

The Psychology of **Meaning**

Edited by

Keith D. Markman, Travis Proulx, and Matthew J. Lindberg

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FINDING MEANING IN ONE'S PAST: NOSTALGIA AS AN EXISTENTIAL RESOURCE

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Imagine being asked the following question: What gives your life a sense of meaning? Perhaps you would respond, as many people would, by talking about family, friends, personal accomplishments, your religious faith, or other personally valued traditions. These would be good answers that are echoed empirically in the literature on existential meaning.

Another question, then, would be: How do you use these sources to derive meaning? This question is more complex. It concerns psychological processes that are difficult to access and identify. You might thus respond by simply stating that you do not know how precisely you use these sources, but you know that they make your life feel meaningful. In the current analysis, we seek to answer this question of how people are able to attain and maintain a sense of meaning in life. Specifically, we propose that reflecting nostalgically on the past is an important method people use to meet their existential needs. Family and friends, as well as beliefs, accomplishments, and experiences, may

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provide the ingredients to a life full of meaning, but nostalgia is how people actually make meaning.

On the pages that follow, we offer an analysis of nostalgia as a meaning-making tool. We begin our consideration of nostalgia by providing a brief historical overview of the fascinating and occasionally amusing theoretical perspectives on what nostalgia is and what it does. We then review the current scientific literature that elucidates the content, triggers, and functions of nostalgia. We brush up against other topics of psychological science such as mental health and well-being, intergroup conflict, consumer behavior, and positive psychology. Critically, however, we explore a diverse body of recent work that provides, in our opinion, a strong case for nostalgia as a meaning-making resource. We conclude by discussing future research possibilities as well as the potential for developing nostalgia-based interventions to promote psychological health.

THE HISTORY OF NOSTALGIA

Nostalgia is defined by *The New Oxford Dictionary* (Pearsall, 1998) as a "sentimental longing for the past," and contemporary theory and research cast this emotion in a psychologically positive light (Sedikides, Wildschut, Arndt, & Routledge, 2008). However, nostalgia has not always enjoyed this treatment (Sedikides, Wildschut, & Baden, 2004). The concept of an emotion representing a longing for the past has been featured in literary works dating back thousands of years (e.g., the Bible, Homer's *The Odyssey*). The term *nostalgia*, however, was not actually introduced until the 17th century. The word was coined by Swiss physician Johannes Hofer (1688/1934) to describe physical and psychological symptoms suffered by Swiss mercenaries. Symptoms of this pathology included bouts of weeping, anorexia, irregular heartbeat, and insomnia (McCann, 1941). However, the causes of this supposed disease were debated. Hofer believed that nostalgia was caused by "continuous vibration of animal spirits through those fibers of the middle brain in which impressed traces of ideas of the Fatherland still cling" (p. 384). Another physician, J. J. Scheuchzer (1732, cited in Davis, 1979) believed that nostalgia was linked to altitude, as it was supposedly Swiss mercenaries who left their Alpine homes to fight in wars on the plains of Europe that were most vulnerable to this ailment. Scheuchzer thus proposed that nostalgia was caused by "a sharp differential in atmospheric pressure causing excessive body pressurization, which in turn drove blood from the heart to the brain, thereby producing the observed affliction of sentiment" (cited in Davis, 1979, p. 2). Unsatisfied with these explanations, other physicians speculated that

the true trigger of nostalgia could be damage to the eardrum and brain caused by the unremitting clanging of cowbells in the Alps (Davis, 1979). Clearly, the study of nostalgia started off with some tentative, yet extravagant and amusing, theoretical treatments.

In the early 19th century, nostalgia became viewed less as a neurological condition confined to the Swiss and more as a psychological illness akin to depression that could affect anyone separated from one's homeland or longing to return to a desired past state (McCann, 1941; Rosen, 1975). Though perspectives on the causes of nostalgia varied, it was, for the most part, viewed as a mental illness well into the 20th century.

Later in the 20th century, a more discerning analysis of the psychologically aversive outcomes associated with a longing for aspects of the past revealed that it was specifically homesickness (i.e., longing to return to one's home after a period of absence), and not nostalgia, that led to psychological problems. Whereas homesickness was better characterized as psychologically unpleasant, nostalgia was found to be related to fond memories and warm feelings toward the past (Davis, 1979). It was then that nostalgia began to be regarded as conceptually distinct from homesickness. This shift away from perceiving nostalgia as a sickness paved the way for a fresh theoretical and empirical consideration of nostalgia as a psychological resource.

This new perspective did not immediately materialize, however. Though the topic of homesickness received a good deal of empirical attention (Fisher, 1989; Van Tilburg, Vingerhoets, & van Heck, 1996), the same cannot be said about nostalgia. In fact, until about five years ago, most of the empirical work on nostalgia was largely confined to the disciplines of marketing and consumer psychology, and was primarily focused on predicting consumption based on prevalent trends from an individual's youth (Holak & Havlena, 1998; Schindler & Holbrook, 2003). This dearth of research on nostalgia in the psychological sciences sparked us, along with some of our colleagues, to launch a program of research investigating the construct (Routledge & Arndt, 2005; Sedikides, Wildschut, Arndt, & Routledge, 2006; Sedikides et al., 2008). We initiated this program of research by asking questions such as: How prevalent or commonplace is the experience of nostalgia? What is the emotional landscape of nostalgia? What are people nostalgic about? What prompts nostalgic reflection? And, more important, what does nostalgia do for people? That is, is nostalgia beneficial for psychological health and well-being? We summarized these types of questions in the categories of content, triggers, and functions of nostalgia. And with these general categories in mind, we began our scientific journey into the realm of nostalgia.

AN EMOTION REDEEMED: CONTEMPORARY RESEARCH ON THE CONTENT, TRIGGERS, AND FUNCTIONS OF NOSTALGIA

Our consideration of nostalgia started with the proposition that nostalgia would be both commonplace and, unlike homesickness, a largely positively valenced emotion (Sedikides et al., 2004). First, is nostalgia a common emotional experience, or is it a rare sentiment largely observed in specific populations? Despite assertions that nostalgia is an emotion for the elderly, our research suggests that nostalgia is frequently experienced by people of all ages. For example, we asked British undergraduate students to indicate how often they bring to mind nostalgic experiences by checking one of the following options: *at least once a day, three to four times a week, approximately twice a week, approximately once a week, once or twice a month, once every couple of months, or once or twice a year*. Around 80% of British undergraduate students reported experiencing nostalgia approximately once a week (Wildschut et al., 2006). Our research, taken as a whole, indicates that nostalgia is common among young and older adults alike. In fact, rarely do participants state that nostalgia is absent from their lives.

Second, is nostalgia a positive emotional experience? It is this question that launched our empirical study of the content of nostalgia. For example, in one study, we asked participants to bring to mind a past event that they think about in a nostalgic way. We instructed them to take a few minutes to think about the nostalgic experience and then to write about it in vivid detail. We content analyzed these nostalgia narratives and found that though these narratives often featured both positively and negatively valenced emotions, positive emotions were roughly three times more frequent than negative emotions (Wildschut et al., 2006). In addition, the majority of narratives had a redemptive quality, in which negative incidences (e.g., a socially awkward start to a family reunion) progressed into positive ones (e.g., eating, drinking, singing together). In other words, nostalgia narratives were commonly tinged with negative affect but were largely positive and usually had happy endings. Similarly, music-evoked nostalgia is associated strongly with feelings of joy but is not devoid of some sadness (Barrett et al., 2010).

This examination of the content of nostalgia allowed us to ask a related question: What are the objects about which people become nostalgic? We found that nostalgia narratives are typically focused on the self but are also highly social in nature (Wildschut et al., 2006). During nostalgic reverie, people write about momentous life events and, in particular, social interactions in which the self is featured prominently. In sum, nostalgia is commonplace, ambivalent but largely positively toned, self-relevant, and focused on important life events and close relationships.

Armed with evidence that nostalgia is a predominantly positive emotional experience, we began to examine its triggers. When are people likely to engage in nostalgic reflection? We initially addressed this question by asking participants to report the circumstances under which they wax nostalgic. Specifically, we instructed participants to give a detailed written description of the circumstances that trigger nostalgia and then we developed coding categories for these descriptions. We found that bad mood was the most frequently reported trigger (Wildschut et al., 2006). Further, loneliness was the most frequently reported discrete negative affect. On the basis of these findings, we conducted experiments to further test the role of bad mood and loneliness as triggers of nostalgia (Wildschut et al., 2006).

In one experiment, we manipulated mood by having participants read a sad, happy, or neutral news story. Manipulation checks confirmed that these stories produced the desired moods. We then had participants complete two measures of state nostalgia. In one measure, participants endorsed level of agreement with statements such as "Right now, I am feeling quite nostalgic," and in the other measure they were provided a list of 18 aspects of their past and reported the extent to which they currently miss or long for them (e.g., "having someone to depend on," "the way people were," "my family house"; Batcho, 1995). As predicted, the sad news story increased state nostalgia (on both measures) relative to the happy and neutral news stories, which did not differentially impact state nostalgia.

In a second experiment, we manipulated loneliness by giving participants false feedback on a "loneliness" test. Participants who were led to believe that they suffered from loneliness evidenced higher levels of state nostalgia than participants in a control condition. We have since replicated this pattern of findings among Chinese children, Chinese undergraduate students, and Chinese factory workers (Zhou, Sedikides, Wildschut, & Gao, 2008). In a conceptual replication, we found that dispositional levels of sad mood (Barrett et al., 2010) or loneliness (Zhou et al., 2008) predict dispositional levels of nostalgia. In sum, negative affective states (e.g., bad mood, loneliness) activate, or predict, elevated levels of nostalgia (Wildschut, Sedikides, & Cordaro, 2011).

We then shifted our attention to the functions question. What psychological functions might nostalgia serve? Considering that our findings depict nostalgia as largely positive, self-relevant, and socially oriented, as well as triggered by negative affect, we proposed that nostalgia serves at least three psychological functions. First, we hypothesized that nostalgia serves to increase positive mood. To test this hypothesis, we experimentally manipulated nostalgia by instructing participants to "bring to mind a nostalgic event in your life. Specifically, try to think of a past event that makes you feel most nostalgic." Participants in the control condition were given

similar instructions but were instead asked to bring to mind an ordinary life event. We found that nostalgia, relative to the control condition, increased positive affect but had no impact on negative affect (Wildschut et al., 2006). Thus, although the content of nostalgic narratives featured some negatively valenced elements, the predominantly positive and redemptive nature of these narratives contributes to an exclusively positive affective outcome.

Second, we hypothesized that nostalgia enhances or protects the self. We also found support for this hypothesis in several experiments. Nostalgia, compared with a control condition, increased state self-esteem (Wildschut et al., 2006). In addition, nostalgia, compared to a control condition, increased the accessibility of positive self-attributes and reduced the self-serving attribution bias (Vess, Arndt, Routledge, Sedikides, & Wildschut, 2010). Specifically, in the first study from Vess et al. (2010), participants who reflected and wrote about a nostalgic event, relative to those who reflected and wrote about a positive future event, were significantly faster at categorizing positive self-attributes. In the second study, participants received success or failure performance feedback on a laboratory task and subsequently thought about a nostalgic or ordinary event from their past. Next, participants were asked to what extent they attributed their performance to ability (an internal attribution). As one might predict from past research on the self-serving bias (Campbell & Sedikides, 1999), participants were less likely to attribute failure to one's own ability than success. However, nostalgia moderated this effect. Nostalgic participants were more willing to attribute failure to one's own ability than participants in the control condition. In other words, bolstering the self with nostalgia reduced the need to protect the self through the self-serving bias. In sum, nostalgia promotes and protects a positive view of self.

Third, we hypothesized that nostalgia strengthens social connectedness. In support of this hypothesis, we found (Wildschut et al., 2006; Zhou et al., 2008) that nostalgic, relative to control, participants reported feeling (a) more interpersonal competence (in the domains of relationship initiation, self-disclosure, and emotional support), (b) more socially supported, and (c) more loved and protected. In addition, nostalgic participants reported feeling less attachment-anxiety (reduced relationship worry) and attachment-avoidance (reduced concern with relationship closeness). A more recent empirical interface between nostalgia and attachment theory further elucidated the social function of nostalgia (Wildschut, Sedikides, Routledge, Arndt, & Cordaro, 2010). In particular, individuals low (compared with high) in attachment-related avoidance derived a stronger sense of social connectedness from nostalgia. In another recent series of studies, we observed a similar pattern when examining coupled individuals' satisfaction with their romantic relationships and single individuals' desire to pursue

romantic relationships (Sand, Juhl, & Routledge, 2011). For individuals low, but not high, in attachment-related avoidance, nostalgia greased the wheels of romance by increasing relationship satisfaction among coupled participants and the desire to seek out a romantic relationship among single participants. In sum, nostalgia heightens belongingness and social competence, and promotes positive relationship outcomes.

Taken together, this recent body of research demonstrates that nostalgia elevates positive mood, enhances and protects the self, and strengthens social connectedness. Importantly, nostalgia may also serve a fourth critical psychological function. Specifically, nostalgia may imbue life with a sense of meaning (Routledge & Arndt, 2005; Sedikides et al., 2004). This existential function of nostalgia is the primary focus of the current analysis, and thus we now turn our attention to the relevant program of research.

THE PAST AS AN EXISTENTIAL RESOURCE: NOSTALGIA MAKES MEANING

At the beginning of this chapter we posed the question of what makes life meaningful. We highlighted domains such as family, friends, cultural traditions, and personal triumphs as ingredients of a meaningful life. We then turned our attention to the question driving the current analysis: How do people use these sources to find meaning? We suggest that nostalgia is one method of acquiring and preserving a sense of meaning in life. Specifically, we propose that when people are pressed to find meaning, they reflect nostalgically on treasured past experiences (e.g., family functions, personal accomplishments). We have conducted a number of diverse studies to test this position.

Our consideration of nostalgia as a source of meaning begins with a return to the content question. When waxing nostalgic, people focus on the self and close relationships; however, these narratives also revolve around momentous life events (Wildschut et al., 2006). Nostalgic episodes could thus be characterized as snapshots of the personally treasured life experiences that infuse life with a sense of meaning. Since such precious life experiences cannot occur every day, we reasoned that people are able to regularly tap into these meaning-providing experiences via nostalgic reflection. However, once we observed narrative data consistent with the notion that nostalgia involves meaning-providing life experience, it became crucial to test the idea that nostalgia augments meaning. We did so in two ways. First, we relied on terror management theory (TMT; Solomon, Greenberg, & Pyszczynski, 1991) to test hypotheses consistent with the proposition that nostalgia is a meaning-making resource. Second, we tested directly whether nostalgia provides meaning.

Is Nostalgia a Meaning-Making Resource?

We started our examination of nostalgia as an existential tool by consulting the literature in experimental existential social psychology. The most prominent and empirically substantiated theory relevant to the human need for meaning is TMT (Solomon et al., 1991; see also Chapter 3, this volume). According to TMT, one reason why people strive to perceive their lives as meaningful is their awareness of their own mortality. Like all animals, humans strive for self-preservation. However, humans uniquely possess the requisite cognitive capabilities to understand that despite all efforts to thrive, death is certain and can come without warning. This realization, according to the theory, has the potential to generate a great deal of psychological distress. The theory proposes that people are able, at least for the most part, to avoid distress associated with the awareness of their inevitable demise by believing that their lives are meaningful. Physical death cannot be defeated, but the sting of mortality can be softened by the belief that existence is about more than living, it is about living a life of purpose and meaning.

In support of TMT, extensive experimental research has demonstrated that heightened awareness of mortality leads to heightened investment in socially and culturally derived meaning-providing structures (e.g., family, religion, social identities) and that such investment reduces the accessibility of death-related thoughts (Greenberg, Solomon, & Arndt, 2008) as well as psychological distress (e.g., anxiety; Routledge & Juhl, 2010; Routledge et al., 2010).

Drawing upon research derived from TMT, we hypothesized that if nostalgia is a meaning-providing resource, then, like other meaning-providing resources, it will mitigate the effects of death-related cognition. We first tested this hypothesis in three experiments (Routledge, Arndt, Sedikides, & Wildschut, 2008). In the first study, we measured individual differences in nostalgia proneness (e.g., "How often do you engage in nostalgia?") and manipulated death-related cognition with a mortality salience induction (Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989). In the experimental condition, participants pondered their mortality (e.g., "Briefly describe the emotions that the thought of your own death arouses in you"), whereas in the control condition they pondered an aversive experience not related to death (e.g., "Briefly describe the emotions that the thought of your dental pain arouses in you"). Subsequently, we administered a measure of meaning in life (e.g., "All strivings in life are futile and absurd"; Kunzendorf & Maguire, 1995). We proposed that mortality salience would undermine a sense of meaning in life, but only among individuals not disposed to reflect on meaning-providing life experiences—that is, among those low in nostalgia proneness. This pattern is precisely what we found. Individuals prone to

nostalgia did not show a reduction in meaning in response to the existential threat of mortality salience, but those not prone to nostalgia did.

We examined nostalgia as an existential resource in follow-up research that focused on the accessibility of death thoughts (Routledge et al., 2008). As noted, previous research demonstrates that when mortality is made salient, investment in meaning-proving structures (e.g., religion) reduces the accessibility of death thoughts. We thus hypothesized that nostalgia would reduce the accessibility of death thoughts after such thoughts are activated via a mortality salience induction. In one experiment, we measured nostalgia proneness and then rendered mortality salient. In another experiment, we manipulated nostalgia as before (i.e., Wildschut et al., 2006), that is, by asking participants to conjure up a nostalgic versus ordinary autobiographical event from their lives. In both experiments, the dependent variable was death-thought accessibility, which we assessed with a stem completion task. Specifically, participants received a list of incomplete words, some of which could be completed with death or non-death-related words (e.g., *COFF__* could be *COFFIN* or *COFFEE*; Greenberg, Pyszczynski, Solomon, Simon, & Breus, 1994). The more words that are completed to be death related, the more death thoughts are accessible. Both experiments yielded results consistent with our hypothesis. Mortality salience increased the accessibility of death-related thoughts, but only at low levels of nostalgia (when nostalgia proneness was measured) and in the "ordinary" condition (when nostalgia was manipulated). In all, nostalgia buffered the effects of mortality salience on increased death thoughts.

In a subsequent investigation, we further considered nostalgia as a means through which people protect against the negative psychological consequences of mortality salience (Juhl, Routledge, Arndt, Sedikides, & Wildschut, 2010). Previous research has implicated death-related cognition as a facilitator of intergroup conflict, as people respond to mortality salience with ingroup bias and outgroup derogation (Greenberg et al., 2008). Group identities are a source of meaning, and thus, when meaning is needed because death is salient, one way in which people find and preserve meaning is by defending their own group identities, often at the expense of other groups. We have maintained that nostalgia is another way through which people are able to attain and preserve meaning. In fact, we believe it to be a particularly powerful way. Thus, we hypothesized that people who regularly engage in nostalgia (high-proneness individuals) would not respond to mortality salience with the typically observed ingroup identity defense. To test this prediction, we measured nostalgia proneness, manipulated mortality salience, and then asked participants to evaluate an essay critical of their university (an identity threat). As hypothesized, mortality salience increased negative evaluations of the critical essay, but only among individuals low on

nostalgia proneness. People who frequently used nostalgia did not need to defend other sources of meaning when death was salient. Another experiment further highlighted the relevance of nostalgia as a source of meaning (Juhl et al., 2010). Specifically, mortality salience increased death anxiety, but only among individuals low on nostalgia proneness. Thus, nostalgia keeps death thoughts from turning into death fears.

In a final experiment (Juhl et al., 2010), we sought to provide a more rigorous test of the hypothesis that people high on nostalgia proneness in fact implement nostalgia as a meaning-providing resource when mortality is salient. We measured nostalgia proneness, manipulated mortality salience, and assessed state nostalgia (by asking participants how much they miss various aspects of their past; Wildschut et al., 2006). The findings provided unequivocal support for nostalgia as the means by which nostalgia-prone individuals resolve mortality concerns. For people high, but not low, in nostalgia proneness, mortality salience increased state nostalgia. People who regularly wax nostalgic employ nostalgia when grappling with the existential threat of death awareness.

In sum, across six experiments, we obtained consistent evidence for the notion that nostalgia provides meaning in life. Mortality salience compromised a sense of meaning, increased death thought accessibility, motivated ingroup identity defense, and heightened death anxiety. However, none of these effects emerged among individuals who are frequently nostalgic or when nostalgia was experimentally induced. In addition, people high on nostalgia proneness used nostalgia in response to mortality salience. Yet, one drawback of these experiments is that they were all focused on nostalgia as an existential resource in response to a specific existential threat (i.e., death awareness). These experiments did not consider broadly nostalgia in meaning-making endeavors that were unrelated to mortality concerns. Further, in none of the experiments did we directly test the hypothesis that nostalgia increases meaning. Instead, we used TMT and research derived from the theory to evaluate hypotheses aligned with the possibility that nostalgia contributes to feelings of meaning in life. Therefore, we determined that it was crucial both to take a broader approach, not limited to one particular existential threat, and to test more explicitly whether nostalgia provides meaning.

Does Nostalgia Provide Meaning?

We began our empirical efforts by examining the covariation between nostalgia and meaning (Routledge et al., 2011). We hypothesized that if nostalgia is one prevalent way through which people derive and maintain meaning, then people who frequently, rather than infrequently, wax nostalgic would evidence higher levels of perceived meaning in life. We obtained

support for this hypothesis in two studies. The first study used an American undergraduate sample. Participants completed a measure of nostalgia proneness (Routledge et al., 2008) and two measures of the perceived presence of meaning in life (e.g., "My personal existence is purposeful and meaningful", "I have a good sense of what makes my life meaningful"; McGregor & Little, 1998; Steger, Frazier, Oishi, & Kaler, 2006; see also Chapter 11, this volume). Nostalgia proneness was positively and significantly correlated with both meaning measures. In the second study, Dutch nationals ranging in age from 10 to 71 took part in an online study examining music-evoked nostalgia. Participants listed their favorite songs and also listened to popular songs. Then, they rated how nostalgic each song made them feel and to what extent each song made them feel that life is worth living (an indicator of meaning). We obtained evidence for nostalgia as meaning-making across all age ranges. The more people reported that music made them feel nostalgic, the more they reported deriving meaning from that music.

Our first direct assessment of nostalgia as a meaning provider yielded supportive evidence. Our next task was to find experimental confirmation for this proposition. To this end, we conducted three laboratory experiments testing the hypothesis that nostalgia bolsters meaning (Routledge et al., 2011; Routledge, Wildschut, Sedikides, Juhl, & Arndt, 2012). In the first experiment, we used song lyrics to manipulate nostalgia. Specifically, in a preliminary session we asked participants to list the titles and artists of three songs that made them feel nostalgic. Prior to the experimental session, we randomly allocated participants to the nostalgia or control condition. For participants in the nostalgia condition, we retrieved the lyrics of a song they listed as personally nostalgic. Participants in the control condition were yoked to a participant in the nostalgia condition and were designated to receive the same lyrics as this person, after we ascertained that the relevant song was not one that the control participant had also identified as nostalgic.

One week after the preliminary session, participants were brought back to the laboratory for the experimental session and given the song lyrics to read as just described. Then, they completed a manipulation check to ensure that the lyrics appropriately induced nostalgia. Finally, they completed a measure of meaning in life (Steger et al., 2006). As hypothesized, participants who read the lyrics that they had identified as nostalgia inducing, compared to those in the control condition, were more nostalgic (as measured by the manipulation check) and, critically, perceived life as more meaningful.

In two additional experiments (Routledge et al., 2012), we used our previously validated nostalgia manipulations in which participants wrote about nostalgic versus autobiographical control experiences (e.g., recent positive past experience, ordinary past experience, future anticipated experience; Vess et al., 2010; Wildschut et al., 2006). We assessed meaning with

a presence of meaning scale as well as a search for meaning scale (Steger et al., 2006). Nostalgia, compared with controls, raised meaning. Specifically, induced nostalgia elevated the presence of meaning and decreased the active search for meaning (these two measures were inversely correlated). Thus, not only did nostalgia bolster meaning, it did so sufficiently to decrease the need to search for meaning elsewhere. In all, survey and experimental data provided compelling evidence that nostalgia strengthens a sense of meaning in life.

We returned, in this research, to our analysis of nostalgia triggers. We previously presented findings demonstrating that bad mood and loneliness trigger nostalgia. On the basis of the growing body of evidence that nostalgia provides meaning, we sought to consider meaninglessness as another nostalgia trigger. To this end, we conducted an experiment in which we threatened meaning and then measured state nostalgia (Routledge et al., 2011). To threaten meaning, we had participants read a philosophical essay arguing that life has no real meaning or purpose. Participants in the control condition read a philosophical essay regarding the limitations of computers. A pilot study confirmed that the meaning threat essay undermined perceptions of meaning. Next, participants completed a state measure of nostalgia (Wildschut et al., 2006). As hypothesized, participants who read the meaning threat essay were more nostalgic compared to those who read the control essay. Meaning threat emerged as a potent trigger of nostalgia.

Building upon our findings indicating that nostalgia reduces defensiveness in response to the threat of mortality salience, we then sought to determine whether nostalgia would reduce defensiveness to a more direct threat to meaning (Routledge et al., 2011). We proceeded to manipulate nostalgia (Wildschut et al., 2006) and then have participants read the meaning threat or no-meaning threat philosophical essays that we described above. Next, we had participants evaluate these essays and the essay authors. We assumed that negative evaluations of the threatening essay would reflect defensiveness against the claim that life is meaningless. Participants evaluated the meaning threat essay and author more negatively than the no-meaning threat essay and author. However, this effect was only significant in the control condition; it was nullified in the nostalgia condition. Nostalgia bolsters meaning and by doing so lowers people's sensitivity to existentially threatening information, thus reducing defensiveness.

Finally, in elucidating nostalgia as a meaning-making tool, we sought to examine the extent to which nostalgia protects psychological well-being when meaning is under threat. Meaning in life is a hallmark of healthy psychological functioning and is associated with quality of life (King & Napa, 1998; Krause, 2007), psychological well-being (Steger & Frazier, 2005; Updegraff, Silver, & Holman, 2008), and successful coping with stress or

illness (Janoff-Bulman, 1992; Jim & Andersen, 2007; Park, 2010; see also Chapters 10, 12, and 13, this volume). Therefore, people with meaning deficits are at risk of poor psychological and physical health. Having established that nostalgia bolsters meaning, we proposed that nostalgia could be used as a meaning intervention in efforts to counteract the ill psychological effects that result from a lack of perceived meaning in life. We started this consideration of nostalgia as an intervention with two laboratory studies (Routledge et al., 2011).

In the first study, we measured individual differences in perceptions of meaning and then manipulated nostalgia with the narrative task (Wildschut et al., 2006). We then measured state vitality as an indicator of psychological well-being (Ryan & Frederick, 1997). Vitality is considered a reflection of eudaemonic well-being (i.e., feeling alive and vital) and correlates with other measures of well-being (e.g., satisfaction with life; Ryan & Frederick, 1997). The results were consistent with the idea that nostalgia has intervention potential. There was a significant negative relation between perceived meaning and vitality, but nostalgia mitigated this effect. In particular, nostalgia increased vitality among individuals who lacked a sense of meaning. Nostalgia, then, elevates well-being among those with existing meaning deficits (see Chapter 23, this volume).

We followed up with a similar intervention study to find out whether nostalgia mitigates the effects of stress experienced by people with meaning deficits. We measured perceptions of meaning, manipulated nostalgia with the narrative task, and then implemented the Trier Social Stress Test, an established laboratory stress paradigm in which participants engage in a mock job interview and perform challenging mental arithmetic before an audience (Kudielka, Hellhammer, & Kirschbaum, 2007). We subsequently assessed subjective stress. Meaning was a significant predictor of subjective stress after the stressor task. People with meaning deficits reported high levels of stress after the task compared to those without meaning deficits. Critically, nostalgia mitigated this effect. In particular, nostalgia significantly attenuated feelings of stress among individuals who had low levels of meaning at the start of the study. Nostalgia thus appears to improve well-being and assist in coping with stressful experiences among individuals vulnerable to poor well-being and elevated stress (i.e., individuals low in meaning in life). These two intervention studies provide encouragement for future research seeking to develop and test nostalgia-related therapies for mental health treatment. We return to this topic shortly.

In sum, building upon previous findings that nostalgia serves several psychological functions, we conducted a range of studies showcasing an existential function of nostalgia. Nostalgia not only increases positive mood, self-positivity, and social connectedness, but it also contributes to meaning

making. Specifically, nostalgia mitigates the effects of existential threats (i.e., mortality salience, undermining meaning), increases perceptions of meaning, decreases the need to further search for meaning, and promotes psychological health for those with low levels of perceived meaning. Further, threats to meaning increase nostalgia. In all, the evidence strongly demonstrates that nostalgia aids people in finding and preserving a sense of life meaning.

THE FUTURE OF NOSTALGIA: CURRENT PLANS AND PROPOSALS

Though research provides compelling evidence that nostalgia helps people perceive their lives as meaningful, key questions remain unanswered. For example, how precisely does nostalgia provide meaning? In other words, is the effect of nostalgia on meaning mediated by any other function of nostalgia? As previously discussed, nostalgia serves functions related to affect, the self, and relationships. In addition, theory and research suggest that each of these functions is associated with meaning. For example, positive affect is a prominent predictor of judgments of meaning (King, Hicks, Krull, & Del Gaiso, 2006; see also Chapter 22, this volume). In addition, research derived from TMT suggests that both self-esteem (Greenberg et al., 2008) and close relationships (Mikulincer, Florian, & Hirschberger, 2003) contribute to a sense of meaning. Finally, belongingness facilitates meaning (Hicks, Schlegel, & King, 2010; Lambert et al., in press). Therefore, there is reason to believe that nostalgia may offer meaning via one or more of these routes.

We recently began to explore this question. In particular, we considered the question of mediation, in two studies, when examining the link between nostalgia and meaning (Routledge et al., 2011). As a starting point, we focused on social connectedness as the mediator because close relationships played a prominent role in most of the nostalgic narratives about momentous life events. In other words, events that people identified as being of great personal value were interpersonal in nature (e.g., family gatherings, weddings, holidays, graduations). In both studies, in addition to measuring or manipulating nostalgia and then measuring meaning, we assessed social connectedness as a mediator. Social connectedness mediated the effects of nostalgia on meaning in both studies. Therefore, preliminary research suggests that a sense of social connectedness that emanates from nostalgic engagement accounts, in part, for the way in which nostalgia contributes to perceptions of meaning in life.

The issue of mediation deserves prioritization in future research plans. What are other critical mediators, besides social connectedness? Moreover, are different mediators more impactful for different people? This latter question returns us to the beginning of this chapter, when we discussed what

makes life seem meaningful. People may vary in the extent to which specific domains offer meaning, and thus people may vary in the extent to which tapping into these domains via nostalgia elevates meaning. For example, people low in attachment-related avoidance may garner meaning from reflecting nostalgically on past social experiences. Likewise, cultural differences may emerge. For example, individuals from individualistic cultures may derive more meaning for agentic experiences (e.g., personal accomplishments), whereas individuals from collectivistic cultures may derive more meaning from communal experiences (e.g., harmonious relationships). In sum, more research is needed to examine the nuanced ways in which people use nostalgia to find meaning.

How about the relation between nostalgia and psychological health? We discussed the results from two studies supporting the idea that nostalgia has intervention potential. However, neither of these studies tested a clinical population or examined longer term effects of a nostalgia induction. Therefore, much work is needed to advance nostalgia as a potential therapeutic tool. Given that nostalgia fosters a sense of meaning, we believe that the potential for nostalgia to be used as a form of treatment by mental health practitioners is strong. Preliminary findings indeed point to a relation between meaning and positive mental health outcomes. For example, a sense of meaning in life predicted improvement during psychotherapy (Debats, 1996). In addition, a lack of meaning is associated with psychological dysfunction and maladaptive health behavior. For example, a lack of meaning is a predictor of depression (Wong, 1998) and even a precursor to suicide (Harlow, Newcomb, & Bentler, 1986). Frankl (1997) proposed that the existential pain of meaninglessness and an inability to find meaning could result in the development of negative health-related behaviors such as excessive drinking, drug abuse, and gambling. Consistent with this assertion, excessive drinking has been related to poor purpose in life (Marsh, Smith, Piek, & Saunders, 2003; Waisberg & Porter, 1994), as has drug abuse (Padelford, 1974). Therefore, future research examining nostalgia as a mental health intervention may offer therapists and counselors another weapon in their arsenal to combat psychopathology and problem behaviors (see Chapter 23, this volume).

The utility of nostalgia as a mental health treatment depends, of course, on the extent to which nostalgia is a predominantly positive experience. Our research suggests that it is; however, all of our studies thus far have focused on "normal" populations, and thus another critical direction for research is to consider the possibility that nostalgia may not be a net positive experience for everyone. Perhaps there are certain groups of people (e.g., people high in neuroticism, people with negative attitudes toward their past) for whom increased nostalgia might contribute to undesirable psychological consequences (e.g., anxiety, unhappiness).

IN CLOSING

As a collective, society emphasizes the present and the future, and de-emphasizes the past, when making judgments about our lives. People admonish one another to live in moment, plan for the future, and not to dwell on the past. Certainly, there is value to this advice. Appreciating the present can be rewarding, and goal-related behavior that paves the way for a better future is advantageous. However, turning to the past may be beneficial as well. Historians like to remind us that there is much to learn from the past. We, as psychologists, also propose that the past should not be underrated. Reflecting nostalgically on the past betters one's affective state, bolsters and protects the positivity of the self, strengthens a sense of social connectedness, and as this chapter highlighted, imbues life with purpose and meaning.

REFERENCES

- Barrett, F. S., Grimm, K. J., Robins, R. W., Wildschut, T., Sedikides, C., & Janata, P. (2010). Music-evoked nostalgia: Affect, memory, and personality. *Emotion, 10*, 390–403. doi:10.1037/a0019006
- Batcho, K. I. (1995). Nostalgia: A psychological perspective. *Perceptual and Motor Skills, 80*, 131–143. doi:10.2466/pms.1995.80.1.131
- Campbell, K. W., & Sedikides, C. (1999). Self-threat magnifies the self-serving bias: A meta-analytic integration. *Review of General Psychology, 3*, 23–43. doi:10.1037/1089-2680.3.1.23
- Davis, F. (1979). *Yearning for yesterday: A sociology of nostalgia*. New York, NY: Free Press.
- Debats, D. L. (1996). Meaning in life: Clinical relevance and predictive power. *British Journal of Clinical Psychology, 35*, 503–516. doi:10.1111/j.2044-8260.1996.tb01207.x
- Fisher, S. (1989). *Homesickness, cognition and health*. Hove, England: Erlbaum.
- Frankl, V. E. (1997). *Man's search for ultimate meaning*. New York, NY: Plenum.
- Greenberg, J., Pyszczynski, T., Solomon, S., Simon, L., & Breus, M. (1994). Role of consciousness and accessibility of death-related thoughts in mortality salience effects. *Journal of Personality and Social Psychology, 67*, 627–637. doi:10.1037/0022-3514.67.4.627
- Greenberg, J., Solomon, S., & Arndt, J. (2008). A basic but uniquely human motivation: Terror management. In J. Y. Shah & W. L. Gardner (Eds.), *Handbook of motivation science* (pp. 114–134). New York, NY: Guilford Press.
- Harlow, L. L., Newcomb, M. D., & Bentler, P. M. (1986). Depression, self-derogation, substance abuse, and suicide ideation: Lack of purpose in life as a mediational factor. *Journal of Clinical Psychology, 42*, 5–21. doi:10.1002/1097-4679(198601)42:1<5::AID-JCLP2270420102>3.0.CO;2-9
- Hicks, J. A., Schlegel, R. J., & King, L. A. (2010). Social threats, happiness, and the dynamics of meaning in life judgments. *Personality and Social Psychology Bulletin, 36*, 1305–1317. doi:10.1177/0146167210381650
- Hofer, J. (1934). Medical dissertation on nostalgia (C. K. Anspach, Trans.). *Bulletin of the History of Medicine, 2*, 376–391. (Original work published 1688)
- Holak, S. L., & Havlena, W. J. (1998). Feelings, fantasies, and memories: An examination of the emotional components of nostalgia. *Journal of Business Research, 42*, 217–226. doi:10.1016/S0148-2963(97)00119-7
- Janoff-Bulman, R. (1992). *Shattered assumptions: Towards a new psychology of trauma*. New York, NY: Free Press.
- Jim, H. S., & Andersen, B. L. (2007). Meaning in life mediates the relationship between social and physical functioning and distress in cancer survivors. *British Journal of Health Psychology, 12*, 363–381. doi:10.1348/135910706X128278
- Juhl, J., Routledge, C., Arndt, J., Sedikides, C., & Wildschut, T. (2010). Fighting the future with the past: Nostalgia buffers existential threat. *Journal of Research in Personality, 44*, 309–314. doi:10.1016/j.jrp.2010.02.006
- King, L. A., Hicks, J. A., Krull, J. L., & Del Gaiso, A. K. (2006). Positive affect and the experience of meaning in life. *Journal of Personality and Social Psychology, 90*, 179–196. doi:10.1037/0022-3514.90.1.179
- King, L. A., & Napa, C. K. (1998). What makes a good life? *Journal of Personality and Social Psychology, 75*, 156–165. doi:10.1037/0022-3514.75.1.156
- Krause, N. (2007). Evaluating the stress-buffering function of meaning in life among older people. *Journal of Aging and Health, 19*, 792–812. doi:10.1177/0898264307304390
- Kudielka, B. M., Hellhammer, D. H., & Kirschbaum, C. (2007). Ten years of research with the Trier Social Stress Test—Revisited. In E. Harmon-Jones & P. Winkielman (Eds.), *Social neuroscience: Integrating biological and psychological explanations of social behavior* (pp. 56–83). New York, NY: Guilford Press.
- Kunzendorf, R. G., & Maguire, D. (1995). *Depression: The reality of "no meaning" versus the delusion of negative meaning*. Unpublished manuscript, University of Massachusetts, Lowell.
- Lambert, N. M., Stillman, T. F., Baumeister, R. F., Fincham, F. D., Hicks, J. A., & Graham, S. M. (in press). Family begets meaning: The unique contribution of family relationships to purpose in life. *The Journal of Positive Psychology*.
- Marsh, A., Smith, L., Piek, J., & Saunders, B. (2003). The Purpose in Life Scale: Psychometric properties for social drinkers and drinkers in alcohol treatment. *Educational and Psychological Measurement, 63*, 859–871. doi:10.1177/0013164403251040
- McCann, W. H. (1941). Nostalgia: A review of the literature. *Psychological Bulletin, 38*, 165–182. doi:10.1037/h0057354
- McGregor, I., & Little, B. R. (1998). Personal projects, happiness, and meaning: On doing well and being yourself. *Journal of Personality and Social Psychology, 74*, 494–512. doi:10.1037/0022-3514.74.2.494

- Mikulincer, M., Florian, V., & Hirschberger, G. (2003). The existential function of close relationships: Introducing death into the science of love. *Personality and Social Psychology Review, 7*, 20–40. doi:10.1207/S15327957PSPRO701_2
- Padelford, B. L. (1974). Relationship between drug involvement and purpose in life. *Journal of Clinical Psychology, 30*, 303–305. doi:10.1002/1097-4679(197407)30:3<303::AID-JCLP2270300323>3.0.CO;2-2
- Park, C. L. (2010). Making sense of the meaning literature: An integrative review of meaning making and its effects on adjustment to stressful life events. *Psychological Bulletin, 136*, 257–301. doi:10.1037/a0018301
- Pearsall, J. E. (Ed.). (1998). *The new Oxford dictionary of English*. Oxford, England: Oxford University Press.
- Rosen, G. (1975). Nostalgia: A "forgotten" psychological disorder. *Psychological Medicine, 5*, 340–354. doi:10.1017/S003329170005697X
- Rosenblatt, A., Greenberg, J., Solomon, S., Pyszczynski, T., & Lyon, D. (1989). Evidence for terror management theory I: The effects of mortality salience on reactions to those who violate or uphold cultural values. *Journal of Personality and Social Psychology, 57*, 681–690. doi:10.1037/0022-3514.57.4.681
- Routledge, C., & Arndt, J. (2005). Time and terror: Managing temporal consciousness and the awareness of mortality. In A. Strathman & J. Joireman (Eds.), *Understanding behavior in the context of time: Theory, research, and application* (pp. 59–84). Mahwah, NJ: Erlbaum.
- Routledge, C., Arndt, J., Sedikides, C., & Wildschut, T. (2008). A blast from the past: The terror management function of nostalgia. *Journal of Experimental Social Psychology, 44*, 132–140. doi:10.1016/j.jesp.2006.11.001
- Routledge, C., Arndt, J., Wildschut, T., Sedikides, C., Hart, C., Juhl, J., . . . Schlotz, W. (2011). The past makes the present meaningful: Nostalgia as an existential resource. *Journal of Personality and Social Psychology, 101*, 638–652. doi:10.1037/a0024292
- Routledge, C., & Juhl, J. (2010). When death thoughts lead to death fears: Mortality salience increases death anxiety for individuals who lack meaning in life. *Cognition & Emotion, 24*, 848–854. doi:10.1080/02699930902847144
- Routledge, C., Ostafin, B., Juhl, J., Sedikides, C., Cathey, C., & Liao, J. (2010). Adjusting to death: The effects of mortality salience and self-esteem on psychological well-being, growth motivation, and maladaptive behavior. *Journal of Personality and Social Psychology, 99*, 897–916. doi:10.1037/a0021431
- Routledge, C., Wildschut, T., Sedikides, C., Juhl, J., & Arndt, J. (2012). The power of the past: Nostalgia as a meaning-making resource. *Memory*. Advance online publication. doi:10.1080/09658211.2012.677452
- Ryan, R. M., & Frederick, C. (1997). On energy, personality, and health: Subjective vitality as a dynamic reflection of well-being. *Journal of Personality, 65*, 529–565. doi:10.1111/j.1467-6494.1997.tb00326.x
- Sand, E., Juhl, J., & Routledge, C. (2011). *When the past plays Cupid: Nostalgia bolsters relationship satisfaction and desire*. Unpublished manuscript, North Dakota State University, Fargo.
- Schindler, R. M., & Holbrook, M. B. (2003). Nostalgia for early experience as a determinant of consumer preferences. *Psychology & Marketing, 20*, 275–302. doi:10.1002/mar.10074
- Sedikides, C., Wildschut, T., Arndt, J., & Routledge, C. D. (2006). Affect and the self. In J. P. Forgas (Ed.), *Affect in social thinking and behavior: Frontiers in social psychology* (pp. 197–215). New York, NY: Psychology Press.
- Sedikides, C., Wildschut, T., Arndt, J., & Routledge, C. (2008). Nostalgia: Past, present, and future. *Current Directions in Psychological Science, 17*, 304–307. doi:10.1111/j.1467-8721.2008.00595.x
- Sedikides, C., Wildschut, T., & Baden, D. (2004). Nostalgia: Conceptual issues and existential functions. In J. Greenberg, S. L. Koole, & T. Pyszczynski (Eds.), *Handbook of experimental existential psychology* (pp. 200–214). New York, NY: Guilford Press.
- Solomon, S., Greenberg, J., & Pyszczynski, T. (1991). Terror management theory of self-esteem. In C. R. Snyder & D. R. Forsyth (Eds.), *Handbook of social and clinical psychology: The health perspective* (pp. 21–40). New York, NY: Pergamon Press.
- Steger, M. F., & Frazier, P. (2005). Meaning in life: One link in the chain from religiousness to well-being. *Journal of Counseling Psychology, 52*, 574–582. doi:10.1037/0022-0167.52.4.574
- Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The Meaning in Life Questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*, 80–93. doi:10.1037/0022-0167.53.1.80
- Updegraff, J. A., Silver, R. C., & Holman, E. A. (2008). Searching for and finding meaning in collective trauma: Results from a national longitudinal study of the 9/11 terrorist attacks. *Journal of Personality and Social Psychology, 95*, 709–722. doi:10.1037/0022-3514.95.3.709
- Van Tilburg, M. A. L., Vingerhoets, A. J. J. M., & van Heck, G. L. (1996). Homesickness: A review of the literature. *Psychological Medicine, 26*, 899–912. doi:10.1017/S0033291700035248
- Vess, M., Arndt, J., Routledge, C., Sedikides, C., & Wildschut, T. (2010). Nostalgia as a resource of the self. *Self and Identity*. Advance online publication. doi:10.1080/15298868.2010.521452
- Waisberg, J. L., & Porter, J. E. (1994). Purpose in life and outcome of treatment for alcohol dependence. *British Journal of Clinical Psychology, 33*, 49–63. doi:10.1111/j.2044-8260.1994.tb01093.x
- Wildschut, T., Sedikides, C., Arndt, J., & Routledge, C. (2006). Nostalgia: Content, triggers, functions. *Journal of Personality and Social Psychology, 91*, 975–993. doi:10.1037/0022-3514.91.5.975
- Wildschut, T., Sedikides, C., & Cordaro, F. (2011). Self-regulatory interplay between negative and positive emotions: The case of loneliness and nostalgia.

- In I. Nyklíček, A. Vingerhoets, & M. Zeelenberg (Eds.), *Emotion regulation and well-being* (pp. 67–83). New York, NY: Springer. doi:10.1007/978-1-4419-6953-8_5
- Wildschut, T., Sedikides, C., Routledge, C., Arndt, J., & Cordaro, F. (2010). Nostalgia as a repository of social connectedness: The role of attachment-related avoidance. *Journal of Personality and Social Psychology, 98*, 573–586. doi:10.1037/a0017597
- Wong, P. T. P. (1998). Implicit theories of meaningful life and the development of the personal meaning profile. In P. T. P. Wong & P. S. Fry (Eds.), *The human quest for meaning. A handbook of psychological research and clinical applications* (pp. 111–140). Mahwah, NJ: Erlbaum.
- Zhou, X., Sedikides, C., Wildschut, C., & Gao, D.-G. (2008). Counteracting loneliness: On the restorative function of nostalgia. *Psychological Science, 19*, 1023–1029. doi:10.1111/j.1467-9280.2008.02194.x