = 26$ ), and years of education ranged from 12 to 16 ( $Mdn = 14$ ). Fifty-nine percent of the participants ( $n = 248$ ) defined themselves as religious, and 57% of the participants ( $n = 241$ ) were single.

**Materials and procedure.** Participants were contacted during regular class time, in which a research assistant presented the study as a survey of attitudes toward life and death and asked who wanted to volunteer to participate in the study. Those who agreed were invited to a separate room after class in order to fill out the questionnaires. From the 450 participants initially approached, 420 (90%) agreed to participate in the study. Participants filled out a scale that taps symbolic immortality and the Fear of Personal Death Scale; they also provided basic sociodemographic information. The order of the questionnaires was randomized across participants.

Individual differences in symbolic immortality were examined by a Hebrew translation of Mathews and Kling's (1988) scale. This scale consisted of 30 belief statements generated to reflect Lifton's (1979) five modes of symbolic immortality (six items corresponding to each

mode). The scale was originally constructed by Mathews and Mister (1987) and revised by Mathews and Kling, who dropped the weakest items from the original version. These studies provided initial evidence on the reliability and validity of the scale. Factor analyses revealed the expected factor structure, and Cronbach's alpha coefficients for each factor ranged from .79 to .90. In addition, theoretically expected correlations were found between these factors and other self-report scales (e.g., prosocial behavior and sensation seeking).

For the present study, a team of three psychologists with appropriate linguistic background translated the scale to Hebrew, according to Brislin's (1980) back-translation technique. Participants were instructed to rate the extent of their agreement or disagreement with each statement by using a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Mathews and Kling (1988) reported high reliability of the scale, and their factor analysis supported the 5-factor structure of the questionnaire.

In the current study, a factor analysis with Varimax rotation yielded four main factors (eigenvalue > 1) that explained 56% of the variance. The first factor explained 29% of the variance and included the six items that tap the biological mode (e.g., "I would do almost anything to ensure the future of my children") and the six items that tap the creative mode (e.g., "It is important for me to write, create, or build something that will exist after my death"). That is, at least in our Israeli sample, the biological and creative modes were combined into a single factor. The second factor explained 12% of the variance and included the six items that tap the religious mode (e.g., "The meaning of life is determined by my religious beliefs"). The third factor explained 9% of the variance and included the six items that tap the nature mode (e.g., "Being with nature gives me a sense of peace and tranquility about life"). Finally, the fourth factor explained 6% of the variance and included the six items that tap the experiential mode (e.g., "It is important to me to live my life to the fullest by experiencing as much of it as I can").

In general, the factor analysis demonstrated that the 30-item scale assesses four modes of symbolic immortality: religious, nature, experiential, and a combined biological-creative mode. These modes fit well to Lifton's (1979) theoretical propositions. Cronbach's alphas for items loading in a factor indicated high internal consistency (from .83 to .89). In addition, Cronbach's alpha for all 30 items was high (.91). On this basis, we computed four general scores by averaging items loading high in each factor. Higher scores reflected more attitudes and behaviors related to a mode of symbolic immortality.

The overt expressions of fear of death were measured by the Fear of Personal Death Scale (Florian & Kravetz, 1983). This scale is a self-report questionnaire consisting of 31 reasons for fear of death to which participants respond on a 7-point scale ranging from 1 (*totally incorrect for me*) to 7 (*totally correct for me*). Florian and Kravetz reported a factor analysis that revealed six factors. Two factors—Fear of Loss of Self-Fulfillment (i.e., "cessation of creative activities") and Fear of Body Annihilation (i.e., "decomposition of the body")—correspond to the intrapersonal component of fear of death. The interpersonal component is represented by the Fear of Loss of Social Identity (i.e., "my absence will not be felt") and Fear of Consequences to Family and Friends (i.e., "inability to provide for family") factors. The transpersonal component is reflected in the Fear of the Unknown Nature of Death (i.e., "uncertainty of what to expect") and the Fear of Punishment in the Hereafter factors. This structure was replicated in several studies across samples in Israel and in the United States (Florian & Har-Even, 1984; Florian & Snowden, 1989).

In the current study, a factor analysis with Varimax rotation revealed five main factors (eigenvalue > 1) that explained 61% of the variance. The items included in the first four factors entirely replicated Florian and Kravetz's (1983) factors of Fear of Loss of Self-Fulfillment, Fear of Body Annihilation, Fear of Loss of Social Identity, and Fear of Consequences to Family and Friends. The fifth factor included items corre-

sponding to Florian and Kravetz's factors of the Fear of the Unknown Nature of Death and the Fear of Punishment in the Hereafter. That is, our fifth factor combined the two factors belonging to the transcendental component of fear of death. Cronbach's alphas for the five factors were reasonably high (from .74 to .87). On this basis, we computed five scores by averaging items on each of the factors. Higher scores indicate that participants attributed more fear to a factor.

## Results and Discussion

In this section, we examine our main hypothesis that the level of fear of personal death is inversely related to an individual's scores on symbolic immortality. For this purpose, we conducted a canonical correlation analysis examining the strength of the association between the cluster of five Fear of Personal Death factors and the cluster of four modes of symbolic immortality. In addition, we conducted Pearson product-moment correlations assessing the association between each pair of variables. Table 1 presents the relevant Pearson product-moment correlation coefficients.

The canonical correlation analysis yielded a significant association between the fear of personal death construct and the symbolic immortality construct, canonical  $R(R_c) = .31$ ,  $F(20, 1364) = 4.04$ ,  $p < .01$ . As can be seen in Table 1, all the bivariate Pearson product-moment correlations were negative, supporting the hypothesized inverse association between fear of death and symbolic immortality. However, the strength of the correlations was moderately low, and not all of them reached statistical significance. Specifically, the biological-creative mode showed significant inverse correlations with four of the five fear of death factors (Fear of Loss of Self-Fulfillment, Fear of Body Annihilation, Fear of Loss of Social Identity, and Fear of the Unknown Nature of Death). In addition, the religious mode showed a significant and inverse correlation with only the Fear of Body Annihilation factor, and the nature mode showed a significant and inverse correlation with the Fear of Body Annihilation and the Fear of Loss of Social Identity factors.

In general, our findings support the hypothesized inverse relationship between symbolic immortality and fear of death. However, one should note that the strength of the correlation was, although significant, moderately low. This fact may suggest the

Table 1  
Pearson Correlations Between Symbolic Immortality Modes and Fear of Personal Death Factors

Fear of death factor	Symbolic immortality mode			
	Religious	Biological-creative	Nature	Experiential
Self-Fulfillment	-.12	-.26**	-.10	-.04
Body Annihilation	-.24**	-.25**	-.19**	-.03
Social Identity	-.12	-.20**	-.23**	-.03
Consequences to Family	-.04	-.06	-.06	-.07
Transcendental Fear	-.05	-.25**	-.08	-.01

\*\*  $p < .01$ .

presence of a possible third factor that may moderate the association between the two assessed constructs. This possibility is examined in Study 3 by introducing the construct of attachment style. In addition, our conclusions should be taken with caution because of the use of self-report methodology and therefore are reexamined in Study 2 wherein we used a different methodological approach.

Study 1 also revealed another interesting finding. Although our factor analysis basically reproduced Lifton's (1979) structure of symbolic immortality, it combined the biological and creative modes in a single factor. At this point, we can only raise a possible cultural explanation, emphasizing the particularities of Israeli Jewish society where family continuity is viewed as an integral part of the individual's personal attainments. This explanation should be further explored by using a cross-cultural approach in examining the meanings attached to the various modes of symbolic immortality.

### Study 2

In Study 2, we intended to expand the understanding of the association between symbolic immortality and fear of personal death. Instead of assessing self-reports of fear of death, this time we used the TMT framework, which taps the cognitive and behavioral consequences of fear of death. Specifically, we conceptually replicated Rosenblatt et al.'s (1989) study, examining the hypothesis that individual differences in symbolic immortality moderate the effects of the manipulation of death salience on reactions to a moral transgression (increased punishment to the transgressor). In examining this hypothesis, we used a  $2 \times 2$  factorial design for death salience manipulation (salient or nonsalient) and scores in symbolic immortality (low or high). The dependent variable was the level of monetary bond that participants set for an alleged prostitute.

### Method

**Participants.** Undergraduate students ( $N = 120$ ) from the social science department at Bar-Ilan University volunteered to participate in the study without monetary reward. The sample consisted of 66 women and 54 men, ranging in age from 21 to 27 years ( $Mdn = 24$ ).

**Materials and procedure.** All the participants were approached during regular class time, were told that the study concerned the association between personality and social opinions, and were immediately requested to fill out various scales in the order described below. The entire procedure took about 20 min.

After reading general instructions and providing basic demographic information, all the participants received a two-item open-ended questionnaire aimed at manipulating death salience. According to the content of these two items, participants were randomly assigned to one of two experimental conditions. Half of the participants were assigned to the *death salient* condition, in which they were asked to write about (a) what will happen to them as they physically die, and (b) the emotions that the thought of their own death arouses in them. The other half of the participants were assigned to the control (*death nonsalient*) condition, in which they were asked to write about (a) what will happen to them at the end of the current academic year, and (b) the emotions that the thought of the end of the current academic year arouses in them. This procedure was similar to that of Rosenblatt et al.'s (1989) study.

Following the death salience manipulation, all the participants completed the Symbolic Immortality Scale (see the detailed description in

Study 1). Because in the current study we intend to assess whether symbolic immortality moderates the effects of death salience without hypothesizing different effects for each of its modes, we calculated a general symbolic immortality score by averaging the 30 items of the scale. Cronbach's alpha for the 30 items was high (.88), indicating appropriate internal consistency. On the basis of the distribution of this general score, participants in each death salience condition were divided into two groups: those who scored below the median of the symbolic immortality score (3.58) and those who scored above it.

The Symbolic Immortality Scale was followed by a scale that assessed the study's dependent variable: reactions to a moral transgression (i.e., prostitution). Participants received information about the arrest of an alleged prostitute who had a prior prostitution conviction 6 months earlier and had no failures to appear in court. They received sociodemographic information about the prostitute and information about the previous and current arrests (location and date of the crime, the arresting officer, and the arresting charge). This information was followed by a form that asked participants to set bond for the prostitute as an indicator of the punishment they gave to this specific crime. On this form, participants were told that bond for this class of offense usually ranges from 0 to 999 Israel shekel (ISH).

### Results and Discussion

The hypothesis that symbolic immortality moderates the effect of death salience on reactions to transgressions was examined by using a two-way analysis of variance (ANOVA) with symbolic immortality (high or low) and death salience (salient or nonsalient) as the variables. The dependent variable was the level of monetary bond participants set for the alleged prostitute. Table 2 presents means and standard deviations relevant to this analysis.

The ANOVA revealed a significant main effect for death salience,  $F(1, 116) = 5.10, p < .05$ . This effect replicated previous TMT findings: Participants in the death salient condition set a higher bond for the prostitute ( $M = 496.23$  ISH) than participants in the death nonsalient condition ( $M = 383.59$  ISH). Whereas the main effect for symbolic immortality was not significant, the two-way interaction reached significance,  $F(1, 116) = 4.06, p < .01$ . Tests for simple main effects revealed that the effect for death salience was significant only among participants who scored below the median on the Symbolic Immortality Scale ( $p < .01$ ) but not among those who scored above the median. That is, death salience led to an increase in the level of bond only among participants who showed low scores in symbolic immortality (see Table 2). As expected,

Table 2  
Means and Standard Deviations of Bond Level According to Death Salience and Level of Symbolic Immortality

Symbolic immortality level	Death salient	Death nonsalient
Low		
<i>n</i>	33	26
<i>M</i>	595.42	382.19
<i>SD</i>	296.18	240.66
High		
<i>n</i>	27	34
<i>M</i>	397.04	385.01
<i>SD</i>	244.64	287.75

participants who were high in symbolic immortality were not affected by the death salience manipulation. This finding supports our hypothesis that the sense of symbolic immortality might serve as an anticipatory protective device against the terror of death.

### Study 3

In Study 3, we intended to clarify and refine the association between symbolic immortality and fear of death by examining whether individual difference variables may contribute to this association. Specifically, we used Bowlby's (1973) attachment theory and assessed whether an individual's attachment style, which was found to be related to fear of death, may also contribute to the sense of symbolic immortality and may moderate the association between these two constructs.

### Method

**Participants.** A total of 270 Israeli Jewish students (128 men and 142 women) from Bar-Ilan and Tel-Aviv universities volunteered to participate in the present study without reward. The demographic data of the sample were as follows: Age ranged from 24 to 45 years ( $Mdn = 28$ ), and years of education ranged from 12 to 15 ( $Mdn = 13$ ).

**Materials and procedure.** Participants completed the questionnaires during regular class time, in which a research assistant presented the study as a survey of attitudes toward life and death. Three scales were presented in a random order: the Symbolic Immortality Scale, the Fear of Personal Death Scale, and the Attachment Style scale.

The Symbolic Immortality Scale and the Fear of Personal Death Scale were identical to those described in Study 1. In the current study, Cronbach's alphas for the four modes of symbolic immortality and the five factors of fear of death were appropriate (ranging from .75 to .92), indicating high internal consistency. In addition, a factor analysis of the Symbolic Immortality Scale replicated the factor structure found in Study 1. On this basis, we computed four scores for the Symbolic Immortality Scale and five scores for the Fear of Personal Death Scale in the same way as described in Study 1.

Attachment styles were assessed by way of two instruments based on Hazan and Shaver's (1987) descriptions of how people typically feel in close relationships. Details on these instruments were reported by Mikulincer et al. (1990). First, participants received the three Hazan and Shaver descriptions of feelings and cognitions regarding attachment styles and were asked to endorse the description that best described their own feelings. Second, they received 15 statements (five items per attachment style), which were constructed by separating the items of Hazan and Shaver's descriptions (for more details, see Mikulincer et al., 1990). This 15-item scale was found to be internally consistent in previous studies with Israeli samples and to possess high construct and predictive validity (Mikulincer & Erev, 1991; Mikulincer et al., 1990).

A factor analysis with Varimax rotation of the 15 attachment items yielded three factors (eigenvalue  $> 1$ ) that explained 56% of the variance and replicated the three-factor structure of the scale. Cronbach's alphas for the factors were acceptable (from .72 to .86). On this basis, we averaged items corresponding to each factor. Then, we compared the values of these scores (previously standardized by way of  $z$  scores) and assigned each participant to the attachment style that had the maximal value of the three alternatives.

Only 12 mismatches resulted from comparing the results of the two techniques for classifying attachment style. No clear pattern was detected in the failures to coincide. In order to avoid classification ambiguities, we dropped these cases from statistical analyses. The frequencies of attachment styles were similar to those found by Hazan and Shaver

(1987) in an American sample and to those found in previous Israeli studies (e.g., Mikulincer et al., 1990). Sixty-three percent of the participants ( $n = 162$ ) classified themselves as secure, 21% as avoidant ( $n = 55$ ), and 16% as anxious-ambivalent ( $n = 41$ ).

### Results and Discussion

**Attachment style and fear of death.** Preliminary analyses were conducted examining the association between attachment style and fear of death. Specifically, one-way multivariate analysis of variance (MANOVA) and ANOVAs were performed with attachment style as the independent variable and the five factors of fear of death as dependent variables. Table 3 presents means and standard deviations relevant to these analyses.

The MANOVA revealed a significant main effect for attachment style,  $F(10, 502) = 2.79, p < .05$ . The univariate ANOVAs indicated that this effect was significant for only the Loss of Social Identity factor,  $F(2, 255) = 3.47, p < .05$ , and the Transcendental Fear factor,  $F(2, 255) = 5.30, p < .01$ . Duncan post hoc tests ( $\alpha = .05$ ) revealed that anxious-ambivalent persons reported higher fear of loss of social identity after death than secure persons. In addition, both avoidant and anxious-ambivalent persons reported higher fear of the unknown nature of death than secure persons (see means in Table 3). These differences replicated findings reported by Mikulincer et al. (1990) and supported the idea that attachment style is an important source of individual differences in fear of death.

**Attachment style and symbolic immortality.** In this section, we examine the association between the individual's attachment style and his or her scores in the four modes of symbolic immortality. For this purpose, one-way MANOVA and ANOVAs were performed with attachment style as the independent variable and the four modes of symbolic immortality as dependent variables. The MANOVA revealed a significant main effect for attachment style,  $F(8, 504) = 2.11, p < .05$ . The univariate ANOVAs indicated that this effect was significant for only the biological-

Table 3  
Means and Standard Deviations of Fear of Death and Symbolic Immortality According to Attachment Style

Dependent measures	Secure		Avoidant		Ambivalent	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Fear of death factors						
Self-Fulfillment	2.80	1.55	2.90	1.61	3.29	1.35
Body Annihilation	2.48	1.50	2.63	1.74	2.63	1.45
Social Identity	3.08	1.52	3.51	1.69	3.70	1.57
Consequences to Family	3.80	1.72	4.24	1.82	4.29	1.52
Transcendental Fear	2.62	1.17	3.13	1.51	3.21	1.31
Symbolic immortality modes						
Religious	2.46	1.07	2.36	1.06	2.55	0.94
Biological-creative	3.53	0.72	3.20	0.94	3.54	0.71
Nature	3.27	0.89	3.22	0.93	3.35	0.81
Experiential	3.91	0.71	3.87	0.87	3.91	0.66

creative mode of symbolic immortality,  $F(2, 255) = 3.87, p < .05$ . Duncan post hoc tests ( $\alpha = .05$ ) revealed that secure and anxious-ambivalent persons scored significantly higher in the biological-creative mode than did avoidant persons (see means in Table 3). The other univariate effects were not significant.

*Attachment style, fear of death, and symbolic immortality.* In this section, we examine whether attachment style moderates the association between fear of death and symbolic immortality. For this purpose, canonical and Pearson correlations were computed between the five fear of death factors and the four symbolic immortality modes separately for each of the three attachment styles (secure, avoidant, and anxious-ambivalent). Table 4 presents the relevant Pearson correlations.

For secure persons, the canonical correlation analysis yielded a significant association between the fear of personal death construct and the symbolic immortality construct,  $R_c = .55, F(20, 508) = 3.66, p < .01$ . As can be seen in Table 4, the biological-creative mode showed significant inverse correlations with all the five fear of death factors. In addition, the religious mode showed a significant and inverse correlation with the Fear of Loss of Self-Fulfillment and the Fear of Social Identity. Finally, the nature mode showed a significant and inverse correlation with the Fear of Loss of Self-Fulfillment, the Fear of Body Annihilation, and the Fear of Loss of Social Identity. It is interesting to note that these correlations were stronger than those found in Study 1 for the entire sample.

For avoidant persons, the canonical correlation analysis also

yielded a significant association between fear of personal death and symbolic immortality,  $R_c = .57, F(20, 154) = 1.71, p < .05$ . However, all the significant bivariate correlations were positive, indicating that the higher the symbolic immortality of avoidant persons, the higher their fear of death. Specifically, the biological-creative mode showed significant positive correlations with the Fear of Loss of Self-Fulfillment, the Fear of Loss of Social Identity, and the Fear of Consequences to Family and Friends. The nature mode showed significant positive correlations with the Fear of Loss of Social Identity and the Fear of Consequences to Family and Friends. Finally, the experiential mode was significantly and positively associated with the Fear of Loss of Self-Fulfillment.

As can be seen in Table 4, significant positive associations between fear of death factors and symbolic immortality modes were also found for the other insecurely attached group—anxious-ambivalent persons,  $R_c = .67, F(20, 108) = 1.83, p < .05$ . Specifically, the biological-creative mode showed significant positive correlations with the Fear of Loss of Self-Fulfillment, the Fear of Loss of Social Identity, the Fear of Consequences to Family and Friends, and the Fear of the Transcendental Nature of Death. In addition, the nature and experiential modes showed significant positive correlations with Fear of Loss of Self-Fulfillment.

*Conclusions.* In general, the findings partially fit our predictions. An expected inverse correlation between symbolic immortality and fear of death was found for only individuals reporting secure attachments. However, one should note some problems with the data. First, the strong relationships between symbolic immortality and fear of death occur mainly with regard to the biological-creative mode. Second, attachment groups differed only with regard to this mode. Third, insecure persons revealed an unexpected positive correlation between the two constructs. We address these points in the General Discussion.

## General Discussion

In the perpetual confrontation with death, human beings have developed symbolic mechanisms that might protect them against the terror of their own finitude. The findings of our series of studies seem to corroborate Lifton's (1979) theoretical assumptions and to provide systematic empirical support to the hypothesis that a sense of symbolic immortality can serve as a shield against the fear of death. Specifically, we found that persons who scored high in certain aspects of symbolic immortality reported low levels of fears related to the various components of personal death. Moreover, these individuals showed no activation of other terror management mechanisms when exposed to death salience induction. In this case, a sense of symbolic immortality appears to act as a self-protective device, which neutralizes the pervasive impact of death encounter and the activation of cultural anxiety-buffer mechanisms.

Findings of Study 1 revealed that a sense of symbolic immortality was relevant to all of the three theoretical components of fear of death: intrapersonal, interpersonal, and transpersonal. In order to explain this finding, we address Lifton's (1973) original conceptualization of the symbolic immortality construct. Lifton proposed that this construct is related to three basic polarities of human existence: connection versus separation, integrity versus

Table 4  
*Pearson Correlations Between Symbolic Immortality Modes and Fear of Personal Death Factors in Each Attachment Style*

Fear of death factor	Religious	Biological-creative	Nature	Experiential
Secure style				
Self-Fulfillment	-.19	-.39**	-.19*	-.07
Body Annihilation	-.14	-.45**	-.25**	-.05
Social Identity	-.21**	-.46**	-.24**	-.01
Consequences to Family	-.08	-.21**	-.13	-.04
Transcendental Fear	-.03	-.38**	-.10	-.09
Avoidant style				
Self-Fulfillment	.12	.33**	.13	.28*
Body Annihilation	.05	.16	.01	.19
Social Identity	.17	.38**	.32**	.16
Consequences to Family	.24	.36**	.34**	-.06
Transcendental Fear	.24	.22	.12	.13
Ambivalent style				
Self-Fulfillment	.01	.46**	.34*	.30*
Body Annihilation	.05	.28	.16	.08
Social Identity	.02	.36**	.22	.15
Consequences to Family	.11	.48**	.12	.18
Transcendental Fear	.25	.30*	.24	.26

\*  $p < .05$ . \*\*  $p < .01$ .

disintegration, and movement versus stasis. Moreover, a sense of symbolic immortality seems to protect people against the fears of separation, self-disintegration, and lack of movement and vitality. It is interesting to note that we can observe a parallelism between Lifton's polarities and Florian and Kravetz's (1983) components of fear of death. Although fear of separation from the world corresponds to the interpersonal component of fear of death, fear of self-disintegration is a part of the intrapersonal component, and fear of stasis seems to correspond to the transpersonal component. On this basis, it is not surprising that symbolic immortality was found to be inversely related to the three components of fear of death.

The results of Study 2 have important implications for both Lifton's (1979) theory and TMT. First, the fact that the sense of symbolic immortality moderated the effects of death salience on the judgment of social transgressions expands the significance of such a sense to a much broader repertoire of life-related cognitions, emotions, and behaviors. Moreover, the study provides a more rigorous test of Lifton's hypothesis and emphasizes the implications of a sense of symbolic immortality for theory and research in social psychology. With regard to TMT, the above finding seems to limit the activation of worldview protection mechanisms mainly to those persons who do not possess a sense of symbolic immortality. This tentative conclusion may suggest two types of complementary self-protective mechanisms, which different persons may use in their confrontation with their own mortality.

The above line of interpretation seems also to correspond to some new ideas proposed by Greenberg et al. (1997). Within the terminology of the theory, Study 2 shows that people with strong cultural anxiety buffers (i.e., faith in meaningful worldview and sense of value within the context of that worldview) have less of a need to bolster their worldview when reminded of their mortality. A similar hypothesis has been supported in a recent series of studies (Harmon-Jones, Simon, Greenberg, Pyszczynski, & Solomon, in press) showing that high self-esteem people and those whose self-esteem has been raised also do not respond to mortality salience with heightened worldview defense.

The findings also fit with TMT's emphasis on the possible existence of "growth" motives (Pyszczynski et al. 1997). These motives reflect the human basic need for progress, development, and increasing complexity, which, in turn, may serve the individual as basic inner resources in dealing with life adversities. In our view, the development of a sense of symbolic immortality may be a facet of growth motives. Lifton's (1979) sense of symbolic immortality, particularly the biological-creative mode, reflects a tendency toward development and growth and may result in a richer and more productive life.

Further support for our line of thinking may also be found in the results of Study 3. First, as expected, there were systematic individual differences in the sense of symbolic immortality as well as in its association with fear of death. Moreover, these individual differences were clearly related to the person's attachment style, implying that a sense of symbolic immortality may be a part of more basic inner resources that serve the human needs for growth and protection. Findings showed that both secure persons and anxious-ambivalent persons scored higher in the biological-creative mode of symbolic immortality than

did avoidant persons. However, although secure persons evidenced an inverse association between symbolic immortality and fear of death, anxious-ambivalent and avoidant persons showed an unexpected positive association between these two constructs.

With regard to securely attached persons, the findings corroborate our predictions. These individuals, who have experienced warm attachment relationships and have developed a sense of secure base, were able to develop a corresponding sense of symbolic immortality, which, in turn, seemed to protect them against the terror of their own mortality, as indicated by their relatively low levels of fear of personal death. It may be that secure persons' positive and constructive attitudes toward life (Collins & Read, 1990; Mikulincer, 1995; Mikulincer et al., 1993) help them in developing a sense of personal continuity and in transcending the terror of death. From this perspective, the observed associations among secure attachment, symbolic immortality, and fear of death seem to shed light on the potential source and development of a sense of symbolic immortality. Furthermore, they point out the importance of early life experiences and personality development in shaping the individual approach to life and death.

Avoidant persons revealed an interesting pattern of symbolic immortality and fear of death. In line with our predictions, these persons, who have experienced insecure attachment relationships and do not hold a positive connection to the world (Collins & Read, 1990; Hazan & Shaver, 1987), revealed corresponding low levels of symbolic immortality. However, this lack of a sense of personal continuity was not reflected as one may expect in high levels of fear of personal death. In fact, avoidant persons, like securely attached persons, reported relatively low levels of this fear.

In our view, the above finding reflects the activation of suppression or denial as the basic mechanisms used by avoidant persons in dealing with their own death. This interpretation is based on extensive evidence pointing out the habitual tendency of these persons to distance themselves and avoid any direct or symbolic confrontation with painful and threatening life experiences (e.g., Kobak & Sceery, 1988; Mikulincer et al., 1993; Mikulincer & Orbach, 1995). Moreover, it is also supported by a previous finding from our laboratory specifically showing that, although avoidant persons revealed relatively low fear of death in a self-report questionnaire, they scored high in a below-level-of-awareness measure of this fear (Mikulincer et al., 1990). If this interpretation is correct, one can also offer a complementary explanation for avoidant persons' low sense of symbolic immortality, by which the denial of the terror of death makes irrelevant the need to develop a sense of personal continuity and lastingness.

In the case of anxious-ambivalent persons, the findings revealed a somewhat curious and complex relationship between fear of death and symbolic immortality. On the one hand, unexpectedly, these persons reported a relatively high sense of symbolic immortality, similar to that shown by securely attached persons. On the other hand, they also reported relatively high levels of fear of personal death, a finding that has already been reported in Mikulincer et al.'s (1990) study. Moreover, among anxious-ambivalent persons, fear of death and symbolic immortality were found to be positively correlated.



According to our interpretation, this pattern of findings may result from the anxious-ambivalent persons' habitual way of dealing with painful experiences. There is wide evidence suggesting that these persons cannot distance themselves from sources of inner or outer threats and are unable to repress negative feelings and thoughts (e.g., Kobak & Sceery, 1988; Mikulincer et al., 1993; Mikulincer & Orbach, 1995). In fact, findings have shown that anxious-ambivalent persons' cognitive systems seem to be overwhelmed by negative emotions and ruminative worries about their social identity and value (Kobak & Sceery, 1988; Mikulincer & Orbach, 1995). In facing the terror of death, it is possible that this strategy of affect regulation is manifested in the inability to suppress or deny the fear of death and in the constant search for other coping mechanisms, such as a sense of symbolic immortality, that might provide some kind of release from their worries and anxieties. However, even though anxious-ambivalent persons try to develop a relatively high sense of symbolic immortality, it seems that this cognitive shield is still inefficient in reducing their basic insecurity and pessimistic approach to life, therefore failing to manage their terror of death.

Alternative interpretations can be offered to the unexpected positive correlation found among anxious-ambivalent persons. First, their responses on the Symbolic Immortality Scale may reflect defensive responding. That is, fear of death may drive these persons to claim investments in symbolic immortality, but they may not really have strong investments. Second, investments in symbolic immortality may not quell fear of death in anxious persons but rather heighten this fear by giving them the feeling they have more to lose in death. Third, it is possible that although secure persons denied fear of death and claimed high investments in symbolic immortality, anxious-ambivalent persons were more veridical and the more fear they had, the more they needed to invest in symbolic immortality. It is important to note that these alternative interpretations do not contradict our basic idea that anxious-ambivalent persons fail to regulate their fear of death. Further studies should examine these alternative hypotheses.

An overall view of the current findings reveals that our initial hypothesis about an inverse relationship between symbolic immortality and fear of death is not necessarily universal, as Lifton (1979) contended, but seems to depend on the individual's inner resources, such as attachment style in this case. The expected inverse correlation was found only among securely attached persons, who possess the required basic trust and positive connection to the world in order to develop a sense of personal continuity and to transcend the terror of death. In contrast, among insecurely attached persons, symbolic immortality does not fulfill its expected protective function. In the case of avoidant persons, the activation of denial and the suppression of death concerns seem to make the sense of symbolic immortality irrelevant to the management of fear of death. In the case of anxious-ambivalent persons, their overwhelming insecurity seems to make even a high sense of symbolic immortality ineffective in reducing their terror of death.

The above line of interpretation emphasizes the view that the ways in which people deal with their own mortality may fit to the ways in which they deal with life issues. It seems that security or insecurity in one's connection to the world have a

strong impact not only on how people cope with life adversities but also on how they manage the terror of their own death. Similarly, one may speculate that other inner resources, like a sense of coherence (Antonovski, 1987) or hardiness (Kobasa, 1982), may also affect the development and effectiveness of a sense of symbolic immortality. For example, people who view their lives in terms of comprehensibility, manageability, and meaningfulness (high sense of coherence) will also be those who may develop a high sense of symbolic immortality and may perceive death as a comprehensible, manageable, and meaningful event.

Before concluding this discussion, we want to acknowledge the fact that the associations between symbolic immortality, fear of death, and attachment style were most salient in the biological-creative mode. It seems that this mode of symbolic immortality is probably the most relevant way by which people in Western, secular societies attain a sense of continuity and transcendence (Lifton, 1973). Moreover, the growth motives proposed by TMT seem to better correspond to the biological-creative mode than to the other modes of symbolic immortality. In fact, whereas the nature, religious, and experiential modes may be confined to unique kinds of ideologies or belief systems, the biological-creative mode may reflect the core of human existence.

One should also note that most of the present findings were based on self-report measures, which can be biased by social desirability or by some degree of lack of awareness to inner experiences. In addition, although the literature suggests that fear of death develops earlier in life than symbolic immortality, the correlational nature of the findings prevents any conclusive statement about direction of causality. Despite these possible limitations, our series of studies seems to provide initial systematic validation of Lifton's (1979) hypothesis. At the same time, our findings emphasize the complexity of the management of the terror of death and the interrelationships between personality, coping with life circumstances, and personal mortality. In this context, one should acknowledge the need for further studies that will tap the ways in which the psychological management of the fear of death may be related to religion, cultural worldviews, value systems, and life history.

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