

# The Political Is Personal: Narrating 9/11 and Psychological Well-Being

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**ABSTRACT** Making meaning out of negative experiences is one of the primary psychological challenges in the wake of adversity. Much of the empirical attention that psychologists have paid to meaning making has focused on personal hardships, but national tragedies similarly pose a challenge to meaning making. In the present study, which is grounded in the theoretical tradition of the narrative study of lives, a nationally representative sample of 395 adults wrote accounts about the 9/11 terrorist attacks approximately 2 months after 9/11. Accounts were coded for 3 narrative themes: closure, redemption, and contamination. Psychological well-being was significantly related to accounts that were high in closure and national redemption and, among those more directly exposed to the attacks, accounts high in redemptive imagery. Psychological distress was significantly related to accounts that were low in closure and high in themes of personal contamination. Understanding the narrative styles that characterize personal accounts of political events has important ramifications for the study of the socially embedded individual.

Significant negative events can be very destabilizing for those who experience them. Such experiences can shake people's sense of coherence (e.g., Adler, Wagner, & McAdams, 2007), they can evoke strong deleterious physiological consequences (e.g., Taylor, 1991),

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and they can make people question the value of their lives (e.g., Wong & Fry, 1998). One of the primary psychological tasks following negative experiences is to make sense out of them, to render them meaningful (e.g., Janoff-Bulman, 1992; Taylor, 1991; Wong & Fry, 1998). Yet there are many kinds of meaning one can make from a negative experience. Psychologists have approached the study of meaning making from many angles (e.g., Neimeyer, 2001; Silver & Wortman, 1980; Taylor, 1983; Wong & Fry, 1998), including the literature on sense making and benefit finding (e.g., Davis, Nolen-Hoeksema, & Larson, 1998; McIntosh, Silver, & Wortman, 1993; Tennen & Affleck, 2002), posttraumatic growth (e.g., Helgeson, Reynolds, & Tomich, 2006; Park, Cohen, & Murch, 1996; Tedeschi & Calhoun, 1995), and the narrative study of lives (e.g., Adler & McAdams, 2007; Adler, Skalina, & McAdams, 2008; McAdams, 1995, 2006). In the narrative tradition, which provides the theoretical context for the present study, the emphasis has largely been on the ways in which people construct stories about personal events or other self-defining memories to create a life story that provides the self with unity and purpose (e.g., Adler et al., 2008; Lieblich & Josselson, 1997; McAdams, 1995, 2006; McLean, Pasupathi, & Pals, 2007; Pasupathi, 2001; Singer, 2004). Yet it is not just personal events that find their way into people's stories; social and political events also challenge the individual to construct meaningful stories for understanding their significance.

McAdams and Pals (2006) have suggested that culture not only represents the context in which meaning making is situated, but it also provides a menu of dominant narrative themes from which individuals select and personalize when making meaning of their experiences. Thus, social and political events are also narrated in individuals' personal stories, and often they draw on cultural templates for how to narrate them. Just as narrative theory suggests that individuals must make meaning about events in their lives in order to achieve a sense of unity and purpose, "nations need a good story line to learn how to cope with their tragedies" as well (Thomas & Romano, 2006, p. 56).

Perhaps the defining event of recent American history is the terrorist attacks of September 11, 2001 (henceforth referred to as 9/11). In the wake of the attacks, most individuals were resilient and did not experience psychopathology (Bonanno, Galea, & Bucciarelli, 2007; Bonanno, Galea, Bucciarelli, & Vlahov, 2006). However, many Americans experienced more subtle forms of psychological distress

from this major national trauma (Lanning, Colucci, & Edwards, 2007; Liverant, Hofmann, & Litz, 2004; Schuster et al., 2001; Silver, Holman, McIntosh, Poulin, & Gil-Rivas, 2002; Silver et al., 2004). Thus, making meaning out of this event became a significant task for Americans, both as individuals and as a country. And indeed, the work of crafting a coherent narrative of the 9/11 attacks on a national level was begun immediately. Less than 12 hours after the attacks, President Bush (2001) addressed the nation, stating,

Today, our fellow citizens, our way of life, our very freedom came under attack in a series of deliberate and deadly terrorist acts. . . . This is a day when all Americans from every walk of life unite in our resolve for justice and peace. America has stood down enemies before, and we will do so this time. None of us will ever forget this day. Yet, we go forward to defend freedom and all that is good and just in our world.

In doing so, the president adopted a narrative pattern that research has revealed to be quite characteristic in stories from American cultural history: the redemption sequence (McAdams, 2006). In this way of narrating an event, scenes that begin negatively are transformed toward positive endings (McAdams, Reynolds, Lewis, Patten, & Bowman, 2001). Examples of such narratives are to be found in the spiritual autobiographies of the early American Puritans, the personal narratives of ex-slaves, and the Horatio Alger rags-to-riches tales, as well in contemporary American stories like that of Oprah Winfrey (McAdams, 2006). Furthermore, in past empirical research, redemption sequences have been shown to relate to various components of psychological well-being such as satisfaction with life, self-esteem, and low levels of depression (McAdams et al., 2001). President Bush carried on the American tradition of redemption narratives in suggesting that the deadly acts of 9/11 would be redeemed in the uniting of the nation and in the defense of freedom that would extend throughout the world. Indeed, the redemption sequence is one narrative style that clearly lends itself to the study of meaning making following the 9/11 attacks.

Research on constructs related to redemptive patterns of meaning making suggests that finding some positivity in the wake of the attacks may have been a widespread response. Individuals frequently report perceiving benefits or personal growth as the result of highly stressful events (e.g., Frazier, Conlon, & Glaser, 2001; Helgeson et al., 2006;

Park et al., 1996; Tedeschi & Calhoun, 1995; Tennen & Affleck, 2002), and the 9/11 attacks seem to have been no exception. Several studies have examined how individuals changed in positive ways (e.g., Peterson & Seligman, 2003) or perceived positive changes in their lives (e.g., Ai, Cascio, Santangelo, & Evans-Campbell, 2005; Linley, Joseph, Cooper, Harris, & Meyer, 2003) due to 9/11. Moreover, a separate analysis of a subset of the data used in the present study suggested that a majority of Americans perceived some positive consequences of 9/11 (Poulin, Silver, Gil-Rivas, Holman, & McIntosh, in press).

There are also other, nonredemptive ways of narrating events that, though less prevalent in American popular discourse, are possible avenues for meaning making. Principal among these alternative styles is the opposite of redemption—the use of affective sequences that shift from positive to negative. This type of affective sequence has been labeled *contamination* and has been studied with regards to its relationship with psychological well-being when it is detected in life stories (Adler, Kissel, & McAdams, 2006; McAdams et al., 2001). When they do occur, contamination sequences in the life story have been found to correlate with depression and low life satisfaction, even when statistically controlling for the stable personality trait of neuroticism (Adler et al., 2006). It is easy to imagine how one might make contaminative meaning out of the events of 9/11, for example, describing the loss of innocence the country experienced with this nearly singular foreign attack on home soil. In addition, much of the current political discourse surrounding the Iraq war frames it as a contaminative sequel to the groundswell of support the country experienced globally following the 9/11 attacks.

Besides these two narrative styles of sequencing affective reactions to events, one additional way of storying negative events that has received some empirical research attention is relevant to the study of meaning making following 9/11. Several studies have suggested that individuals whose stories of negative events or major life transitions conclude with some degree of closure are better-off, psychologically, than those whose stories do not contain this sense of closure (e.g., King & Raspin, 2004; King, Scollon, Ramsey, & Williams, 2000; King & Smith, 2004; Pals, 2006). Indeed, Pals suggests that individuals' subjective well-being is related to the crafting of narratives that come to a coherent resolution. Once again, it is possible to conceive of how an individual might describe the events of 9/11 in a way that suggested a sense of closure or an ongoing, unresolved set of thoughts and emotions.

Thus, the present study sought to uncover the relationship between these three different patterns of meaning making, drawn from the narrative tradition, and individuals' psychological adjustment following the terrorist attacks of 9/11. In doing so, we focused on the ways in which personal meaning is made out of political events and on the relationship between accounts of the event and its aftermath to both positive and negative components of psychological well-being. One previous study, by Fivush, Edwards, and Mennuti-Washburn (2003), similarly approached the question of the narrative reconstruction of 9/11. In that study, the authors used linguistic coding software (the Linguistic Inquiry and Word Count program [LIWC]; Pennebaker & Francis, 1996) to assess the accounts of 65 mostly White undergraduates in the 2 months following the attacks for emotion words and cognitive processing words. They found that students who used more emotion and cognitive processing words in their accounts subsequently reported being less upset upon hearing the news of the attacks. These results mark an important initial foray into this matter, and one with clear implications for the study of autobiographical memory. However, whereas this previous study used *linguistic* coding, focused on the presence or absence of particular words, in the present study, we relied on *narrative* coding, which takes into account the context of the words being used and the unique affective sequences and overall structure of the accounts. The coding systems employed in the present study were drawn from research on personal narratives in order to situate this investigation within the tradition of the narrative study of lives (e.g., Lieblich & Josselson, 1997; McAdams, 1995; Singer, 2004). Although the stories obtained in this study are not *narratives* in the complete sense of the way that term has been used, our investigation operates from within a narrative-based framework of meaning-making process. Thus, in the present study we investigated the ways in which a nationally representative sample of Americans narrated the events of 9/11 just 2 months after the terrorist attacks.

We hypothesized that those individuals whose writing about the 9/11 attacks showed redemption sequences would also evidence high levels of psychological well-being and low levels of general and event-specific distress. In addition, we hypothesized that those individuals who used contamination sequences in their writing about the attacks would show low levels of psychological well-being and high levels of distress. Finally, we hypothesized that individuals whose

writing was high in closure would espouse high levels of well-being and low levels of distress. In each instance it is possible that the relationship between these narrative thematic variables and psychological well-being and distress might operate differently among individuals who experienced different degrees of exposure to the terrorist attacks, as was observed in the Fivush et al. (2003) study. Given the central role of writing in making meaning of one's experiences (e.g., King & Miner, 2000; Low, Stanton, & Danoff-Burg, 2006), we expect that the relationships described in the above hypotheses will be stronger among individuals more directly exposed to the attacks.

The causal relationship between narrative meaning making and psychological health remains an open question. Narrative theory suggests that "human beings create stories and then live according to them" (McAdams & Adler, in press). Longitudinal studies of narrative identity and mental health do lend some support to the idea that the adaptive narrative construction precedes improvements in mental health (e.g., Lysaker, Davis, Hunter, Nees, & Wickett, 2005). However, the present cross-sectional study is not designed to address the question of mechanism. Instead, the present study aims to expand the existing literature on meaning making and mental health with its unique focus on written accounts of major social and political events and a larger, nationally representative sample. Our hypotheses center on those narrative themes whose relationship with mental health has some previous empirical support yet assess them directly as they are brought to bear on significant events from a national context.

## METHOD

### Participants

Participants were 395 adult members of a nationally representative, Web-enabled research panel established by Knowledge Networks, Inc. (KN), who were randomly selected to participate in research on 9/11 (for more information about the panel, see Silver et al., 2002). To ensure representation of population segments that would not otherwise have Internet access (e.g., lower income individuals, older adults), KN provides panel households with an Internet connection and appliance that uses the television as a monitor (Web TV). Panel members participate in brief Internet surveys three to four times a month in exchange for free Internet access. When members are assigned a survey, they receive notice in password-protected email accounts. Surveys are confidential, self-administered, and

accessible any time for a designated period; participants can complete a survey only once. Members may leave the panel at any time, and receipt of the Web TV and Internet access is not contingent upon completion of any particular survey. It has been documented that panel members' responses to surveys do not significantly differ over time from the responses of new panel members (Dennis, 2001, 2003).

### Design

Approximately 2 months after 9/11 (between November 10, 2001, and December 3, 2001) a survey was fielded to a random subsample of respondents identified and sampled by KN within a few days after 9/11 (see Silver et al., 2002). Additionally, KN adult panelists were oversampled from each of four targeted communities in which there had been major community disasters: Littleton, Colorado, and the surrounding Denver metropolitan area (the Columbine High School shootings); Miami, Florida (Hurricane Andrew); Oklahoma City, Oklahoma (the Alfred P. Murrah Federal Building bombing); and New York, New York (the 9/11 terrorist attacks). The survey was fielded to 1,643 adults, and 1,382 completed it (84% participation rate). Individuals who received the survey but did not respond did not differ significantly from respondents in terms of income, education, gender, marital status, or ethnicity. Nonrespondents were, however, significantly younger ( $M = 40$  years) than respondents ( $M = 48$  years;  $t(1371) = -8.33, p < .001$ ).

In an analysis of nonparticipants we found that of the 1,382 individuals who completed the 2-month post-9/11 survey, 395 contributed sufficient text data (see criteria below) to qualify for the present study. A multiple logistic regression compared these individuals to nonqualifying sample members ( $N = 987$ ) on demographics, mental health history, 9/11 exposure, lifetime experience of stressful events, and both positive and negative well-being. Results indicated that individuals in the present study did not differ from others in terms of mental health history, 9/11 exposure, or well-being variables. However, the group included in the present study included proportionately more females (60.5%) than did the nonqualifying group (47.3%;  $OR = 1.76, p < .001$ ) and proportionately fewer African Americans (5.4% vs. 11.0%;  $OR = 0.49, p < .01$ ). Additionally, the present sample was slightly better educated than the nonqualifiers, having attained an associate's degree or higher on average versus just some college on average ( $OR = 1.25, p < .001$ ). Also, the qualifying group reported more lifetime stressful events ( $M = 8.02$ ) than the nonqualifying group ( $M = 6.02, p < .001$ ).

### Participating Sample Characteristics

The sample ( $N = 395$ ) was 74.1% White, 10.1% Hispanic, 5.4% African American, and 10.4% other ethnicities. Females comprised 60.5% of the

sample, and ages ranged from 18 to 93 ( $M = 50.5$ ). Education ranged from 4.6% who had not finished high school to 38.8% with a college degree; another 24.2% had only completed high school, and 32.4% had attended college but held no bachelor's degree. Median annual household income was between \$40,000 and \$49,000, with approximately 25% of households making less than \$25,000 and approximately 25% making over \$60,000.

A prior diagnosis of an anxiety disorder or depression was reported by 11.5% of the sample, with an additional 7.4% reporting both. On average, respondents had experienced 8.02 stressful events as assessed by the included checklist. Only 6.0% of respondents had been directly exposed to the 9/11 attacks, but 57.9% watched them on live television, whereas 36.1% had no live exposure. For descriptive statistics and correlations for narrative and well-being variables, see Table 1. As described above, the sample participating in the present study is not as representative of the U.S. population as the panel from which it was drawn. We will return to this issue in the discussion section.

## Measures

### *Demographics*

KN administered a demographic survey to all panelists, including information on gender, age, ethnicity, educational status, and household income. KN imputed missing values for income using the mean income score for each respondent's census block.

### *Mental Health History*

KN also routinely assessed the physical and mental health questionnaires of panelists. All panelists in the present study had completed a health questionnaire before 9/11 that included information on respondents' history of physician-diagnosed mental health difficulties (e.g., depression, anxiety disorder, or both). An index of mental health problems was created with values of 0 (*no diagnoses*), 1 (*depression or anxiety*), and 2 (*both depression and anxiety*). These data were missing for approximately 8%–9% of respondents. Because the Little and Rubin MCAR tests for these data were non-significant ( $p > .10$ ), missing health data were imputed within age groups using the expectation maximization (EM) method (Little & Rubin, 1987).

### *Stressful Life Events*

Lifetime exposure to stressful events was assessed by asking participants whether they had ever experienced each of 30 negative events (e.g., natural disaster, child abuse). This measure was modified from the Diag-

**Table 1**  
Descriptive Statistics and Correlations for Narrative and Well-Being Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Well-being	—												
2. Distress	-.42***	—											
3. Emotional tone	.10*	-.15**	—										
4. Redemption (general) <sup>a</sup>	-.09	-.01	-.06	—									
5. Contamination (general) <sup>a</sup>	-.01	.10*	.05	.05	—								
6. Closure (general)	.14**	-.21***	.35***	.17***	-.19***	—							
7. Personal redemption	-.08	.01	.02	.65***	.11*	.20***	—						
8. National redemption	-.05	-.06	-.07	.75***	.00	.13*	0.20***	—					
9. Personal contamination	-.03	.13**	.04	.09	.79***	-.13*	0.17***	0.01	—				
10. National contamination	.04	.00	-.02	.03	.79***	-.15**	0.08	0.04	0.48***	—			
11. Personal closure	.16**	-.25***	.29***	.10*	-.16**	.86***	0.18***	0.08	-.017**	-.08	—		
12. National closure	.08	-.09	.33***	.18***	-.17***	.71***	0.14*	0.18***	-.07	-.22***	0.43***	—	
13. Exposure to 9/11 <sup>b</sup>	-.08	.24***	-.05	.04	.04	.00	.06	.01	.00	.04	.00	.00	—
<i>M</i>	3.97	0.59	-0.17	0.19	0.06	2.87	0.07	0.11	0.04	0.04	2.98	2.85	0.70
<i>SD</i>	0.96	0.49	0.62	0.44	0.24	0.90	0.29	0.34	0.20	0.20	0.76	0.64	0.58
Range (min, max)	1.31, 6.00	0, 2.91	-1, 1	0, 2	0, 1	0, 5	0, 2	0, 2	0, 1	0, 1	1, 5	1, 5	0, 2

<sup>a</sup>A total of 16.7% of respondents had at least one redemption sequence and 6.3% had at least one contamination sequence.

<sup>b</sup>A total of 6.0% of respondents had been directly exposed to the 9/11 attacks, 57.9% watched them on live television, and 36.1% had no live exposure.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

nostic Interview Schedule section on trauma (Robins, Helzer, Croughan, & Ratcliff, 1981), expanded open-ended coding of lifetime traumas reported by a primary care sample (Holman, Silver, & Waitzkin, 2000), and has provided rates of specific events in this sample comparable to surveys conducted on other community samples (e.g., Breslau et al., 1998). From these data, we calculated an index of the total number of these stressful events individuals had experienced in their lives.

### *9/11-Related Exposure*

Participants completed several questions on their experiences related to the 9/11 attacks. Due to the predominantly indirect, media-driven nature of 9/11 exposure nationwide, these data were used to group individuals into one of three levels of exposure: *direct exposure* (being in the World Trade Center or Pentagon, seeing or hearing the attacks in person, or having a close relationship with someone in the targeted buildings or airplanes during the attacks), *live media exposure* (watching the attacks unfold live on television), and *no live exposure* (only seeing or learning of the attacks after they had occurred). On the basis of this grouping, a three-level variable was created to represent 9/11 exposure (0 = *no live exposure*; 1 = *live media exposure*; 2 = *direct exposure*). Past research has found the three levels of this variable to significantly differentiate levels of 9/11-related distress (Silver et al., 2002).

### *Psychological Well-Being*

Psychological well-being was assessed as the mean of the two positive components of subjective well-being proposed by Diener (1984, 2006): positive affect and life satisfaction. Positive affect was assessed using a measure that asked respondents to rate the frequency with which they had experienced each of eight different positive emotions (affection, joy, love, happiness, contentment, caring, pride, and fondness) within the past week (Diener, Smith, & Fujita, 1995). Life satisfaction was assessed using the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). The composite measure of positive well-being consisted of both scales had very good internal consistency ( $\alpha = .90$ ).

### *Psychological Distress*

Psychological distress was assessed as the mean of general distress and 9/11-specific posttraumatic stress. General distress was assessed using the 25-item Hopkins Symptom Checklist (HSCL-25; Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974), a measure of the frequency of anx-

iety, depression, and somatization symptoms in the past week. Posttraumatic stress related to 9/11 was assessed using the Impact of Events Scale-Revised (IES-R; Weiss & Marmar, 1997), a widely used measure of post-traumatic stress (PTS) symptoms with good reliability and validity. The composite measure of distress consisted of both scales had excellent internal consistency ( $\alpha = .96$ ).

### Narrative Coding

The post-9/11 survey contained a number of open-ended questions, three of which were identified as yielding accounts with sufficient content to code. First, all respondents answered a series of questions relating to their exposure (e.g., proximity, relationships with individuals affected) to the 9/11 attacks. After responding to these items, participants were asked, "Is there anything more you can share with us about your experiences regarding the September 11th events?" Individuals could then write as much or as little as they wished in response to this open-ended probe to describe their 9/11 experiences. Second, respondents were asked whether they had been able to make sense of the 9/11 attacks. Participants were then asked, "If so, how have you made sense of the September 11 attacks and their aftermath?" Again, they were able to write as much or as little as they wanted. Finally, respondents were asked if they had been able to find any positive consequences of 9/11. Respondents who reported finding positive consequences were asked, "What positive consequences have you found as a result of the September 11 attacks and their aftermath?"

To have enough text on which to code respondent accounts using the narrative coding guidelines, only responses of more than 100 words on any of the three above items were coded. Each response was assigned a score for redemption, contamination, and closure based on the coding systems described below.<sup>1</sup>

#### *Redemption*

Redemption sequences were coded according to the system reported by McAdams and colleagues (2001) and available online (Coding System for Redemption Sequences, n.d.). A redemption sequence is identified in a response when the account moves from a demonstrably negative scene to a related and demonstrably positive scene. The coder must first determine if there is a negative state, scene, or situation in the account. Negative scenes are often described in terms of the protagonist's emotional state—

1. All quotations taken from participants are reported exactly as they were written. They have been carefully deidentified to protect participant confidentiality and in certain instances the names of people or places have been changed.

he or she may have felt fear, sadness, anger, distress, or any of a large number of explicitly negative affective states. Once a negative state has been determined, the question of what, if anything, follows that state must be asked. For redemption imagery to be scored, the negative state must lead to a related and especially positive scene or state. Positive states are often indexed by positive emotions, but they can also be indicated by certain especially positive cognitive results, such as increased understanding or insight, and by descriptions of events that themselves would likely elicit positive feelings in most people (e.g., close relationships, victory, reconciliation, healing, growth, learning). For example, in response to the probe “Is there anything more you can share with us about your experiences regarding the September 11th events?” one participant wrote:

Our government lowered its vigil on this country. It was what our enemy was waiting for—a weak spot, and they seized the opportunity to strike. . . . I believe our battle will be a long one, but we will defend ourselves and this country with everything we’ve got, and sooner or later we will win. The attacks have made us stronger and determined in a way that I don’t believe Bin Laden had counted on.

The shift from the exploitation by the enemy to the victory of our country and increased strength and determination was coded as a redemption sequence. The presence of a redemption sequence in a given response was scored a 1 and the absence of a redemption sequence was scored a 0. Redemption sequences were rated by two coders who had been trained using the Coding System. Interrater agreement across the three probes was good, with an intraclass correlation of .87. Next, a variable was created representing the overall number of redemption sequences generated by each individual—a procedure outlined in the coding manuals for redemption and contamination and employed in previous studies (e.g., Adler et al., 2006; McAdams et al., 2001). Because there were three probes, this variable had a potential range of 0 to 3.

### *Contamination*

Contamination sequences can, to a certain extent, be understood as the opposite of redemption sequences. Contamination sequences were coded according to the system reported by McAdams and colleagues (2001) and available online (Coding System for Contamination Sequences, n.d.). In a contamination scene, a good or positive event or state becomes bad or negative. That which was good or acceptable becomes contaminated, ruined, undermined, undone, or spoiled. Positive affect gives way to negative affect, so that the negativity overwhelms, destroys, or erases the

effects of the preceding positivity. Also, in contamination sequences, things may go from very good to bad or from barely acceptable to worse. For example, in response to the probe “Is there anything more you can share with us about your experiences regarding the September 11th events?” one participant wrote:

I have always lived in New York, and the towers were around for all of my adult life. I saw them being built as a child. Their loss to me is akin to the loss a parent feels when he/she loses a child. I also feel the country lost some of its sense of innocence on that day. I now wake up each day dreading what may happen.

The warm likening of the twin towers to a child and the reference to the nation’s “innocence” before the attacks are overwhelmed by loss and dread in their wake. The presence of a contamination sequence such as this in a given response was scored a 1 and the absence of a contamination sequence was scored a 0. Contamination sequences were rated by two coders who had been trained using the Coding System. Interrater agreement was good, with an intraclass correlation of .87. As described above for redemption sequences and following the coding manual and previous studies (e.g., Adler et al., 2006), a variable was created representing the overall number of contamination sequences generated by each individual. This variable also had a potential range of 0 to 3.

### *Closure*

Following the work of King and colleagues (2000) and Pals (2006), closure in participants’ accounts was operationalized based on the degree to which the story exhibited evidence of coherent resolution. As such, closure was rated on a 5-point scale reflecting the extent to which the participant described himself/herself as having achieved closure so that his/her story was no longer “stuck” in the consequences of the experience. High scores (5 = *very resolved*) were assigned to narratives reflecting a sense of closure, a capacity to experience positive emotion, and a lack of unresolved issues and emotions. In addition, closure was only identified in narratives that initially conveyed some degree of threat, struggle, or effort in dealing with the 9/11 attacks, as a way of differentiating closure from denial or numbing. The tense of the language plays an important role, with past-tense verbs suggesting more resolution and present-tense verbs suggesting continued struggles. An example of a response that was scored a 5 for closure is to be found in this participant’s statement:

It was a strange day. I don’t usually watch TV news but I did that morning while talking with my husband on the phone. . . . At no point

did I ever feel unsafe and since the attacks I have unwavering faith in our nation's security.

In this example, the participant sets up a clear story about the odd coincidence of having turned on the news, and concludes with a definitive, resolved ending. In contrast, low scores (1 = *very unresolved*) were assigned to accounts suggestive of low resolution and little progress toward resolution, with ongoing effects of the past events. The following is an example of a response that was scored a 1 for closure:

Living in Oklahoma City at the time of the Murrah Building bombing, it was hard not to loose [sic] control of my emotions; the Murrah Building was so small compared to the [World Trade Center]. The loss of life that took place before my eyes (via TV) is something I will never forget and it still brings in a sinking sad scared feeling. . . . I don't think I will get over this for a while.

Midrange scores (2 = *somewhat unresolved*, 4 = *somewhat resolved*) were assigned to accounts communicating a relative mix of progress toward and struggles with resolution. Closure was rated by two coders who had been trained using this system. Interrater agreement was adequate, with an intraclass correlation of .71. Scores on closure were averaged across the three responses to yield an average closure score ranging from 1 to 5.

### *Emotional Tone*

To control for the potentially biasing effect of an overall positivity or negativity in the writing style of participants, all responses were coded for their overall emotional tone. Accounts rated to be *entirely negative in tone* were assigned a score of  $-1$ , accounts rated to be *entirely positive in tone* were assigned a score of  $+1$ , and accounts that had been deemed to *contain either a redemption or contamination sequence* (both positive and negative emotional tone) were assigned a score of 0 for overall emotional tone. Interrater agreement between two coders was quite good, with an intraclass correlation of .90. Scores on emotional tone were averaged across the three responses to yield an average tone score ranging from  $-1$  to  $+1$ .

### *Personal Versus National*

In the pilot phase of this study it became clear that the content of participants' accounts could be meaningfully labeled as personal (about the character of the self), national (about the character of the country), or both. In personal accounts, participants principally wrote about their

own experiences and reactions, whereas in national accounts participants focused predominantly on the political and cultural aspects of 9/11. To account for these differences in character content, two variables were created for each account, representing the presence (0 = *not present*, 1 = *present*) of personal or national content, respectively. Some accounts were designated as containing *both* personal and national content (i.e., scored as 1 on both the personal and national variables); no accounts were coded as being devoid of both personal and national content. Interrater agreement between two coders was quite high, with intraclass correlations above .90. Using these data, we were able to further differentiate the content categories described above. That is, a redemption sequence could be coded as personal or national redemption (or both), a contamination sequence as personal or national contamination (or both), and closure as personal or national closure (or both). Thus, we created variables representing the total number of personal/national *redemption* and *contamination* sequences and the mean values of personal/national *closure*, for a total of six additional variables.

## RESULTS

### Tests of Primary Hypotheses

Hypotheses relating narrative variables (redemption, contamination, and closure) to psychological outcomes were tested using separate hierarchical multiple regressions for well-being and distress.<sup>2</sup> These models were constructed by first screening demographic variables (age, gender, ethnicity, education, income level), and then mental health and stressful event history (lifetime psychological diagnoses, exposure to the 9/11 attacks, and number of lifetime stressful events) in separate steps. Significant variables from each of these two steps were retained, and then emotional tone and narrative variables were entered together in the final step.<sup>3</sup>

2. To ensure that associations with narrative content were not solely attributable to any one probe, we conducted pairwise comparisons among the probes for each of the content categories (redemption, contamination, and closure). Results showed that the probe for positive consequences of 9/11 yielded more redemption and closure narratives than did the other probes. However, the results reported in this article were substantively unchanged even when narratives from this probe were omitted.

3. The total number of words respondents wrote for each probe and in total was also examined as a predictor of adjustment. Neither of these variables was a significant predictor of either psychological well-being or distress.

**Table 2**  
Narrative Variables, Exposure to 9/11, and Well-Being

	Main Effects $R^2 = .12$		With Interactions by 9/11 Exposure $R^2 = .13$	
	<i>B</i>	Beta	<i>B</i>	Beta
Black ethnicity	-0.74***	-.18	-0.74***	-.18
Hispanic ethnicity	-0.02	-.01	-0.04	-.01
Other ethnicity	-0.40*	-.13	-0.41*	-.13
Income	0.02*	.10	0.02	.10
Pre-9/11 psychological dx	-0.30***	-.19	-0.31***	-.19
Lifetime stressful events	-0.02	-.08	-0.02	-.08
Emotional tone	0.03	.02	0.03	.02
Redemption	-0.17	-.08	-0.47**	-.21
Contamination	0.12	.03	0.55	.14
Closure	0.13*	.12	0.09	.08
9/11 exposure			-0.26	-.15
Redemption × exposure			0.39*	.16
Contamination × exposure			-0.49	-.11
Closure × exposure			0.05	.09

*Note.* Interaction was such that redemption was more positively related to well-being with increasing exposure.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

The final models for well-being and distress are reported in Tables 2 and 3, respectively. Results from these models indicated that closure was the only narrative variable associated with either well-being ( $\beta = .12$ ,  $p < .05$ ) or distress ( $\beta = -.17$ ,  $p < .05$ ). Both associations were in the hypothesized directions for closure. In addition, emotional tone was not a significant predictor of either well-being or distress.

A separate set of analyses examined whether simply perceiving positive consequences of 9/11 (a Likert-scale precursor item to one of the open-ended probes) was associated with distress or well-being. These analyses were conducted to determine if the construction of a written account high in closure was related to mental health above and beyond merely reporting benefit-finding on a single-item scale. Results indicated that degree of perceiving positive consequences (1 = *no, not at all*; 5 = *yes, a great deal*) was not associated with either

**Table 3**  
Narrative Variables, Exposure to 9/11, and Distress

	Main Effects $R^2 = .25$		With Interactions by 9/11 Exposure $R^2 = .26$	
	<i>B</i>	Beta	<i>B</i>	Beta
Gender	0.15**	.15	0.15**	.15
Black ethnicity	0.20*	.09	0.22*	.10
Hispanic ethnicity	-0.07	-.05	-0.06	-.04
Other ethnicity	0.27***	.16	0.29***	.17
Income	-0.01*	-.12	-0.01*	-.11
Pre-9/11 psychological dx	0.10*	.12	0.09*	.11
Lifetime stressful events	0.02***	.19	0.02***	.19
9/11 exposure	0.16***	.19	0.35*	.40
Emotional tone	-0.05	-.07	-0.06	-.07
Redemption	-0.06	-.06	-0.04	-.03
Contamination	0.15	.08	-0.22	-.11
Closure	-0.09**	-.17	-0.04	-.07
Redemption × exposure			-0.02	-.01
Contamination × exposure			0.46*	.21
Closure × exposure			-0.07	-.26

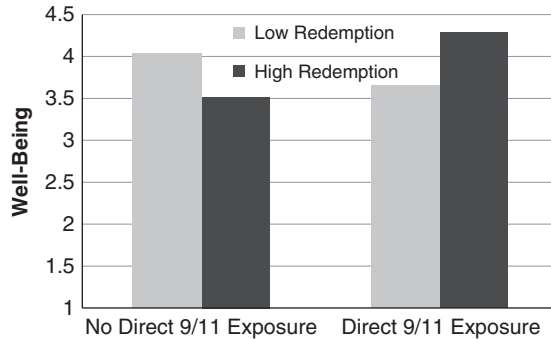
*Note.* Interaction was such that Contamination was more negatively related to well-being with increasing exposure.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

outcome variable ( $ps > .10$ ), suggesting that the narrative construction was indeed important, independent of benefit finding.

### Moderation by Exposure

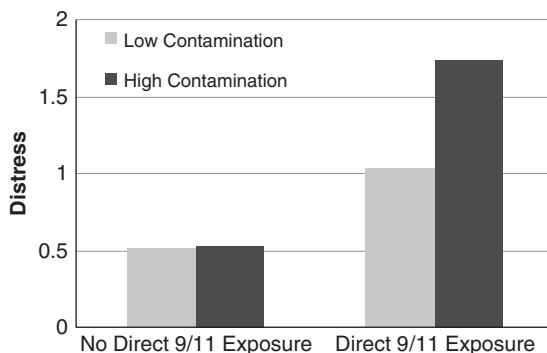
In light of previous findings (e.g., Fivush et al., 2003), one set of follow-up analyses examined whether narrative variables would vary or be more strongly associated with outcomes for individuals with greater exposure to the 9/11 attacks. A set of one-way analyses of variance (ANOVAs) tested whether redemption, contamination, or closure content differed across the three levels of exposure (direct, live television, postevent). Results indicated that there were no exposure differences in any of the types of narrative content (all



**Figure 1**

Values of well-being as predicted by number of redemption sequences (0–2) and directness of exposure to the 9/11 attacks. Predicted values of well-being were derived from the regression model shown in Table 2. Low redemption was defined as zero redemption narratives; high redemption was defined as two redemption narratives, which was the maximum number of redemption narratives in this sample. Total range for well-being in this sample was 1.31 to 6.00.

$p > .40$ ). To examine the possibility that narrative content would nonetheless be differentially associated with adjustment across levels of exposure, exposure was entered into the regression model for well-being, along with exposure interactions with emotional tone and all narrative variables. In addition, exposure interactions were entered into the model for distress, which already contained 9/11 exposure. In each case, exposure was treated as a continuous variable in order to minimize the number of effects being tested. The final models, also reported in Tables 2 and 3, indicate significant moderation by exposure. There was a significant Exposure  $\times$  Redemption interaction for well-being ( $\beta = .16, p < .05$ ), such that redemption sequences were more positively associated with well-being for more exposed individuals. Similarly, there was a significant Exposure  $\times$  Contamination interaction for distress ( $\beta = .21, p < .05$ ), such that accounts with a contamination sequence were more positively associated with distress for more exposed individuals. Thus, redemption and contamination were significantly related to psychological well-being and distress in the hypothesized directions among participants more directly exposed to the 9/11 attacks. Figures 1 and 2 illustrate the differing roles of narratives among those directly exposed to 9/11 versus all others using predicted values



**Figure 2**

Values of distress as predicted by number of contamination sequences (0–1) and directness of exposure to the 9/11 attacks. Predicted values of distress were derived from the regression model shown in Table 3. Low contamination was defined as zero contamination narratives; high contamination was defined as one contamination narrative, which was the maximum number of contamination narratives in this sample.

Total range for distress in this sample was 0 to 2.91.

generated by the regression models for redemption and contamination, respectively. There were no significant interactions with emotional tone.

### Personal Versus National Narratives

A second set of follow-up analyses examined whether accounts about the self (personal narratives) would be more strongly associated with psychological outcomes than would accounts about the United States (national narratives). These models were constructed as described above, but instead of entering general narrative variables (i.e., redemption, contamination, and closure) along with emotional tone in the final step, the personal and national forms of each narrative variable were entered separately (i.e., a total of six variables). The resulting models are reported in Table 4. These analyses indicated that personal, not national, closure was associated with greater well-being ( $\beta = .14, p < .05$ ), and lower distress ( $\beta = -.22, p < .001$ ). Similarly, personal, not national, contamination was associated with greater distress ( $\beta = .14, p < .05$ ). However, national, not personal, redemption was associated with lower dis-

**Table 4**  
 Personal Versus National Narrative Variables, Well-Being, and Distress

	Well-Being $R^2 = .12$		Distress $R^2 = .28$	
	<i>B</i>	Beta	<i>B</i>	Beta
Gender			0.16**	.16
Black ethnicity	-0.72**	-.17	0.19*	.09
Hispanic ethnicity	-0.02	-.01	-0.06	-.04
Other ethnicity	-0.44**	-.14	0.30***	.18
Income	0.02*	.10	-0.01*	-.11
Pre-9/11 psychological dx	-0.31***	-.19	0.02***	.19
9/11 exposure	-0.07	-.04	0.10*	.12
Lifetime stressful events	-0.02	-.08	0.17***	.19
Emotional tone	0.05	.03	-0.07	-.08
Redemption-personal	-0.24	-.07	-0.03	-.02
Contamination-personal	-0.10	-.02	0.33*	.14
Redemption-national	-0.10	-.03	-0.14*	-.09
Contamination-national	0.42	.08	-0.18	-.07
Closure-personal	0.19*	.14	-0.15***	-.22
Closure-national	0.00	.00	0.04	.05

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

stress ( $\beta = -.09$ ,  $p < .05$ ). Emotional tone, again, was not significantly associated with either outcome variable.

## DISCUSSION

The findings of this study suggest that different ways of writing about the events of 9/11 relate to different psychological outcomes. We found support for one of our primary hypotheses: Individuals whose accounts were high in closure exhibited higher levels of psychological well-being and lower levels of distress. This suggests that being able to retrospectively describe significant events such as the terrorist attacks with a sense that they are now over and do not exert continued influence is positively related to psychological health. Importantly, individuals whose accounts were rated as high on closure exhibited both higher levels of psychological well-being *and*

lower levels of psychological distress than individuals whose responses did not contain closure, indicating that this narrative style is related to both the negative impacts of stressful life events and also individuals' well-being in their wake.

No significant effects on well-being or distress were observed for individuals whose accounts were high in redemption or contamination sequences. This null finding, counter to the prediction of our primary hypotheses, was somewhat surprising given the documented relationships between redemption and positive psychological health (i.e., McAdams et al., 2001) and between contamination and poorer psychological health (i.e., Adler et al., 2006; McAdams et al., 2001). However, among individuals more directly exposed to the terrorist attacks, those whose accounts contained higher levels of redemptive imagery did show higher psychological well-being and those whose accounts contained higher levels of contamination did show higher levels of distress. This suggests that, as predicted, the relationship between narrative reconstructions of negative events and psychological adaptation is stronger for those more directly exposed to the events. In other words, participants in our sample who were directly exposed to the 9/11 attacks and whose accounts contained high levels of redemptive imagery did exhibit the well-being that has previously been shown to relate to this narrative style. Similarly, participants in our sample who were directly exposed to the 9/11 attacks and whose accounts contained high levels of contamination imagery likewise exhibited the distress that has previously been shown to relate to this narrative style. This pattern of findings echoes those of Fivush and colleagues (2003), who observed more pronounced effects of narrative writing among participants with more personal involvement in the 9/11 attacks (knowing someone who died or living closer to the attacks). It is important to note, however, that degree of 9/11 exposure was not associated with narrative *content*—the thematic lines of individuals' accounts of 9/11 varied independently of their direct involvement with the attacks. This suggests that the types of stories that people construct about their experiences—even those concerning dramatic events of national and historical significance—are more a reflection of individual meaning-making processes as opposed to derivatives of objective experiences.

Although we did not form a priori hypotheses about the role of the accounts' character content in their relationships with psychological well-being and distress, pilot testing suggested that we exam-

ine these relationships in post hoc analyses. Specifically, in reading the participants' accounts it became clear that most individuals focused their writing either on the character of the self (what we have labeled "personal" narratives) or on the character of the country (what we have labeled "national" narratives) and that these emphases could be reliably discriminated. When reexamining our primary hypotheses separately for personal and national narratives, some interesting results emerged.

Individuals whose accounts were high in personal closure showed both higher levels of psychological well-being and lower levels of distress than those whose accounts were low in personal closure. This was not true of accounts high in national closure. This suggests that the previously documented role of narrative closure in providing psychological benefit following difficult events may be especially important in stories of the self. Indeed, this is the context in which closure has primarily been examined (i.e., King et al., 2000; Pals, 2006). Closure in narratives may therefore be less relevant to psychological health when the narratives are not explicitly about the self.

Similarly, personal narratives that were higher in contamination were shown to significantly relate to greater psychological distress. This also mirrors previous narrative research on contamination sequences that has tended to focus on stories about the self (i.e., Adler et al., 2006; McAdams et al., 2001). It suggests that the existence of contamination sequences is particularly toxic in personal narratives, whereas they were not observed to relate to psychological distress when present in narratives about the nation.

A different pattern of results was observed for personal and national redemption, however. In accounts focused on the nation in the wake of the 9/11 attacks, the presence of redemption sequences was found to be positively related to psychological well-being. This relationship was not similarly observed in those accounts that focused on the self. In other words, individuals whose accounts portrayed the 9/11 terrorist attacks as a tragedy that resulted in some growth or improvement for the country exhibited higher levels of psychological well-being than those whose accounts did not follow this pattern of affective sequencing. But those individuals who regarded 9/11 as holding personal significance in shifting from negative to positive did not show similar benefits. It is possible that joining in the telling of this national story of redemption was related to participants' feelings of connection to the larger national community—for example, through a

sense of a shared worldview (e.g., Bonanno & Jost, 2006; Osborn, Johnson, & Fisher, 2006). Indeed, sharing stories serves the social function of developing, maintaining, and nurturing social bonds (Pillmer, 1998) and transportation or absorption into public narratives has also been shown to influence individuals (Green & Brock, 2000).

Finally, it is important to note several factors that were *not* associated with adjustment in this study, adding further weight to the significance of narrative styles. First, although the use of different narrative themes was related to psychological health, mere writing alone was not associated with adjustment—individuals who did not provide sufficient text for us to code did not differ from others in terms of psychological well-being or distress from those who were included in the narrative coding. Similarly, the overall emotional tone of the accounts was not significantly related to either adjustment variable, suggesting that our findings do not simply reflect happy people telling happy stories. In addition, there was no association between respondents' simple ratings of having perceived positive consequences of 9/11 and their well-being or distress. Together, these results suggest that narratives rich in thematic shifts such as redemption, contamination, and closure are associated with psychological health in unique ways not explainable by mere processing, emotional positivity, or recognition of benefits alone.

### Limitations and Future Directions

A few features of the present study suggest some degree of caution in interpreting its findings. First, although we focused on the possibility that writing accounts might influence well-being, the cross-sectional nature of the data leaves open the possibility that well-being instead influenced the narrative variables or that an unmeasured third variable influenced both narrative style and well-being. It is unlikely, however, that the act of communicating the particular accounts we prompted affected participants' well-being (i.e., Pasupathi, 2001), given the mental health questionnaires were completed before the written responses during the survey. Nonetheless, a longitudinal study in which prior values of well-being variables were controlled would be better suited to determining what causal role, if any, narrative variables and narrative construction play in determining well-being.

Second, we acknowledge that the procedure used to elicit written accounts in the present study was weaker than that used in most narrative research. Because the survey simply asked individuals to provide or not provide open-ended follow-ups to closed-ended items, many respondents did not provide text, and many of those who did so provided answers too short to code for the present study. Thus, although our sample size was adequate to detect even small effects and we did not note significant differences in adjustment between our sample and the broader sample, our procedure was not ideal. Given the weaknesses of the narrative elicitation procedure, it is interesting to note that over a quarter of the potential sample did spontaneously generate narratives of 100 words or more—a fact that may further suggest the strength of the need to create narratives. Nonetheless, a more guided procedure for eliciting narrative accounts, such as that used by Fivush and colleagues (2003), might have yielded richer content that would have matched more closely findings from prior research.

Third, although the sample for the present study is much more diverse than used in other narrative research in this area (i.e., Fivush et al., 2003), it nonetheless was not entirely representative of the U.S. population, as was the broader panel from which the present sample was drawn. This loss of representativeness is another cost of the methodology for eliciting narratives, noted above. Despite this loss of exact representativeness, however, our sample did not differ from the broader panel in terms of mental health or well-being variables, suggesting that the findings from the present study may generalize fairly well to the population as whole. In fact, our sample was sufficiently diverse to show that, although narratives bear strong relationships with well-being, background characteristics such as ethnicity and mental health history continue to play a significant role.

The limitations discussed above suggest ways in which future studies can build on the present investigation. More generally, however, our findings suggest three broad avenues for future research. First, the present study investigated written accounts in response to the 9/11 terrorist attacks. To our knowledge, this is one of the first empirical tests in a national sample of the idea that individuals' patterns of meaning making in response to societal events relates to their well-being (though see Pennebaker & Banasik, 1997, for an excellent theoretical contribution). Whereas 9/11 was a unique event, there are countless other societal events that can affect the national psyche, some of which researchers can anticipate. Examples of the

latter include elections and major national sporting events. Other nationally significant events more broadly might include national disasters, public scandals, economic fluctuations, and other large-scale events that affect people's lives and sense of meaning. In our view, there is great potential for research on personal meaning making in response to these events. In a related vein, the present study adopted a hypothesis-testing approach to the data, grounded in the tradition of narrative research. Yet given the novelty of this type of investigation, adopting qualitative, exploratory methods might also generate novel and fruitful ways for approaching the study of personal meaning making following events of cultural significance.

Another possible direction for future research would be to explicitly assess the self-relevance of people's written accounts to test the idea that more self-relevant narratives have a greater influence on well-being. Perhaps by asking individuals about their core life narratives, or narratives of key life transitions, and comparing the content of these narratives to the same individuals' stories of other, less central events, researchers could get a sense of the self-relevance of these latter stories. This approach could be used in traditional narrative research as well as in studies of societal events, as described above, to yield a better understanding of when narratives do and do not matter for well-being.

Finally, given the dramatic shifts in the political discourse in the United States since the immediate post-9/11 period, it would be especially interesting to empirically examine the ways in which individuals' accounts of the terrorist attacks have evolved since that time. It is possible that many accounts that were rich in redemptive imagery or espoused a high degree of closure have been transformed by the enduring wars in Iraq and Afghanistan and might now show themes of contamination or reduced closure. Although we do not have access to the sample included in the present study for a follow-up study, the role of redemption, contamination, and closure in the current American national discourse today is a highly timely and relevant avenue for investigation, particularly surrounding the 2008 presidential election. Indeed, public discourse today from figures in both major political parties is saturated with the rhetoric of redemption, contamination, and closure. If 9/11 is now described as contaminating America's prior innocence, the ongoing Iraq war is often narrated today as contaminating Americans' civil liberties at home and the country's relationships throughout the world while robbing

the country of the closure to the post-9/11 period it longs for. Furthermore, the 2008 presidential election was continually framed by political candidates as an opportunity to redeem (“hope,” “change”) and provide closure to the perceived negative impacts of the Bush presidency. Assessing the ways in which these themes from American public discourse are incorporated into individuals’ narrative identity would extend the present study.

## CONCLUSION

In summary, we found that psychological well-being was significantly related to the following narrative styles: high in closure (especially personal closure), high in redemptive imagery (only for those individuals more directly exposed to the attacks), and high in themes of national redemption. Psychological distress was significantly related to accounts that were low in closure (especially personal closure), high in contaminative imagery (only for those individuals more directly exposed to the attacks), and high in themes of personal contamination. These findings, drawn from a nationally representative sample, indicate that different ways of storying major political events have differential relationships with psychological adaptation in their wake. Understanding the ways in which people make meaning of political events provides a unique opportunity to understand the relationships between national events and personal identity and therefore has important ramifications for the study of the socially embedded individual.

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