

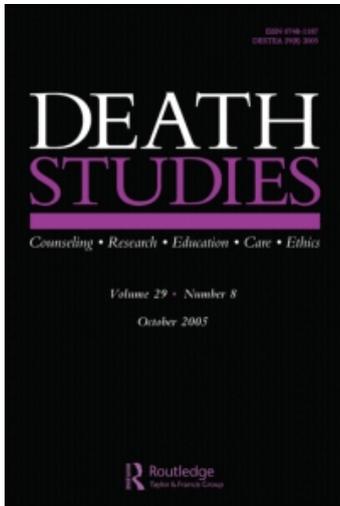
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Meaning-Making in Memories: A Comparison of Memories of Death-Related and Low Point Life Experiences

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MEANING-MAKING IN MEMORIES: A COMPARISON OF MEMORIES OF DEATH-RELATED AND LOW POINT LIFE EXPERIENCES

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Because of their extensive experience with death and dying, hospice volunteers may be more successful at engaging in meaning-making regarding their death-related experiences than their low point life experiences (e.g., job loss). Consequently, their memories of death-related experiences will manifest more meaning-making strategies (e.g., benefit-finding) than their low point memories. Fifty-two hospice volunteers wrote memory narratives of death-related and low point experiences and provided ratings of their memories. Results show that death memory narratives exhibit more meaning-making strategies, are rated as more emotionally positive, and are more frequently rehearsed. The long-term significance of the use of meaning-making strategies is discussed.

Compared to mundane low point life experiences, (e.g., losing a job, family strife; McAdams, 1998), bereavement experiences are more likely to challenge the validity of core worldview beliefs (i.e., that the world is benevolent, predictable, and meaningful; Janoff-Bulman, 1992; Parkes, 1975). Individuals can reaffirm the validity of core beliefs through the use of specific meaning-making strategies such as benefit-finding, responsibility allocation, or religious reframing (Folkman, 2001; Park & Folkman, 1997). These

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strategies help individuals to make sense of their experience in a way that either reinstates or produces changes in their existing worldview beliefs (Park & Folkman, 1997).

Hospice volunteers may be especially likely to use these strategies. They are individuals who choose to form emotional bonds with dying individuals, acting as friend, advocate, and source of support to both patient and family (Chng & Ramsey, 1984). They repeatedly experience the emotional and psychosocial impact of death and dying (Brazil & Thomas, 1995); thus, hospice volunteers may be a unique subset of the population that is especially adept at coping with bereavement. In other words, these individuals may be especially likely to use meaning-making strategies with regards to their death-related experiences, but less so with regards to other mundane low point experiences such as job loss or family strife. If so, then an interesting difference may arise when hospice volunteers are asked to share memories (via the writing of memory narratives) of death-related and low point experiences from their lives: Due to the differential use of meaning-making strategies, memories of death-related experiences may manifest more meaning-making strategies than memories of low point experiences. The current study thus examined whether hospice volunteers' death memory narratives exhibit more meaning-making strategies than low point memory narratives. In addition, the study explored differences between the two types of memories on non-narrative characteristics (e.g., how frequently a memory is recalled, the emotional valence of a memory).

The following review begins with a discussion of why death-related experiences are more likely than low point life experiences to challenge the validity of an individual's worldview beliefs. Specific meaning-making strategies individuals can use to reaffirm or modify worldview beliefs are then described, with particular focus being given to how these meaning-making strategies may subsequently manifest in individuals' memories. Lastly, because the study data are memory narratives, a brief overview and definition of memory characteristics is provided.

The Challenge of Death-Related Experiences

According to Janoff-Bulman (1992), most individuals hold deep-seated beliefs that they are worthy and deserving of positive

outcomes, that they have a significant amount of control over their lives, and that the world is generally benevolent and just. These deep-seated beliefs endow individuals with a coherent worldview that allows them to cognitively organize their experiences and engage in goal-directed behavior.

Events that are random, unjust, unpredictable, or malevolent have the potential to challenge the validity of such beliefs. Indeed, it is for these reasons such experiences are subjectively experienced as traumatic (Janoff-Bulman, 1992). For example, being a victim of a random act of violence can make an individual doubt whether the world is benevolent and question whether he can prevent future negative life events (i.e., question his level of control in life). Such experiences produce incongruence between an individual's beliefs about how the world is supposed to function and one's actual lived experience. In such instances, the individual needs to engage in meaning-making and reconstruct the event in a way that reaffirms or modifies worldview beliefs (Neimeyer, 2001; Park & Folkman, 1997). According to Janoff-Bulman and Frantz (1997), individuals can reaffirm challenged worldview beliefs by either developing an understanding of why the event happened (i.e., meaning-as-comprehension) or by finding ways in which the experience adds worth or value to their lives (i.e., meaning-as-significance). In both cases, individuals engage in a search for meaning in the wake of an event that has shaken the coherence of their worldview.

To the extent that they are subjectively perceived as traumatic, death-related experiences are likely to challenge the validity of an individual's worldview and spur such a search for meaning. Violent, sudden, or seemingly meaningless deaths (e.g., homicide, motor vehicle accidents, and heart attacks) can all invalidate individuals' worldview beliefs (Janoff-Bulman, 1992; Park & Folkman, 1997). However, even in cases where a death is not violent or sudden, it can still challenge the validity of a person's worldview beliefs. For example, the prolonged and painful death of a loved one due to cancer may make the bereaved individual wonder if the world is indeed benevolent. Alternately, it may lead the survivor to question how much control one truly has in life since the painful death was unpreventable. Furthermore, the death of a loved one may remind individuals of human mortality and raise questions about the existence of an afterlife, leading them to

engage in an existential search for meaning (Yalom & Lieberman, 1991). In sum, both traumatic and nontraumatic death-related experiences have the potential to challenge the validity of individuals' worldviews and spur meaning-making efforts.

In some instances, mundane low point experiences may also challenge the validity of worldview beliefs and incite a search for meaning. For example, being suddenly fired from one's job as a scapegoat for a supervisor's error may lead a person to question whether the world is indeed just. Conversely, many death-related experiences produce no challenges and thereby no search for meaning (Gilles & Neimeyer, 2006). The death of a parent at age 90 after a long and fulfilling life may not require meaning-making; in fact, it may more so be cause for celebration. Indeed, research finds a significant proportion of bereaved individuals have resilient reactions to loss (Bonanno, 2004). Thus, some low points may challenge beliefs and some death-related experiences may not. Across all types of death-related and low point experiences, however, death-related experiences are overall more likely than (non-traumatic) low point experiences to make individuals question their worldview beliefs and lead to meaning-making efforts. This difference may be especially pronounced in individuals who have had a lot of exposure to death and are adept at coping with such experiences, such as hospice volunteers. The primary goal of the current study was to examine if hospice volunteers' death-related memories reveal more meaning-making strategies than their low point memories.

Meaning-Making in the Context of Death-Related Experiences

Research shows that a significant proportion of individuals engage in meaning-making in the wake of bereavement. McIntosh, Silver, and Wortman (1993) found that 86% of parents coping with the death of their infants by sudden infant death syndrome (SIDS) searched for meaning 2 to 4 weeks after loss. About 80% of parents who lost children through accidents, homicide, or suicide 5 years earlier admitted to searching for meaning (Murphy, Johnson, & Lohan, 2003). Similarly, in a sample of individuals who had lost children or spouses in motor vehicle accidents (MVAs) 4 to 7 years earlier, 32% of bereaved spouses and 52% of bereaved parents

reported that they still attempted to find meaning in the loss (Lehman, Wortman, & Williams, 1987). It thus appears that attempts at meaning-making continue for years after a loss has occurred. Interestingly, research shows the search for meaning does not only occur in the context of bereavement, and may also occur in the wake of self-related death experiences such as overcoming cancer or surviving motor-vehicle accidents (Kinnier, Tribbensee, Rose, & Vaughan, 2001).

Some evidence suggests that searching for understanding of why the event happened (i.e., meaning-as-comprehension) chronologically precedes the search for worth or value in the experience (i.e., meaning-as-significance). Only if bereaved individuals are unable to answer the question of "why did this happen?" do they turn to the question of "what does this mean for me?" (Davis, Nolen-Hoeksema, & Larson, 1998). Not all studies find this chronological relationship, instead suggesting that developing comprehension of the event is more important to adjustment than finding its overall significance for one's life (Holland, Currier, & Neimeyer, 2006).

Regardless of whether bereaved individuals engage in a search for comprehension or a search for significance, it appears as though finding meaning does not come easily in some cases. In the SIDS study cited above, McIntosh et al. (1993) found that only 23% of parents who admitted to searching for meaning claimed to actually have found any, and in subsequent interviews many reported ceasing their unproductive search altogether. Similarly, Keesee, Currier, and Neimeyer (2008) found that 47% of the bereaved parents in their study were unable to make significant sense of their loss. In the MVA study, Lehman et al. (1987) found that 64% of the bereaved parents had not found any meaning in the loss. The percentages in these studies vary considerably; nevertheless, there is high concordance that many individuals who engage in the meaning-making process do not find success.

While many individuals are unsuccessful in finding meaning, those that find meaning do appear to fare better than their counterparts. Research suggests that finding meaning is related to less intense grief (Schwartzberg & Janoff-Bulman, 1991), higher subjective well-being (Stein, Folkman, & Trabasso, 1997), and more positive immune system functioning (Bower, Kemeny, Taylor, & Fahey, 2003). In their study of bereaved parents, Murphy et al.

(2003) showed that finding meaning was related to lower mental distress, higher marital satisfaction, and better physical health. Similar links to better adjustment have been found in other samples of bereaved parents (Keesee et al., 2008) and adults who lost loved ones through violent means (i.e., accidents, homicide, and suicide; Currier, Holland, & Neimeyer, 2006). In support for the chronological relationship between finding meaning-as-comprehension and meaning-as-significance, Davis et al. (1998) found that making sense of loss predicted adjustment in the first 6 months of bereavement whereas finding benefits was primarily related to adjustment after the first year.

In sum, the literature suggests that a significant proportion of individuals engage in meaning-making in the wake of death-related experiences, particularly when the deaths are violent, sudden, or seemingly meaningless. Furthermore, within the subset of individuals who do engage in a search, those who are able to find meaning seem to fare better than their counterparts. It is foreseeable that an individual's ability to find meaning in a death may be related to the amount of experience he or she has with death and dying. That is, individuals who have had a significant number of death-related experiences may have developed skills and expertise at finding meaning in such experiences. Because of the nature of their work, hospice volunteers are likely to be such individuals. The current study examines meaning-making within this sample of individuals.

Specific Meaning-Making Strategies

Park and Folkman (1997) have outlined a number of specific strategies individuals use to reaffirm or alter challenged core beliefs and thereby reestablish a coherent worldview. Because most individuals espouse beliefs that the world is benevolent, just, and predictable (Janoff-Bulman, 1992), these strategies essentially entail finding positive outcomes in, or believable reasons for, negative events. Individuals may do this by finding benefits in the situation, assigning responsibility for the event, imbuing the event with religious or spiritual significance, reframing the event using downward comparisons, or by focusing on some resultant personal growth.

The use of these meaning-making strategies was originally conceptualized as occurring during and shortly after the event without consideration of how meaning continues to be made or

is preserved over longer time periods. Because of the reconstructive nature of autobiographical memory (e.g., Conway & Pleydell-Pearce, 2000), each time an event is recalled, however, some parts may be embellished with new meaning, other parts may be emphasized, and others discounted or entirely forgotten (Bluck & Levine, 1998). As such, meaning-making continues to take place, and the initial meaning of an event is enhanced or eroded as one remembers and reflects on that event in the months and years after it has occurred.

Due to their extensive experience with death and dying, hospice volunteers may be especially adept at using these meaning-making strategies regarding their death-related experiences and less so regarding other low point life experiences. That is, they may be more likely to imbue their death-related experiences with religious or spiritual significance, find benefits, or declare personal growth. Consequently, when hospice volunteers are asked to share memories of death-related and low point experiences (via the writing of memory narratives), the death memories should exhibit more meaning-making strategies. The first aim of the study is to examine whether memory narratives of death-related experiences reveal more meaning-making strategies than low point memory narratives.

Non-Narrative Characteristics of Event Memories

Autobiographical memories have both narrative and non-narrative characteristics (Dual Process Model of memory; Pillemer, 1998). While meaning-making is expressed through the narrative aspect of memories, non-narrative characteristics are also integral to the sense of experiencing and reliving of autobiographical memories (e.g., Rubin, 1998). Researchers have examined specific memory characteristics such as vividness, importance, memorability, intensity, emotional valence, and extent of private and social rehearsal (e.g., Bluck, Levine, & Lauhere, 1999; Larsen, 1998; Rubin, 2004). It is unclear how hospice volunteers' death memories will differ from their low point memories on these non-narrative characteristics. The death-related experiences may be perceived as more stressful and thereby produce memories that are rated as more affectively negative. Alternatively, if hospice volunteers do indeed engage in more meaning-making regarding their death-related

experiences (i.e., by reframing the experiences through finding benefits or declaring personal growth), the death memories may be rated as more affectively positive. The second aim of the study is to explore whether hospice volunteers' death and low point memories differ on several non-narrative characteristics.

The Current Study

The study assesses differences between autobiographical memories of death-related and low point experiences in a sample of hospice volunteers. It is expected that death memories will exhibit more manifestations of meaning-making strategies such as benefit-finding, responsibility allocation, or religious reframing. Differences in non-narrative memory characteristics (e.g., importance, emotional valence) are also explored.

A novel contribution of the current study is its method of assessing meaning-making. Participants are not explicitly asked about specific meaning-making strategies (i.e., personal growth, benefits, assigning responsibility). Instead, they are simply asked to recall and share memories of death-related and low point experiences through the writing of memory narratives. In other words, they tell a story of an event as they personally remember it, without any leading questions. These narratives are then content-coded by two raters for specific meaning-making strategies. This methodology has no demand characteristics and captures meaning-making as it is naturally expressed when individuals recollect challenging experiences. To our knowledge, it is the first attempt at assessing meaning making via an unobtrusive and ecologically valid method.

Method

Participants

Participants were 52 hospice volunteers (M age = 66.2 years, $SD = 15.1$ years) recruited from three Florida hospice organizations via flyers, posters, and hospice newsletters. Participation was voluntary and participants received no compensation. Reflective of the hospice volunteer population, the sample was comprised of 78% women and 94% Caucasians (e.g., Claxton-Oldfield, Jefferies, & Fawcett, 2004; Zweigenfaht, Armstrong, Quintis & Riddick, 1996).

Procedure

Participants completed a demographics questionnaire assessing age, gender, ethnicity, education level, and health. They then wrote two autobiographical memory narratives, one regarding a death-related experience from their life and one regarding a low point life experience (i.e., a nadir in the life story; McAdams, 1998). Order of writing memory narratives was counterbalanced.

To ensure participants wrote narratives about specific experiences as opposed to vague or extended descriptions of events, the instructions asked them to

[s]hare a specific memory about a death or dying-related experience from your own life. This should be an experience that you were personally involved in. This is a specific memory that reflects only a brief moment or a few hours. Please describe what happened and what you were thinking and feeling at that time . . . Do not simply give a general description of a certain time in your life.

Instructions were the same for low point memories except they asked participants to share a specific low point memory that was not death-related. Low point memories were defined in the following fashion: "People have memories about negative or difficult events, or 'low points' in their life, and they remember them in different ways. Sometimes there are small unique events that happen during a difficult time, or a low point in life. We are interested in these unique, rich, memories." Participants were encouraged to write about each type of experience for 10 min, and they produced narratives that were on average 145 words in length.

Directly after writing each memory narrative, participants completed the Memory Qualities Questionnaire (MQQ; Bluck et al., 1999) assessing various non-narrative memory characteristics and also indicated how many years ago the remembered event had occurred. The shared memories were of events that occurred an average of 27 years ago ($SD = 17.9$ years, range = 4 months to 77 years).

Measures

MEANING-MAKING STRATEGIES

The presence of meaning-making strategies was assessed through content-coding of memory narratives. The coding scheme

was developed for the current study based on Park and Folkman's (1997) construct of meaning-focused coping. The initial coding scheme included six categories of strategies. These categories were reiterated with collected narratives to ensure the coding scheme adequately represented the data. One category (downward comparisons) was subsequently removed because it did not appear in any narrative. The final coding scheme had the following five categories:

Benefit-finding. Something positive is mentioned as resulting from the situation. For example, regarding death-related experiences, "It's a good thing he died. He was suffering so much." Regarding low point experiences, "In the end, my teenage daughter's pregnancy forced us to communicate better and brought us closer to each other."

Responsibility assignment. A person or group is named as being responsible or at fault for how the situation unfolded. For example, regarding death-related experiences, "He knew how dangerous smoking was and yet he didn't want to quit." Regarding low point experiences, "If my boss had the guts to admit his own incompetency, I'd still have a job."

Imbuing experience with religious significance. Some type of religious framework is used to develop an understanding of the situation. For example, regarding death-related experiences, "He died because God wanted him in heaven. God takes the best ones first." Regarding low point experiences, "At the height of my panic, I suddenly began to feel a calmness set in. I realized the Holy Spirit was with me."

Imbuing experience with spiritual/supernatural significance. An understanding of the situation is developed that includes spiritual (but not necessarily religious) or supernatural constructs. For example, regarding death-related experiences, "I'm sure the flickering of that light bulb was my father's spirit saying a final goodbye." Regarding low point experiences, "The second I realized the car I hit had a license plate with the number 333—3 being my lucky number—I knew everything would turn out all right."

Personal growth. Self-discovery or self-understanding is reported as resulting from the situation. For example, regarding death-related experiences, "The death of my father was extremely difficult but I am now confident that I have the strength to get through such tough experiences." Regarding low point experiences, "Overcoming my alcohol problem made me more empathic and caring of others who suffer from addiction."

Two coders (one ignorant of the study's hypotheses) rated the memory narratives. Coders familiarized themselves with the coding scheme by practice-rating a set of pilot narratives. This set of pilot narratives was also used to assess inter-rater reliability: before proceeding to code actual study data, coders first demonstrated adequate reliability ($Kappa = .78$). A second reliability check was subsequently performed on actual study data to ensure coders had remained reliable throughout the rating process ($Kappa = .81$).

Before coding was initiated, the memory narratives were divided into idea units (Baker-Brown et al., 1992). An *idea unit* "refers to a section of material that focuses on one idea. Usually, but not always, this scorable unit consists of a single paragraph. Occasionally the paragraph may be broken down into two or more scorable units each having a specific single idea" (Baker-Brown et al., 1992, p. 403). Thus, whenever a narrative switched topics, tenses, or changed from the recall of specific details to the provision of a general summation of the experience, it would be divided into separate idea units. The narratives were typically broken down into three or four idea units.

Coders first read each participant's entire memory narrative to get its overall gist. They then read the narrative one idea unit at a time (Baker-Brown et al., 1992), determining whether the idea unit exhibited one of the five categories of meaning-making strategies described in the coding scheme. After the entire memory narrative was assessed, coders summed up the number of meaning-making strategies (from any of the categories) that were identified in the narrative. For example, if a narrative had three idea units and the first idea unit discussed who was responsible for the event, the second provided a factual description of the event (i.e., no specific meaning-making strategy evident), and the third mentioned personal growth, the narrative would receive a score of two.

NON-NARRATIVE MEMORY CHARACTERISTICS

Non-narrative characteristics of death and low point memories were assessed using a shortened version of the Memory Qualities Questionnaire (MQQ; Bluck et al., 1999) that included eight items anchored on a 5-point Likert-type scale, from 1 (*not at all*) to 5 (*extremely*). An exploratory factor analysis (EFA) using principal axis factoring and varimax rotation revealed a two-factor solution accounting for 64% of the variance. Factor 1, Positive Re-experiencing (eigenvalue = 2.77, 35% of variance) was comprised of items assessing: (a) how positive the event was when it occurred, (b) how positive the memory feels when recalled now, (c) how often one recalls the memory, and (d) how often one shares the memory with others. Cronbach's alpha for item ratings of the low point memory equaled .75; of the death memory, .65. The latter alpha coefficient is considered somewhat low by convention and may indicate low item reliability (Cronbach, 1951). Factor 2, Personal Significance (eigenvalue = 2.37, 29% of variance), was comprised of items assessing memory: (a) vividness, (b) importance, (c) memorability, and (d) emotionality. Cronbach's alpha for item ratings of the low point memory equaled .80; of the death memory, .86. Given this factor structure, the analyses explore differences between death and low point memories on non-narrative memory characteristics using the Positive Re-experiencing and Personal Significance factors as dependent variables.

Results

Preliminary Analyses

DESCRIPTION OF NARRATIVES SHARED BY PARTICIPANTS

A total of 52 death memory narratives were collected. The memories were regarding the death of a parent ($n=14$), spouse ($n=12$), child ($n=5$), hospice patient ($n=5$), friend ($n=4$), sibling ($n=3$), own death (i.e., a near-death experience; $n=2$), and pet ($n=1$). Five memory narratives provided insufficient information to determine whom the memory was regarding. It is noteworthy that only five of the narratives described the deaths of hospice patients; thus, the large majority of memories were acquired from personal life experience, not from hospice work. Illness, in particular cancer, was the most common cause of death ($n=26$),

followed by various accidents ($n = 8$), heart attacks ($n = 3$), and sudden infant death syndrome ($n = 1$). Fourteen memory narratives provided insufficient information to determine mode of death.

A total of 52 low point memory narratives were collected. The memories were regarding friend or family conflict ($n = 9$), temporary separation from loved ones ($n = 6$), the death of a friend or family member ($n = 6$), illness or injury ($n = 6$), drug or alcohol abuse ($n = 5$), relocation ($n = 5$), various accidents ($n = 4$), divorce ($n = 4$), employment or academic difficulties ($n = 3$), legal issues ($n = 2$), and missing children ($n = 1$). One memory provided insufficient information to determine what it was regarding.

It is surprising that six low point narratives described death-related experiences considering that the instructions specifically asked participants not to share death memories in their low point narratives. This occurrence suggests that study participants, being hospice volunteers, may have been highly death-focused. To preserve data, these participants' scores on the low point dependent variables were replaced by sample means. All analyses were performed with and without the replaced values. The results remained unchanged except for a single analysis regarding the MQQ Positive Re-experiencing factor, which dropped just out of significance ($p = .056$); consequently, all results reported below pertain to analyses using dependent variables with mean-substituted values.

FREQUENCY OF MEANING-MAKING STRATEGIES IN MEMORY NARRATIVES

Coders identified a total of 75 meaning-making strategies in the death and low point memory narratives. The number of strategies found in a particular narrative ranged from 0 to 3, with a mean of .77. The most frequent meaning-making strategy was benefit-finding ($n = 45$), followed by the imbuing of religious significance ($n = 12$), imbuing of spiritual/supernatural significance ($n = 9$), declaration of personal growth ($n = 7$), and responsibility assignment ($n = 3$). Frequencies of each individual strategy, broken down by memory type, are presented in Table 1. Examples of actual strategies identified by coders are presented in Table 2.

CORRELATIONS OF MEANING-MAKING STRATEGIES WITH OTHER STUDY VARIABLES

There was a significant correlation between the number of meaning-making strategies manifested in a death memory narrative

TABLE 1 Frequency of Meaning-Making Strategies

Strategy	Death-related	Low point	Total
Benefit-finding	28	16	44
Responsibility assignment	1	2	3
Religious imbuing	9	3	12
Spiritual/Supernatural imbuing	8	1	9
Personal growth	3	4	7
Total	49	26	75

and scores on the MQQ Positive Re-experiencing factor ($r = .35$, $p < .05$). That is, participants who wrote death memory narratives that manifested more meaning-making strategies tended to rate those memories as more positive and more likely to be thought about or shared with others. There was also a significant correlation between the number of meaning-making strategies expressed in low point memory narratives and length of narrative (i.e., the

TABLE 2 Examples of Meaning-Making Strategies Found in Memory Narratives

Coding category	Memory type	Example
Benefit found	Death	My aunt's death <u>brought us together</u> .
	Low point	<u>Luckily, he was there to support me</u> and help make me feel better.
Responsibility assigned	Death	My father was diagnosed with ... lung cancer. <u>He was a smoker</u> .
	Low point	That was ... my first wife. <u>She cannot help herself or change</u> , even now.
Imbuing religious significance	Death	I felt surrounded by <u>God's presence</u> then as I do now.
	Low point	I thought God was punishing me for not doing the chores.
Imbuing spiritual/supernatural significance	Death	Though she seemed to have left us, <u>her spirit</u> was somewhere in there.
	Low point	I had a <u>horrible feeling</u> about going there.
Personal growth	Death	I think it gave me a <u>desire to try to figure out</u> why he was so fearful ... it <u>affected me so profoundly</u> .
	Low point	This ... really <u>made me realize how important our personal relationship is</u> with one and another.

number of words in the narrative; $r = .42, p < .01$). To control for the influence of narrative length, the number of meaning-making strategies was divided by the number of words in each narrative (for both the death and low point memories). Thus, the dependent variable for Aim 1 is the number of meaning-making strategies in each narrative divided by that narrative's number of words. This adjustment ensures that narratives do not receive higher meaning-making scores simply because they happen to be longer.

A significant correlation was also found between the recency of a death memory and its score on the MQQ Positive Re-experiencing factor. That is, more recent death memories were rated as more positive and more likely to be rehearsed. To control for the influence of recency of event, scores on the MQQ Positive Re-experiencing factor were divided by year of event (for both the death and low point memories). This ensures memories do not receive higher positivity ratings simply because they occurred more recently.

Major Analyses

THE EXPRESSION OF MEANING-MAKING STRATEGIES IN DEATH AND LOW POINT MEMORIES

Data were analyzed using an analysis of variance (ANOVA) with memory type (death, low point) as a repeated measure. As outlined in the preliminary analyses section above, the dependent variable was the number meaning-making strategies found in a narrative divided by the number of words in the narrative (in order to adjust for narrative length). The analysis revealed a significant effect for memory type, $F(1, 51) = 8.55, p < .01, \eta^2 = .14$. As predicted, death narratives manifested more meaning-making strategies ($M = .0083, SD = .0009$) than low point narratives ($M = .0039, SD = .0005$).

NON-NARRATIVE DIFFERENCES BETWEEN DEATH AND LOW POINT MEMORIES

Non-narrative characteristics were assessed using the MQQ. A factor analysis on the MQQ revealed two factors, Positive Re-experiencing and Personal Significance (as described in the Methods section). Analyses were conducted separately for each factor. For the Positive Re-experiencing factor, data were analyzed

using an ANOVA with memory type (death, low point) as a repeated measure with the dependent variable being MQQ Positive Re-experiencing adjusted for recency of event. The ANOVA revealed a main effect for memory type, $F(1, 44) = 26.87$, $p < .001$, $\eta^2 = .38$. Death memories were rated higher on Positive Re-experiencing ($M = .0017$, $SD = .00045$) than low point memories ($M = .0012$, $SD = .00048$).

For the Personal Significance factor, data were analyzed using an ANOVA with memory type (death, low point) as a repeated measure. The dependent variable was MQQ Personal Significance. The analysis revealed no significant effects.

Discussion

The study investigated differences between death and low point memories on the expression of meaning-making strategies (Aim 1) and on non-narrative memory characteristics (Aim 2). Using a novel methodology of assessing meaning-making that was high in ecological validity and contained no demand characteristics, death memory narratives were shown to exhibit more manifestations of meaning-making strategies. Death memories were also rated as more affectively positive and were more frequently thought about and shared with others. The findings are discussed in detail below.

Meaning-Making Strategies in Death and Low Point Memories

Results show that death memory narratives had a greater number of meaning-making strategies than low point narratives. That is, hospice volunteers were more likely to write death narratives that mentioned benefit-finding, focus on personal growth, or religious and spiritual reframing. The finding suggests that the supportive environment of hospice leads individuals to engage in effective meaning-making regarding their death-related experiences, or that the sample comprised of individuals who were adept at such meaning-making to begin with and were as a result comfortable volunteering for hospice (i.e., the effect is due to self-selection). In either case, the results hint that hospice volunteers may be a unique subset of the population especially adept at meaning-making in the context of bereavement. This finding is

in line with a few existing studies showing that volunteering for hospice may increase people's *death competency* (e.g., Paradis & Usui, 1987), defined as "human skills and capabilities in dealing with death" (Robbins, 1994, p. 160).

Alternatively, the finding may be attributable to the nature of death-related and low point experiences in general. One possibility is that death-related experiences are overall more stressful than low point experiences, and it is the stress behind these experiences that produces noted differences in meaning-making. While this explanation is conceivable, the finding that death memories were rated as more positive than low point memories makes it unlikely that stress was the source of the differences in meaning-making. Another possibility, one that is in our view more plausible, is that death-related experiences are in general more likely to engender worldview threat and challenge core beliefs. As purported in the introduction, both death-related and low point experiences have the potential to challenge the validity of an individual's beliefs; however, across all types of death-related and low point experiences, death experiences are more likely to do so because they have a higher likelihood of being traumatic, of making individuals feel like they lack control in life, or of inciting an existential search for meaning. Therefore, the study's finding is relevant to all individuals, not just hospice volunteers. That is, death memory narratives of all individuals would manifest more benefit-finding, declarations of personal growth, or the imbuing of religious and spiritual significance. The sample of hospice volunteers used in this study may have simply made the effects more robust.

This interpretation is in line with research suggesting that many individuals, not just hospice volunteers, report such positive meaning-making in the wake of various negative experiences, including some death-related experiences (Calhoun & Tedeschi, 2001). For example, in a study of bereaved college students, the majority of individuals (71%) reported a positive change in life goals (Edmonds & Hooker, 1992). Similarly, other research suggests bereaved individuals are often able to find benefits resulting from their loss, although the ability to do so appears especially important after the first year of bereavement (Davis et al., 1998). To what extent the study's finding is peculiar to hospice volunteers, or whether it would generalize to samples representative of the general population, is worthy of future examination.

One of the highlights of the current study is that it assessed the expression of meaning-making in memories. Most studies regarding meaning-making explore this process relatively close to the occurrence of the loss. The current study, however, examined meaning-making a considerable time after the loss: meaning-making strategies were assessed in memories of events that occurred an average of 27 years ago. The results chronologically extend Park and Folkman's (1997) assertion that meaning-making strategies are used during the initial stages of coping with adversity. These strategies also become an integral aspect of how events are storied and recalled over time (Bluck & Habermas, 2000). When memories of death-related experiences are recalled months or years after they occurred, they still manifest the finding of benefits, personal growth, or religious insights. This finding is important because it suggests these strategies may promote and maintain long-term coping with the loss of a loved one.

Another highlight of the current study is its assessment of meaning-making via the use of a novel methodology with no demand characteristics. As mentioned previously, participants were not asked any direct questions regarding the finding of benefits, personal growth, or the religious or spiritual significance of their experiences. Instead, they simply wrote narratives of death and low point memories, which were subsequently coded for the manifestation of specific meaning-making strategies. The fact that death memory narratives were found to exhibit more meaning-making strategies using this ecologically valid method certainly adds credence to existing studies showing the post-bereavement finding of benefits or declarations of personal growth (e.g., Davis et al., 1998; Murphy et al., 2003). Unfortunately, the current study did not assess the relation of meaning-making strategies to adjustment; future research using this study's methodology ought to directly examine whether individuals whose memories exhibit these strategies also show successful adjustment to bereavement and positive well-being over time.

Non-Narrative Characteristics of Death and Low Point Memories

Participants reported that their death memories were affectively more positive and that these memories were thought about and shared with others more frequently than low point memories.

Interestingly, there were no differences between the two memories on ratings of personal significance. It thus appears as though the higher sharing and positivity of death memories is not attributable to death memories simply being more important in participants' lives. The fact that participants frequently shared their death memories with others and that the memories were rated as positive (relative to low point memories) may at first glance be considered surprising. Death-related experiences are typically considered quite negative and stressful, and one might reasonably expect death memories to be rated as negative and not frequently shared. This finding is not surprising, however, when considered in light of the fact that the study sample was a group of hospice volunteers. Hospice volunteers are likely adept at dealing with death and dying and, thus, probably feel comfortable discussing death-related experiences with others, especially with other volunteers. Because meaning-making is both a private and social process (i.e., occurs as an interaction between individuals; Nadeau, 2001; Neimeyer, 1998), these participants had both the expertise and ample opportunity to engage in meaning-making regarding their death-related experiences.

Keeping with this line of thinking, one speculation is that the death-related experiences shared by these participants were initially negative (i.e., were subjectively perceived as negative when they occurred), but these participants had more opportunity to engage in meaning-making and reframe the experiences by finding benefits, allocating responsibility, etc. This, in turn, made memories of these experiences quite positive. In other words, these hospice volunteers frequently discussed their negative death-related experiences with other hospice-minded individuals, which promoted the meaning-making process, which in turn resulted in positive memories of these initially negative experiences. While this explanation is speculative, it is noteworthy that in the current study there was a modest positive correlation between the number of meaning-making strategies manifested in a death narrative and scores on the MQQ Positive Re-experiencing factor ($r = .35, p < .05$), indeed suggesting a link between meaning-making, memory sharing, and memory positivity.

This interpretation is consistent with findings indicating that people's judgments of how they initially felt about an event are altered by their reappraisal of the event at a later time (Levine,

1997; Levine, Prohaska, & Burgess, 2001). It is also in line with the communicative theory of emotions (Oatley & Johnson-Laird, 1987), which suggests that experiencing negative emotions motivates coping efforts. If the reported death-related experiences were initially more negative (in relation to low point experiences), they would have been more likely to spur participants to engage in meaning-making, which would subsequently make these experiences be perceived as more positive.

This interpretation is provisional as the study did not examine changes in the emotional valence of memories across time. Indeed, an alternate explanation for death memories being rated more positive may be that the initial experiences themselves were actually more pleasant. Hospice volunteers sometimes report that they assist with hospice as a result of having a good experience with the death of a significant other (Claxton-Oldfield et al., 2004). Thus, the reported memory positivity may not be due to higher meaning-making but instead due to participants reporting death-related experiences that were more positive when they occurred. It is also plausible that both explanations are accounting for the effect. That is, the positivity of some participants' death memories may be due to meaning-making while that of the others be due to the sharing of experiences that were positive from the beginning. In order to tease apart the relative correctness of each of these explanations, future studies are needed to longitudinally examine whether memories indeed take on positive characteristics as a result of individuals utilizing meaning-making strategies.

Conclusion

The current study examined whether hospice volunteers express more meaning-making strategies in their death memories than their low point memories (e.g., job loss, family strife). Using a novel and ecologically valid method of assessing meaning-making, the study found that death memory narratives were indeed more likely to be imbued with meaning-making strategies. Death memories were also rated as more affectively positive and as more frequently thought about and shared with others. The results suggest hospice volunteers may be especially adept at engaging in meaning-making regarding their death-related experiences. Because the shared memories were of events that had occurred

an average of 27 years ago, results also hint that meaning-making strategies are not only used shortly after an event occurs, but that these strategies are an integral aspect of how such experiences are recalled and considered over time.

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